

**ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT**

For

NORTHPOWER

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EXECUTIVE SUMMARY

This reconciliation participant audit was performed at the request of Northpower to encompass the Authority's request for annual audits, as required in clause 11.10 of Schedule 11, of the Electricity Industry Participation Code 2010, to assure compliance with the Code 2010. The relevant rules audited are as required by the Guidelines for Distributor Audits V7.0 issued by the Electricity Authority.

The number of ICPs on Northpower's network increased by around 1,200 ICPs. Northpower has achieved a good level of compliance. The company has put in place many processes to monitor compliance on a daily basis.

The audit found six non-compliances some of them relate to the same non-compliance.

The main issue identified during this audit is not receiving requests from traders for new ICP connections to the network before the name of the proposed retailer is populated in the registry, which the Authority sees as non-compliance. This non-compliance was disputed by Northpower after the last audit.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. Table 1 of the Guidelines for Distributor audit provides some guidance on this matter. The Future Risk Rating score is 12 which results in an indicative audit frequency of 12 months. We agree with the result.

We thank Northpower for its complete cooperation in this audit.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Two ICPs did not have Initial Electrical Connection Date recorded in the registry	Strong	Low	1	Identified
Connection of ICP that is not an NSP	3.6	11.17(2)	New ICPs are connected without a request from a trader	Moderate	Low	2	Identified
Changes to registry information	4.1	8 of Schedule 11.1	Small percentage of updates to the registry later than 3BD.	Moderate	Low	2	Identified
Electrically disconnection an ICP	4.5	3 of Schedule 11.1	1 ICP cannot be easily disconnected because of access issue to a main switch; the problem was created during splitting a motel into separate holiday units.	Weak	Low	3	Identified
Distributor to provide ICP information to the registry manager	0	7(1) of Schedule 11.1	3 ICPs had incorrect data in the registry	Strong	Low	1	Identified
Management of "ready" status	4.9	14 of Schedule 11.1	Incorrectly assigned status "ready"; No confirmation from a trader accepting responsibility is received for the ICP before the "ready" status is assigned	Moderate	Low	2	Identified
Future Risk Rating						12	
Indicative Audit Frequency						12 months	
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
		Nil	

ISSUES

Subject	Section	Issue	Description
		Nil	

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

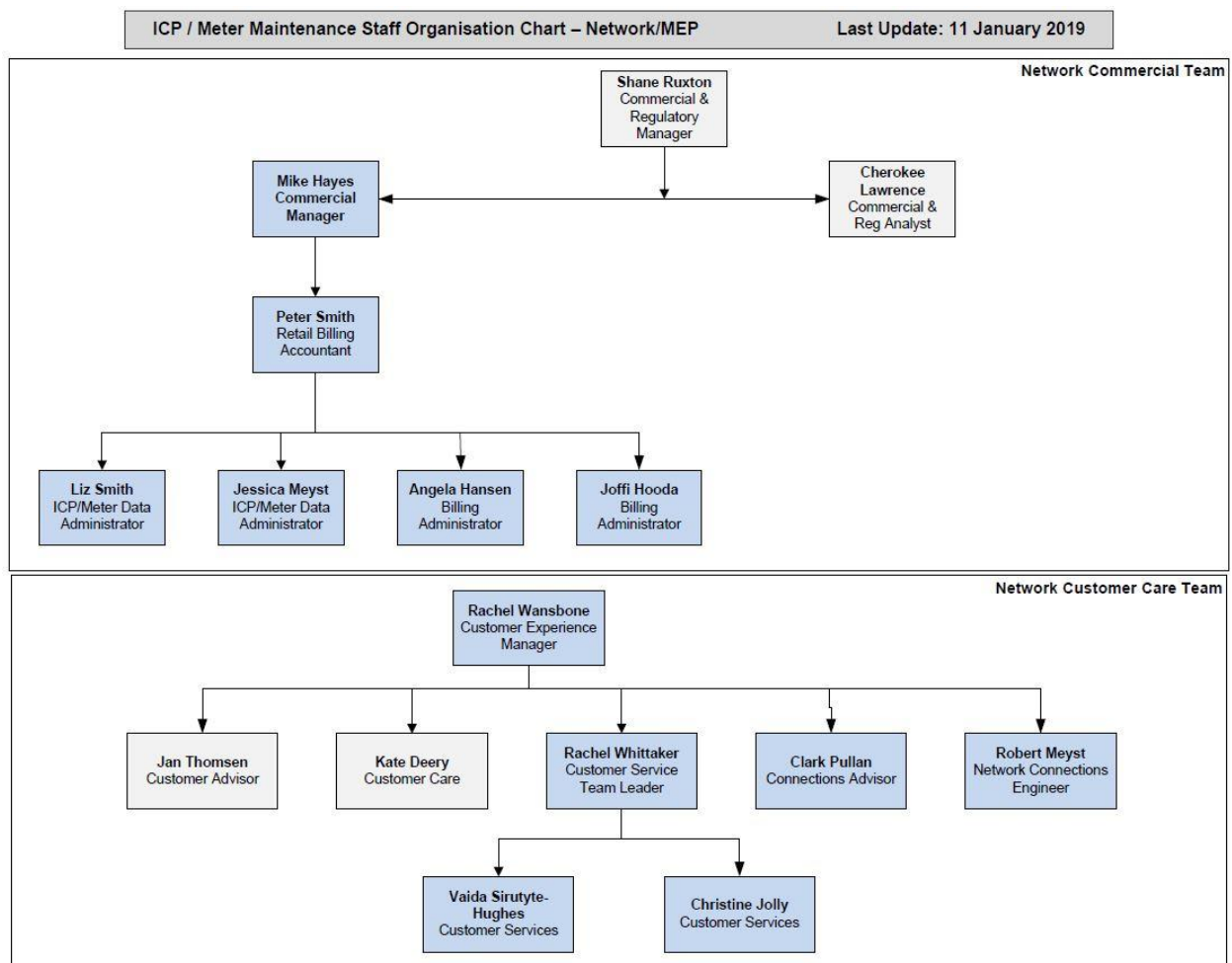
Audit observation

Northpower confirms 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. Structure of Organisation



