

**ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT**

For

NORTHPOWER

Prepared by: Ewa Glowacka

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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 Commission.

The number of ICPs on Northpower's network increased by more than 1,000 ICPs. Northpower has again achieved a high level of compliance. The company has put in place many processes to monitor compliance on a daily basis.

Five non-compliance (one of them cleared) were found. It is more than last year because 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 of one in this report.

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
Changes to registry information	4.1	8 of Schedule 11.1	Small number of updates (about 3%) to the registry later than 3BD.	Strong	Low	1	Identified
ICP location address	4.4	2 of Schedule 11.1	6 ICPs had duplicate addresses, hard to locate	Strong	Low	1	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.	Weak	Low	3	Identified
Distributor to provide ICP information to the registry manager	4.6	7(1) of Schedule 11.1	Less than 10 ICPs had incorrect data in the registry	Strong	Low	1	Identified
Management of "ready" status	4.9	14 of Schedule 11.1	Northpower receives a confirmation form a trader accepting responsibility for the ICP after the registry changes the ICP status to "ready" because a proposed trader specified by a customer was uploaded	Moderate	Low	2	Disputed
Future Risk Rating						8	

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

Northpower level of compliance is high. The company has put in place many processes to monitor compliance daily. We recommend the next audit to be conducted in 18 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.