1.3. Persons involved in this audit

Name	Title	Company
Peter Smith	Retail Billing Accountant	Northpower Ltd
Elisabeth Smith	ICP/Meter Data Administrator	Northpower Ltd
Shane Ruxton	Commercial & Regulatory Manager	Northpower Ltd
Rachel Wansbone	Customer Experience Manager	Northpower Ltd
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates 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

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

Audit commentary

During the audit, we did not identify any contractors who assist Northpower to meet their obligations.

1.5. Supplier list

Gentrack is used by Northpower for ICP creation and the storing of information (transactions) related to ICPs. The software is provided by Gentrack Group Limited.

1.6. Hardware and Software

Gentrack Velocity is still the main software application used for the MEP functions (ICP and meter asset management). Gentrack handles the registry interface and the updating of ICP information in the registry. Sales Force is used for customer applications (new ICPs, changes to ICPs, type of connections e.g. U/G). There are also several databases (MS Access) used for some aspects of the registry data discrepancy management

1.7. Breaches or Breach Allegations

Northpower has stated it has no breaches of the Electricity Industry Participation Code related to this audit.

1.8. ICP and NSP Data

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
NPOW	BRB0331	BREAM BAY			ALLGXPSNPOWG	G	1/05/08	5,240
NPOW	MPE1101	MAUNGATAPERRE			ALLGXPSNPOWG	G	1/04/13	44,495
NPOW	MTO0331	MAUNGATUROTO			ALLGXPSNPOWG	G	1/05/08	10,451

Northpower provided a list of all ICP's as of the 13/01/2019. The total number of ICPs in the registry was 66,360.

Status	Number of ICPs (14/01/19)	Number of ICPs (22/09/17)	Number of ICPs (29/08/16)
Active (2,0)	58,704	57,438	56,446
Inactive- new connection in progress (1,12)	103	119	87
Inactive – vacant (1,4)	1,020	1,069	1,011
Inactive – AMI remote disconnection (1,7)	114	103	82
Inactive – at pole fuse (1,8)	9	5	0
Inactive – de-energised due to meter disconnected (1,9)	8	5	4
Inactive – de-energised at meter box switch (1,10)	4	0	0
Inactive- at meter box switch (1,11)	2	0	0
Inactive – ready for decommissioning (1,6)	59	70	64
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	6,174	5,890	5,711
Distributor (888)	9	9	9
New (999)	8	7	6
Ready (000)	146	112	103

1.9. Authorisation Received

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

1.10. Scope of Audit

This audit was performed at the request of Northpower, as required by clause 11.10 of Schedule 11, to assure compliance with the Electricity Industry Participation Code 2010. The audit covers the following processes, under clause 11.10(4) of Part 11, performed by Northpower:

- (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 Northpower premises at 28 Mount Pleasant Road in Whangarei, on the 23/24 January 2019.

1.11. Summary of previous audit

The previous audit was carried out in September 2017 by Ewa Glowacka (TEG & Associates Ltd). The findings of the audit are shown below:

Subject	Section	Clause	Non-Compliance	Comment
Changes to registry information	4.1	8 of Schedule 11.1	Small number of updates (about 3%) to the registry later than 3BD.	Still exists
ICP location address	4.4	2 of Schedule 11.1	6 ICPs had duplicate addresses, hard to locate	Cleared
Electrically disconnection an ICP	4.5	3 of Schedule 11.1	1 ICP cannot be easily disconnected because of access issue to a main switch; the problem was created during splitting a motel into separate holiday units.	Still exists
Distributor to provide ICP information to the registry manager	0	7(1) of Schedule 11.1	Less than 10 ICPs had incorrect data in the registry	Still exists
Management of "ready" status	4.9	14 of Schedule 11.1	Northpower receives confirmation from a trader accepting responsibility for an ICP after the registry changes the ICP status to "ready" because the proposed trader specified by the customer was uploaded	Still exists

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

Northpower proved to be committed to having complete and accurate data in the registry. Northpower has adopted a proactive attitude to reduce the amount of incorrect or missing information in the registry. A number of queries are run every day to validate information in the registry.

Audit outcome

Compliant

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

Code reference

Clause 11.2(2) and 10.6(2)

Code related audit information

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

Audit observation

We went through the EDA file provided by Northpower for the period 16/9/17 to 13/01/19 to assess if the company identified that, if information provided was inaccurate, it was corrected as soon as practicable.

Audit commentary

Northpower has many processes in place to assist. Acknowledgement files from the registry are checked every day and errors are cleared. Additionally, Northpower designed a number of queries to validate Gentrack data. A few examples of queries, run daily, are listed below:

- ICP decommissioned in the registry by trader
- Live ICP with NSP which does not exist
- Initial Electrical Connection Date missing
- The registry status “ready”, Gentrack status “live”
- BTS – incorrect price code
- GPS coordinates – blank field

- ICP decommissioned in the registry by trader

Audit outcome

Compliant

3. CREATION OF ICPS

3.1. Distributors must create ICPs (Clause 11.4)

Code reference

Clause 11.4

Code related audit information

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

Audit observation

The process for new connections was reviewed. It has not changed since the last audit

Audit commentary

A customer, or an agent, requests a new ICP by completing Northpower's Application for Network Connection or Alteration to Supply form.

Northpower adopted the following processes to create new ICPs:

- If the new connection does not require any line or cable work, an ICP is created straight away. A trader, which is specified on the application form by a customer is notified of the new ICP by email. The trader receives a copy of the completed Application for Network Connection or Alteration to Supply form
- In a situation where some planning and line work is required or overhead line is converted to underground, an ICP will not be created until an agreement between a customer and Northpower is reached and a deposit is paid. When the planning and construction work is completed the ICP is created and the trader is notified via email as above

We walked through 29 new installations to review the process described above.

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

All ICPs are requested by a customer or his/her representative not by traders.

Audit commentary

No requests are accepted from traders therefore this clause is not applicable. Compliance was not assessed.

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

Northpower staff use Gentrack (Velocity) to create new ICPs based on information provided by the customer in the Application for Network Connection. Gentrack creates the file which is uploaded to the registry overnight. The original upload of the ICP to the registry does not include a price category code. The status assigned by the registry is “new”.

The following business day Northpower enters a special “holding price category code” – NEWICP. The registry assigns the status “ready” to the ICP.

Audit commentary

We examined the LIS file dated 13/01/19 and the EDA files and confirm that the process is followed.

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 29 new connections to assess if ICPs were created before being electrically connected.

Audit commentary

The process adopted by Northpower is very good. During our review we did not find any installations which were electrically connected without an ICP being assigned.

We cross checked information in the LIS file to see if there were any ICPs where the Initial Electrical Connection Date was earlier than the date when an ICP was assigned the status of “ready”. We found no such ICPs.

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 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

To assess compliance, we examined the EDA file for the period 16/9/17 to 13/01/19. There were 1,271 new ICPs electrically connected.

Audit commentary

The registry was notified the Initial Electrical Connection Date no later than 10 business days.

Installations on the Northpower Network have been electrically connected only by the Northpower Contracting Division on the request of traders. Once a job is complete, the office staff are notified of the electrical connection date and information in Gentrack is updated, then uploaded to the registry. This process will change on 01/04/19. The Northpower Contracting Division will stop electrically connecting new installations to Northpower's network. This activity will be contracted out to Wells or VircomEMS on behalf of traders.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: 7(2A) of Schedule 11.1 From: 16-Sep-17 To: 13-Jan-19	Two ICPs did not have Initial Electrical Connection Date recorded 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 have recorded the controls as strong. Northpower is very good at validating information. These two ICPs were overlooked, it was human error. Audit risk rating low, no impact on settlement outcomes		
Actions taken to resolve the issue		Completion date	Remedial action status
The Initial Electrical Connection Date for these two ICPs (0000569980NRF3A and 0000569847NRC1B) was updated in the Registry as soon as they were identified during the audit. In both cases the Initial Electrical Connection Date had been correctly loaded into Gentrack so it isn't clear why this did not trigger the automatic Registry update		24/1/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
An extra monthly "audit" process will be added. An ICP List snapshot file requested from the Registry will be loaded into an ACCESS database so that several queries (including no Initial Electrical Connection Date) can check for missing data. This will be an additional "audit" process to the existing daily audit queries run against the Northpower ICP/Meters database to check for missing or invalid data.		31/5/2019	

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

A review of the new connection process confirms compliance with clause 11.17(1A) because it does follow its process in clause 10.31. Clause 11.17(2) puts the obligation on the distributor not to connect an ICP unless a trader is recorded in the registry as accepting responsibility for the ICP. At the time of uploading a proposed trader to the registry Northpower does not have trader acceptance yet. The acceptance arrives later in the form of an SR.

Audit commentary

Clause 11.17 (1A) and 10.31 work together. As soon as there is compliance with clause 10.31 it follows that there is compliance with clause 11.17(1A). In the audit observation, we discussed compliance with clause 11.17(2). Our conclusion is that the company does not comply with this clause.

Also clause 7(1)(j) of Schedule 11.1 requires the distributor to populate the participant identifier of the first trader who has entered into an arrangement with a customer. The clause also clarifies that information must come from the trader.

Some traders change the status to “inactive – new connection in progress” well before a service request to live is issued while others send the service request (SR), which is understood by Northpower as an acceptance of responsibility for the ICP. The trader changes the ICP status in the registry to “active” once the ICP has been electrically connected. Definitely, Northpower has a point, but it is not how their obligation is stated in the Code.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.6</p> <p>With: 11.17 (2)</p> <p>From: 16-Sep-17</p> <p>To: 13-Jan-19</p>	<p>New ICPs are connected without a request from a trader.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Moderate</p> <p>Breach risk rating:2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>We have recorded the controls as moderate. new connections are electrically connected by the Contracting Division of Northpower therefore there is low risk that it will be done without SRs. The fact that it will be contracted to third parties needs to be assessed. Audit risk rating low, no impact on settlement outcomes</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Northpower will not be changing its current ICP creation processes and will continue to place the retailer nominated by the customer in the Registry as the “proposed trader” at the time of creating the new ICP.</p> <p>However, with the move away from Northpower Contracting being the sole metering/livening contractor to using only third party contractors for both meter installation and livening the various “approval” steps are likely to change.</p>		Under review due to process changes	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>ICPs are not connected or electrically connected without the “approval” of a trader. Up until the 1/4/2019, this approval was the receipt of a service request from the trader accepting the ICP and requesting the metering to be installed and the ICP to be electrically connected.</p> <p>Several traders use the Disconnected – New Connection in Progress status to initiate their customer “sign-up” process. With the implementation of Part 10, Northpower was requested to move the ICP to the “ready” status as quickly as possible so that the proposed trader could accept the ICP in the Registry to start their “sign up” process.</p>		No action	