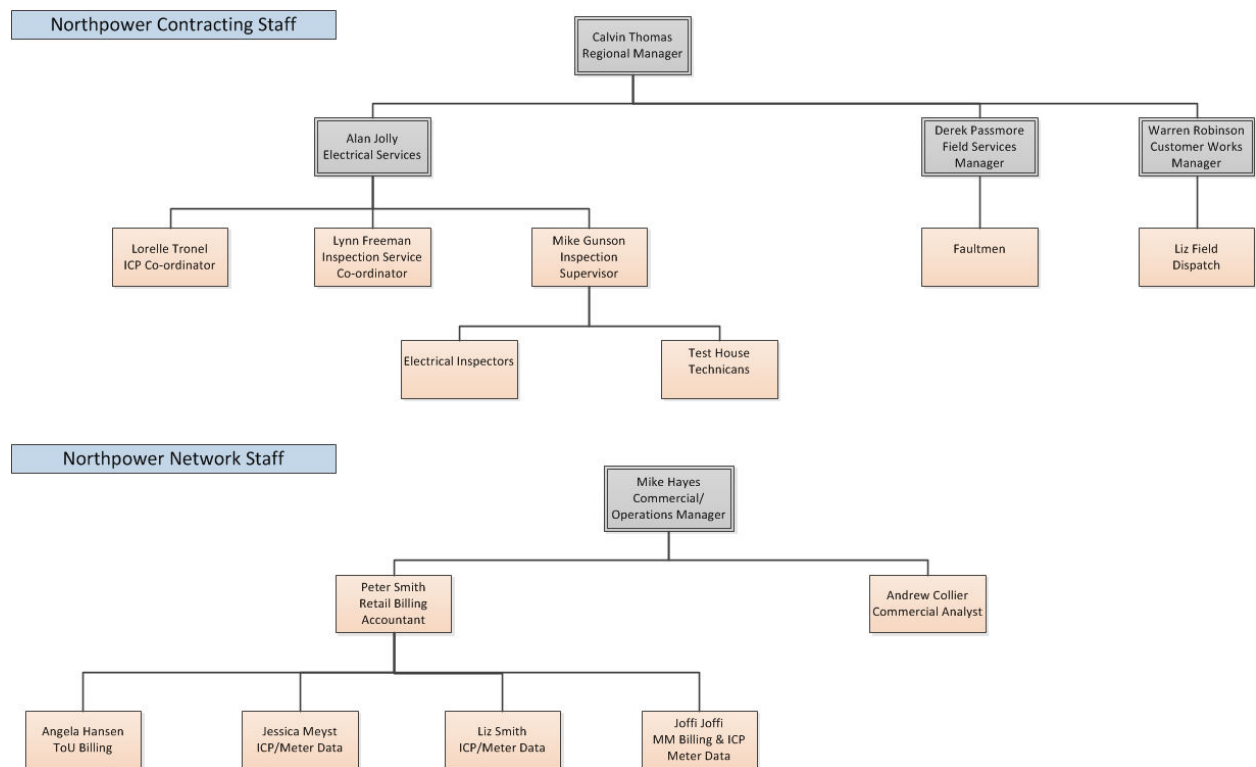
Audit observation

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
Elizabeth Smith	Network Administrator	Northpower Ltd
Joffi Joffi	Billing Administrator	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 participant's 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 the main software application used for both ICP creation and data maintenance. This software application also handles the registry interface and the updating of ICP information in the registry. 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
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NPOW	BRB0331	BREAM BAY			ALLGXPSNPOWG	G	1/05/08	4,981
NPOW	MPE1101	MAUNGATAPERE			ALLGXPSNPOWG	G	1/04/13	43,853
NPOW	MTO0331	MAUNGATUROTO			ALLGXPSNPOWG	G	1/05/08	10,109

Northpower provided a list of all ICP's as of the 22 September 2017. The total number of ICPs in the registry was 64,827.

Status	Number of ICPs (22/09/17)	Number of ICPs (2016)	Number of ICPs (2015)
Active (2,0)	57,438	56,446	55,624
Inactive- new connection in progress (1,12)	119	87	54
Inactive – vacant (1,4)	1,069	1,011	989
Inactive – AMI remote disconnection (1,7)	103	82	0
Inactive – at pole fuse (1,8)	5	0	0
Inactive – de-energised due to meter disconnected (1,9)	5	4	2
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)	70	64	65
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	5,980	5,711	5,512
Distributor (888)	9	9	9
New (999)	7	6	1
Ready (000)	112	103	84

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 26/27 September 2017.

1.11. Summary of previous audit

The previous audit was carried out on 5/6 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)(p) of Schedule 11.1	3 ICPs did not have Initial Energisation Date populated and for 7 ICPs this was the date that solar panels were installed	
Distributor to change ICP information provided to registry	8(2)(b) of Schedule 11.1	Some registry updates were backdated	

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 were reviewed to assess if all practicable steps had been taken to provide accurate information.

Audit commentary

Northpower is committed to having complete and accurate data in the registry. There is still room for improvement but Northpower has adopted a proactive attitude to reduce the amount of incorrect or missing 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 16/8/16 to 15/9/17 to assess if the company identified that if information provided was inaccurate, it was corrected as soon as practicable.

Audit commentary

As described in the previous section, Northpower has had a proactive attitude to reduce the amount of incorrect or missing information in the registry. There are 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:

- BTS – incorrect price code
- ICP decommissioned in the registry by trader
- GPS coordinates – blank field
- Live ICP with NSP which does not exist

- Initial Electrical Connection Date missing
- The registry status “ready”, Gentrack status “live”

As we said before, there is always room for improvement but so far, this approach to monitoring of compliance delivers excellent results.