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

As the last audit identified, Northpower do not receive requests from traders to connect an ICP. According to the process used by Northpower, a service request (SR) is received from the trader to request to connect and electrically connect a new ICP and hang meters.

Audit commentary

Northpower receives the SR, which acts as a request to electrically connect a new ICP. SR does exactly distinguish between connection and electrical connection but both activities happen at the same time therefore we found Northpower compliant 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

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

Audit commentary

If Northpower is asked by an MEP to temporarily electrically connect it would, but it has not occurred.

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

Northpower 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 Northpower 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

Northpower 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 Northpower 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 "NR" as part of each ICP Identifier on the Northpower network. Gentrack is configured to only create ICPs with this distributor code.

Audit commentary

Gentrack creates ICPs based on a sequential number, unique distributor code and checksum, which is generated according to the algorithm. The algorithm was provided by the Market Administrator many years ago.

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 was examined.

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

We reviewed the process of ICP creation. As it was described in **section 3.3**.

Audit commentary

The review of the EDA file for the period covered by this audit showed that the process is followed.

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 dated 13/01/19 was examined to assess compliance.

Audit commentary

We identified four ICPs with the status of “ready” which had been created for more than 24 months.

- 0000566065NR8A6 was created in 2014 and the customer confirmed in early December 2016 and again in mid-August 2018 that they still want to use it in the future. The trader at the time of each enquiry was Contact Energy (CTCT) who confirmed they were happy to accept the ICP remain with a “ready” status.
- 0000566856NR393 was created in 27/10/15, Contact Energy (CTCT) confirmed in early November 2017 that they still want to use it in the future
- 0000567868NR650 was created on 15/09/16, Contact Energy (CTCT) confirmed in mid-September 2018 that they still want to use it in the future
- 0000567946NR19A was created on 30/09/16, Contact Energy (CTCT) confirmed in Mid-September 2018 that they still want to use it in the future

Northpower closely monitors ICPs with the status of “new” and “ready”. ICPs with a “ready” status that are reaching the 24-month deadline mentioned in the Code are referred to the proposed trader. Northpower requests the trader to contact their customer and decide whether we can “decommission – setup in error” or leave the ICP with a status of “ready”.

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:*
 - *the unique loss category code assigned to the ICP*
 - *the ICP identifier of the ICP*
 - *the NSP identifier of the NSP to which the ICP is connected*
 - *the plant name of the embedded generating station.*

Audit observation

The LIS file was examined.

Audit commentary

Northpower has an embedded hydro generation station that has a capacity of 5MW (ICP: 0000100001NR87B) traded by Simply Energy. Also Trustpower has an embedded diesel “peaking plant” generator with 10 MW capacity situated at Bream Bay (ICP: 0000100002NR4BB). We examined the information and confirm both ICPs have unique loss category codes assigned. ICP 0000100001NR87B has the loss category code G1 and ICP 0000100002NR4BB has a loss category code of G2.

Audit outcome

Compliant

4. MAINTENANCE OF REGISTRY INFORMATION

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

Code reference

Clause 8 Schedule 11.1

Code related audit information

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

Notification must be given by the distributor within 3 business days after the change takes effect, unless the change is to the NSP identifier of the NSP to which the ICP is usually connected (other than a change that is the result of the commissioning or decommissioning of an NSP).

In those cases, notification must be given no later than 8 business days after the change takes effect.

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

Audit observation

We examined the EDA file, provided by Northpower, for the period of 16/9/17 to 13/01/19 to assess compliance. The results are shown below:

Activity	Total number of updates		No of updates later than 3BD		Date range of updates [BD]	
	2017	2019	2017	2019	2017	2019
Address	5,773	5,712	137 (2.4%)	312(5.46%)	4 to 2134	Up to 1059
Network	2,792	3,346	58 (2.1%)	185 (5.5%)	4 to 1380	Up to 1340
Pricing	3,702	4,560	174 (4.7%)	235 (5.17%)	4 to 37	Up to 787
Status (3)	190	180	151 (79.5%)	146 (81.1%)	5 to 645	Up to 540

Audit commentary

Addresses - The number of late updates of addresses increased slightly in comparison with last year. Last year it was 2.1%, this year only 5.46%. We reviewed ICPs with the most backdated addresses and our conclusion, after talking to Northpower, was that many were caused by location address updates, sent by the District Council, being reviewed. The most backdated entries are caused by entering into the property name field descriptions such as "generation no export" for three ICPs, which is not of great significance.

Pricing - The number of late updates of price code, increased in comparison with last year. Last year it was 4.7%, this year only 5.17%. We identified three ICPs 0000537534NRB3A, 0000542114NR7F7, and 0000544153NRD58, for which the price code was backdated to 2014. It was discussed with Northpower, their comment is below

- 0000537534NRB3A, 0000542114NR7F7, and 0000544153NRD58- went from DM4 to DM1 on 21/11/14. Northpower discovered incorrect price code assigned to these ICPs and corrected it.

Northpower does not receive a big list of ICPs from traders for which price category code changes are required. 98.4% of changes to price code is done within 10 BD. Traders are billed using price category codes recorded in the registry, meter register price rates held in Gentrack, and units provided by traders.

Network – A small number of ICPs are effected by updates to information later than 3 business days. In most cases there are special circumstances. 24 ICPs were backdated between 347 days to 1380 days. 28 updates to correct UML information, 66 updates are related to updating embedded generation information.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.1</p> <p>With: 8 of Schedule 11.1</p> <p>From: 01-Jun-17</p> <p>To: 13-Jan-19</p>	<p>A small percentage of updates to the registry were later than 3BD.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>We have recorded the controls as strong. Northpower constantly reviews its data, using specially design queries, to check that it is accurate. Late updates to the registry are caused by special circumstances such as correction of errors, being aware that UML was removed, Gentrack issues. No impact on traders or settlement outcomes</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<ol style="list-style-type: none"> 1. Northpower will correct any data errors discovered in the Registry and this often requires existing historical Registry entries to be replaced. 2. Decommissioning of ICPs cannot be completed in the Registry until any subsequent entries are removed and the trader moves the Registry status to Inactive Ready for Decommissioning. Unfortunately, it can take some weeks and several emails before these Registry changes are made by a trader. 3. With regard to backdating price category code changes, Northpower is happy to do this for a reasonable period (usually 1 month maximum) if agreed with the trader and the change is in the best interest of the customer. 		Not Applicable	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	Identified
<p>Gentrack will often send a backdated entry to the Registry, often related to the Part 10 go-live, when data for an ICP is changed that affects the Registry. We have introduced checks to capture, then reverse, these old entries however this will mean both the initial update and the reversal are effectively backdated beyond 3 working days.</p>		Not Applicable	

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

We examined the LIS files and confirm all ICPs have NSPs assigned.

Audit commentary

At the time that an ICP identifier is created, it is assigned a transformer. An interface between Gentrack and the GIS (which holds the Network Asset Configuration) links transformers and NSPs together. There are no situations where Northpower cannot identify the NSP to which an ICP will be connected.

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. This is a common occurrence, generally due to a customer requiring their ICP when moving, so that they can sign up with a trader for the electricity supply.

Audit commentary

Calls from customers are answered by the Northpower Reception or Commercial Team members who have access to Gentrack, which stores connection/customer information.

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 13th of January 2019 was examined.

Audit commentary

We identified 4 ICPs with identical addresses (two pairs). All four ICPs have GPS coordinates assigned therefore they can be located. As soon as any new ICP is electrically connected, GPS coordinates are assigned.

169 ICPs have addresses which do not allow the ICP to be readily located but they all have GPS coordinates recorded in the registry, therefore they are compliant.

Audit outcome

Compliant

4.5. Electrically disconnecting an ICP (Clause 3 Schedule 11.1)

Code reference

Clause 3 Schedule 11.1

Code related audit information

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

Audit observation

This was described in the previous audit report. The situation has not changed much.

Northpower has commented that they have come across a very small number of ICPs that cannot be easily disconnected over the past two or three years. Many of these are very old ICPs where the disconnection point is inside, and access is unavailable for some reason.

Audit commentary

This specific case was described in the previous audit report.

There is a motel which was split into separate “holiday unit ICPs” around 2008 and there is a disconnection problem on one of the “common area” ICPs. It is ICP 0000507209NRDB7, which has a NPOW legacy meter installed on the internal meter board, there is a problem with access to the board.

There were two more ICPs created for “holiday units”, ICPs 0000557758NRF8B (smart meter is installed therefore it can be disconnected remotely, also there is access to the board) and 0000557717NR2F0. AMS meter was installed on 21/03/18, therefore it can be disconnected remotely.

In summary two ICPs can be disconnected remotely but there is a problem with disconnection of 0000507209NRDB7.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.5</p> <p>With: 2 of Schedule 11.1</p> <p>From: 01-Jun-17</p> <p>To: 13-Jan-19</p>	<p>1 ICP cannot be easily disconnected because of an access issue to the main switch; the problem was created during the splitting of a motel into separate holiday units.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>We have recorded the controls as weak. It is a known problem, which was “created” in 2008 during the split of an existing motel into separate holiday units; there is no impact on settlement outcomes, audit risk rating recorded as low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
This last ICP has “interim certified” metering (MEP is Northpower) so it is on the list of ICPs that Northpower has agreed with Contact Energy for a change to Metrix advanced meters. When field staff are available to carry out the meter change, the trader will be asked to arrange access to the meter board with their customer.		31/7/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
It has been re-iterated the requirements of the Code to both the Northpower Network design team and Network Engineers that all ICPs must be able to be disconnected without disconnecting any other ICP. Often disconnection problems arise where the disconnection point is on an internal shared meter-switchboard as access has to be arranged through the trader.		On-going	

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 22 September 2017 were examined to assess compliance.

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

1. 4 ICPs have UML details recorded by traders but they are incorrect.
 - ICP 0000524332NR6B2- Northpower had never recorded unmetered load at the rural shed and it is unlikely this ICP ever had unmetered load.
 - 0000541130NR948 – UML removed 31/8/15
 - 0000541213NRBDE – UML removed 01/09/15
 - 0000536638NRA87 - UML removed 01/08/16
 - 0000536659NR932 – UML removed 03/10/17
2. Initial Electrical Connection Date – was missing for two ICPs (0000569847NRC1B and 0000569980NRF3A) Northpower commented that the registry did not acknowledge the update, but it was not noticed. The date of electrical connection was entered during the audit.
3. Different NSP on the same street – we identified 1 ICP (0000566989NR80B), which had the incorrect NSP assigned due to the incorrect rural transformer identifier being assigned to the ICP. It was corrected during the audit.

Audit commentary

Northpower has robust processes in place to validate data stored in the registry. There are a number of queries designed by Northpower which check the registry data and Gentrack data and compares the two. The results speak for themselves. Minor non-compliances were identified.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.6 With: 7(1) of Schedule 11.1 From: 01-Jun-17 To: 13-Jan-19	3 ICPs had incorrect data in the registry. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	We have recorded the controls as strong. Northpower runs several queries to validate the accuracy of data. Information incorrect for a very small number of ICPs. Audit risk rating low, no impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
Northpower will continue to be proactive in our attempts to identify and correct data errors in Gentrack or the Registry. The correction of data errors often requires existing historical Registry entries to be replaced, resulting in event dates beyond the Code limit of 3 business days. Because of correcting some historic Registry data we found that additional work is involved in chasing traders to update their Registry data (notably unmetered load). It appears that many traders do not review the Notification Files received from the Registry for data changes.		On-going	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Northpower will continue to be proactive in our attempts to identify and correct data errors in both Gentrack and the Registry.		On-going	

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

Any new ICP is created in Gentrack with all the information such as the network and address events, except a price category code. The next business day a “holding price category code” – NEWICP is entered for that new ICP.

Audit commentary

Up to 01/04/2019, Northpower Contracting division used to install the metering at all new ICPs regardless of which MEP was nominated by a trader. The inspectors job was to complete the required electrical compliance testing and certification before electrically connecting the ICP to the network.

Once this work was completed the meter report was passed to Northpower Network staff. The details of the metering and tariff information was entered into Gentrack. Northpower staff was assigning the price category code, which Gentrack automatically uploaded to registry, the same day.

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 13/01/19 was reviewed

Audit commentary

All ICPs with the status “active” or “de-energised” have the GPS coordinated fields populated. ICPs with the status of “new” or “ready” do not initially have GPS coordinates downloaded. We confirm that GPS coordinates meet the NZTM2000 standard as per registry specification.

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 process for creating new connections has not changed since the last audit

The ICP has a single price category (NEWICP) but Northpower does not have in writing, at this point in time, that the trader will take responsibility for the ICP.

Audit commentary

New ICPs are created in Gentrack based on information provided by the customer in the Application for Network Connection. The original upload of the ICP to the registry does not include a price category code. The status assigned by the registry is "new". The following business day Northpower enters a special "holding price category code" – NEWICP. The registry changes the ICP status to "ready". Once the ICP is electrically connected a price category code, which reflects the configuration of the installation, is entered into Gentrack and the registry.

We went through a number of new connections and confirm that this process is followed.

As per **section 3.6** non-compliance was identified, which interconnects with this non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.9</p> <p>With: 14 of Schedule 11.1</p> <p>From: 01-Jun-17</p> <p>To: 13-Jan-19</p>	<p>Incorrectly assigned status “ready” No confirmation from a trader accepting responsibility is received for the ICP before the “ready” status is assigned.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once previously</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>We have recorded the controls as moderate. Northpower has a good process to receive a confirmation from a trader accepting responsibility for the ICP. The problem is that it is received after the registry changes the ICP status to “ready”. Audit risk rating low, no impact on settlement outcomes</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Northpower will not be changing its current ICP creation processes and will continue to place the retailer nominated by the customer in the Registry as the “proposed trader” at the time of creating the new ICP.</p> <p>However, with the move away from Northpower Contracting being the sole metering/livening contractor to using only third party contractors for both meter installation and livening the various “approval” steps are likely to change.</p>		Under review due to process changes	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>ICPs are not connected or electrically connected without the “approval” of a trader. Up until the 1/4/2019, this approval was the receipt of a service request from the trader accepting the ICP and requesting the metering to be installed and the ICP to be electrically connected.</p> <p>Several traders use the Disconnected – New Connection in Progress status to initiate their customer “sign-up” process. With the implementation of Part 10, Northpower was requested to move the ICP to the “ready” status as quickly as possible so that the proposed trader could accept the ICP in the Registry to start their “sign up” process.</p>		No action	

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

Code reference

Clause 16 Schedule 11.1

Code related audit information

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

Audit observation

The LIS file was analysed.

Audit commentary

Northpower has 9 ICPs with the status of “distributor”, representing shared unmetered load, which are correctly populated in the registry. We checked the LIS file and confirm that the information is correctly populated. They are historic ICPs, Northpower does not allow the connection of new shared unmetered load.

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 process of decommissioning ICPs has not changed since the last audit.

Northpower decommissions an ICP upon either retailer instruction, owner’s instruction, or due to an “event” such as destruction by fire or storm. Before the ICP status is changed to “decommissioned”, a contractor goes on site to physically disconnect the installation and remove all equipment. Traders are notified and given details of the meter readings and reason for the decommissioning in those cases where it was requested by the owner or due to an event beyond everyone’s control.

Audit commentary

Northpower has many connections which are called the “long term de-energised” ICPs. These are ICPs that have been de-energised for a long period of time but Northpower cannot decommission them under the Electricity Act 2010 (section 105 to 108) as the owner will not give permission (say they may need the supply in the future) for a permanent disconnection from the network. In Gentrack Velocity these ICPs (286 as at 14th January 2019) have a status of “long-term disconnected”, which doesn’t have an equivalent registry status reason code. Most retailers give such ICPs the status of “Inactive” – vacant, but we identified 56 of these ICPs with a status of “Inactive – ready for decommissioning” in the registry,

which is incorrect. 5 ICPs have a status of “Electrically disconnected due to meter disconnected” but meters were removed. This issue was identified in the last three audits to draw attention to it.

We sampled 17 decommissioned ICPs to follow the decommissioning process. They are ICPs decommissioned since the last audit. Northpower’s process is good. All information related to the decommissioning is stored in Gentrack and any paperwork completed by the field staff doing the decommission is scanned against the ICP.

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. New price category codes were last added as from April 2015.

Audit commentary

New price category code, DM6 (ToU Principal Residence), was added on 13/12/18. The new price code took effect on 01/04/19.

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

We examined the Loss Factor Codes table in the registry. There were no new entries since 1/4/2016.

Audit commentary

Northpower has nine Loss Factor Codes in the registry, no new entries have been added since 2016.

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

We examined the Loss Factor Codes table in the registry. Northpower Loss Factor information is disclosed on the Northpower web site.

Audit commentary

Loss factors have a single value for a whole year, which cover a range of trading periods. There are no separate loss factors for summer or winter.

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

We examined the NSP mapping table in the registry. Since the last audit Northpower did not create a new, or decommission, an NSP.

Audit commentary

Based on examination of the NSP mapping table in the registry it was confirmed that no new NSP was created and no NSP was decommissioned since the last audit.

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

Northpower has not created a new NSP, 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 Northpower 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

Northpower has not created any new NSP since the last audit.

Audit commentary

Northpower has not created any new NSP. It is very 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

Northpower has not established any embedded network since the last audit.

Audit commentary

Northpower has not established any embedded network since the last audit and there are no plans to do it in the future. 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

Northpower has one balancing area (ALLGXPSNPOWG) according to the NSP mapping table in the registry.

Audit commentary

Examination of the NSP mapping table in the registry showed that there were no changes to the balancing area 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

Northpower did not establish any embedded network.

Audit commentary

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

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 3 business days before the transfer takes effect.

Audit observation

Northpower has not transferred any ICPs.

Audit commentary

Northpower has not transferred any ICPs. There are no such plans in 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 are 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

Northpower 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 Northpower 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

Northpower 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 Northpower 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, Northpower did not acquire all or part of a new network.

Audit commentary

This clause is not applicable to Northpower 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

Northpower does not own any embedded network.

Audit commentary

This clause does not apply to Northpower. 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

Northpower did not create any embedded network since the last audit.

Audit commentary

This clause does not apply to Northpower. 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

Northpower did not transfer any ICPs for an embedded network since the last audit.

Audit commentary

This clause does not apply to Northpower. 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

The company does not allow any new shared unmetered load.

Historically, Northpower has 9 ICPs with the status “distributor” which represent shared unmetered load. The reconciliation flag for these ICPs is “SI”. To these 9 ICPs there are connected 57 individual ICPs, which represent single connections to the network.

Audit commentary

Northpower only maintains historic information of shared unmetered load. Requests for new shared unmetered load are not accepted.

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 we mentioned above, all shared unmetered load ICPs are historic, so there are no additions to shared unmetered load. If Northpower becomes aware of a change to the capacity of a shared unmetered load, it will update the registry.

Audit commentary

We checked the registry for the period 16/9/17 to 13/01/19. There were no updates to information for shared unmetered load ICPs.

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

Northpower describes, on their website, in simple terms the methodology for their loss factor calculation. It says:

In accordance with the Electricity Industry Participation Code, Northpower has reviewed the Loss Factors applicable to ICP's on the Northpower Electricity Distribution Network.

The Loss Category Code applicable to each ICP supplied from the network is determined by the voltage and the location within the distribution network at which each ICP is metered. Table 1 below indicates the Loss Factor values applicable to each Loss Category Code from 1 April 2009 and from 1 April 2016. These have been derived from load-flow modelling of power transformers, sub-transmission circuits, high voltage feeders, distribution transformers and the low voltage distribution.

There are two large embedded generators on Northpower's network – the Wairua hydro station, owned by Northpower, and the Trustpower owned diesel fuelled “peaking” generator. The technical loss factor for each Loss Category Code is published on the Northpower web site

Loss Category Code	Metering voltage	Description	Loss Factor 01/04/2009	Loss Factor 01/04/2016
L0	33kV	Metered adjacent to NSP (GXP)	1.000	1.000
L1	33kV	ICP 0000546037NR9E6	1.023	1.015
L2	11kV	Metered at 11kV	1.045	1.050
L3	400V	150kVA and above, metered near the distribution transformer	1.053	1.058
L4	400V	Not currently used	1.068	1.073
L5	230/400V	Less than 150kVA, metered on the LV distribution network	1.068	1.073
L6	33kV	ICP 0000546038NR638	1.000	1.004
G1	33kV	Wairua generation	1.025 Gen 1.016 Cons	1.025 Gen 1.016 Cons
G2	11kV	Bream Bay generation	1.004 Gen 1.001 Cons	1.004 Gen 1.001 Cons

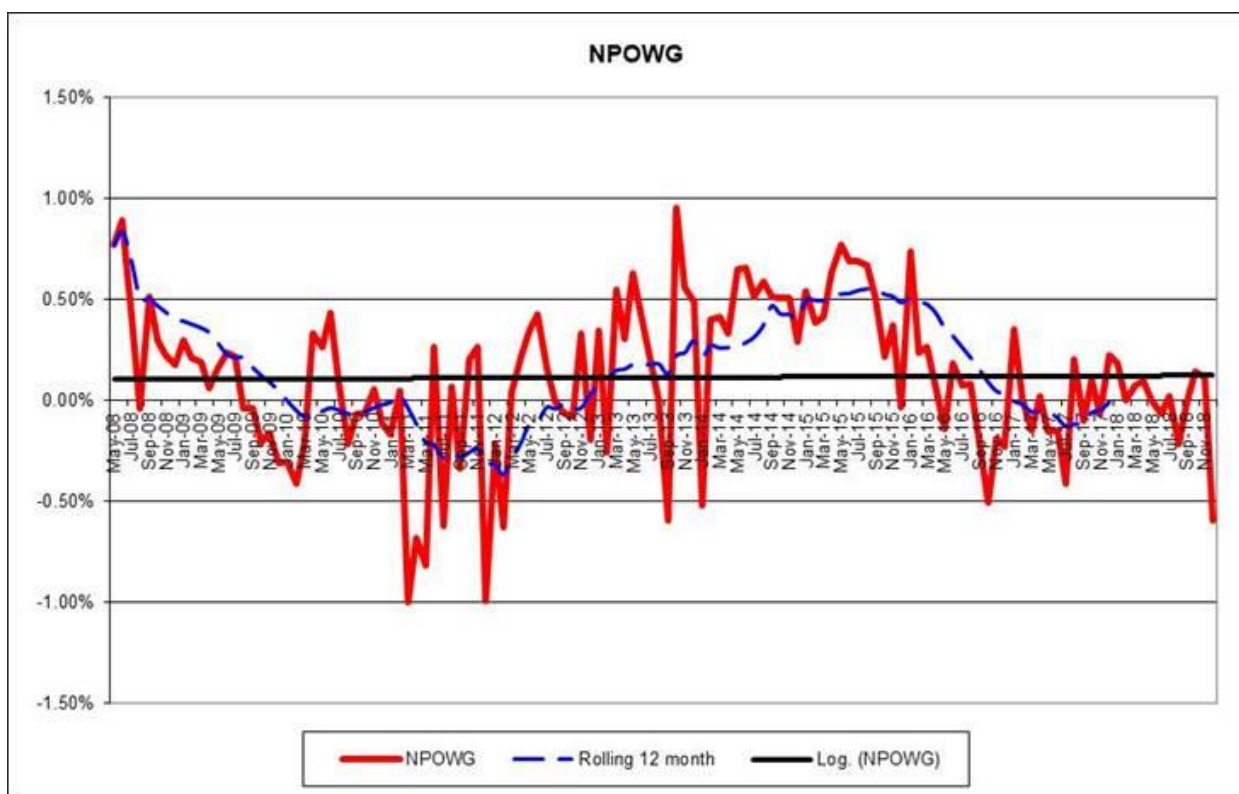
Audit commentary

The loss factor for each Loss category Code was reviewed this year and the decision was that there were no reasons to change the existing loss factors. There were no significant changes to configuration on the

network, which would require loss factor calculation. According to Northpower average loss has decreased. The percentage of smart meters installed on the network is quite high at 85%.

Northpower commented that they don't concern themselves with the non-technical losses; however, they do perform an annual check, for Information Disclosure, on where the overall network loss factors are correct.

Northpower closely monitors reconciliation losses and UFE on its network. The below graph shows UFE:



According to the Guidelines, UFE is expected to be within $\pm 1\%$ over the course of any 12 months period. The 14 month UFE is currently sitting at around 0.1% to 0.5%.

Audit outcome

Compliant

CONCLUSION

PARTICIPANT RESPONSE

Many of the non-compliances noted in this audit are the same as those noted in previous audits.

It is unfortunate that the Code, in being so prescriptive, does not take into consideration that there are many ways to achieve the same outcome. As a result, an auditor must find non-compliances with the overly prescriptive Code without being able to look at whether the actual process used achieve the required result effectively and efficiently. As business relationships change, as has occurred at Northpower Group between Northpower Network and Northpower Contracting, then so too will the processes change to achieve the required results.

With the move to third party contractors, and a more direct relationship between those contractors and the traders, several of Northpower's ICP related processes will need to change. Already we are finding, as have other distributors before us, that the gathering of data to update the Registry becomes more difficult and the lead-time for making the Registry updates lengthens. In Northpower's case, this is a direct consequence of the contractual relationship moving away from Northpower Network – Northpower Contracting to a trader-contractor relationship where Northpower Network has no contractual rights to data that is (or should be) collected in the field by the contractor.

Some areas of current non-compliance may reduce as processes change. It is likely, and this is already occurring, that an increase in Registry updates moving beyond the 3 business days due to the problems in receiving information from contractors who have no direct contractual relationship with Northpower.

To enable an efficient electricity market to evolve the Code should be outcome focused rather than prescriptive. In addition, it should recognise and support the "real-world" contractual relationships that exist for gathering information about an ICP in the field.