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

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

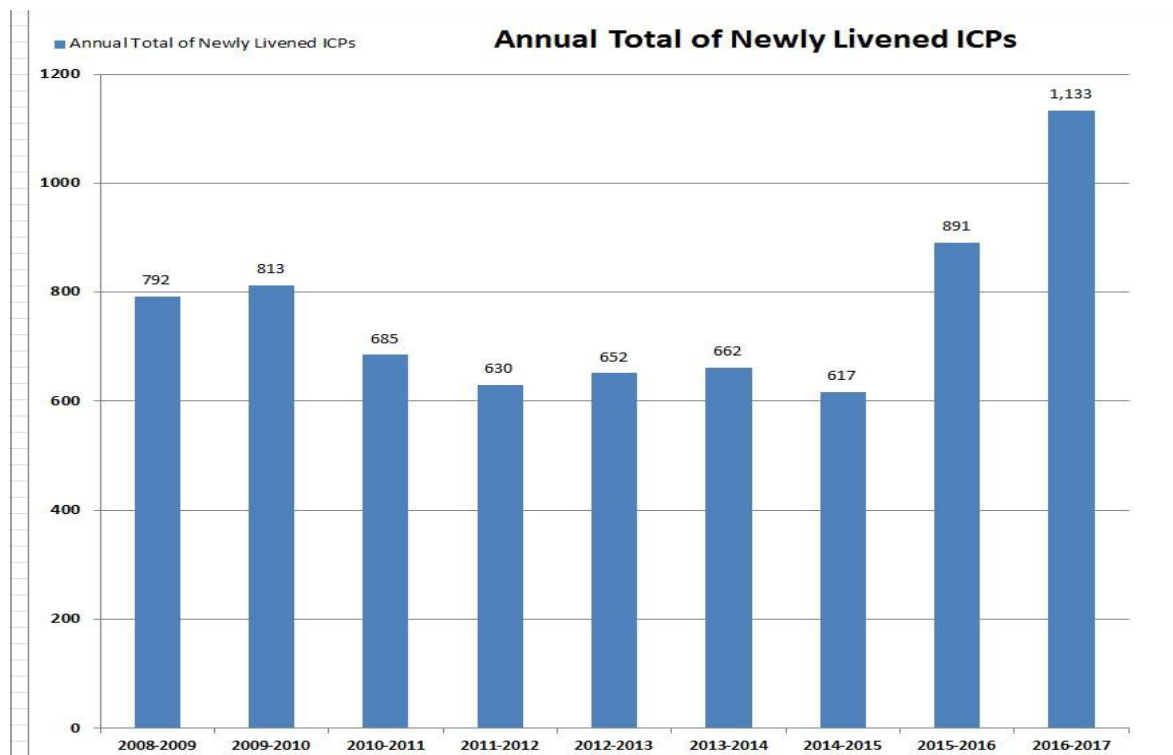
Northpower adopted the following processes to create new ICPs:

1. In the case where the new connection does not require any line or cable work, an ICP is created by the network straight away. A trader, which is specified on the application form (the "proposed retailer"), is notified of the new ICP by Northpower emailing the retailer a copy of the completed Application for Network Connection or Alteration to Supply form and it is also notified by the registry (via the Notification File NP-030) once the ICP has been created in the registry.
2. In a case where some planning and line work is required or overhead line is converted to underground, an ICP will not be created until a customer and Northpower agree on the possible cost and a deposit is paid. Once the planning and construction work is completed the ICP is created and the trader specified on the Application for Network Connection form by a customer is notified using the process outlined in (1) above.

Audit commentary

We walked through 30 new installations (more details shown later) to review the process described above.

Northpower provided a summary of ICPs created for the last 9 years to show the increase in the number of new connections in the area.



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 a customer in the Application for Network Connection. Gentrack creates the UIS file (DC-010/DM-020) and it is uploaded to the registry overnight to create the ICP in the registry. 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. It allows the registry to move the ICP status to “ready”. A trader can now pick-up the ICP and assign it the status code of “New Connection in Progress” (001/12) so they can nominate a MEP where this is the trader’s chosen process (e.g. Genesis Energy and Trustpower). Once the ICP is electrically connected, a price category code, which reflects the configuration of the installation, is entered.

Audit commentary

We examined the LIS file dated 22 September 2017 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 30 new connections to assess if ICPs were created before being electrically connected. The summary information is shown below:

ICP	APPLICATION	Uploaded to registry	SR	Initial Electrical Connection Date
0000567772NR163	20/06/16	16/08/16	17/08/16	23/08/2016
0000567779NRFB7	16/08/16	17/08/16	22/08/16	02/09/2016
0000567799NR50D	25/08/16	26/08/16	5/09/16	19/12/2016
0000567823NRA21	1/09/16	6/09/16	12/09/16	22/11/2016
0000567873NR229	13/09/16	15/09/16	16/09/16	04/11/2016
0000567997NR09D	13/10/16	14/10/16	20/10/16	29/11/2016
0000568070NR784	3/11/16	4/11/16	7/11/16	01/12/2016
0000568133NR0E5	17/11/16	21/11/16	22/11/16	29/11/2016
0000568171NR2C5	25/11/16	28/11/16	29/11/16	26/01/2017
0000568270NRD83	19/12/16	21/12/16	4/01/17	25/01/2017
0000568336NR7AD	21/01/17	26/01/17	31/01/17	01/03/2017
0000568384NR59A	31/01/17	13/02/17	22/02/17	24/02/2017

0000568385NR9DF	9/02/17	13/02/17	16/02/17	24/02/2017
0000568387NR95A	9/02/17	13/02/17	14/02/17	24/02/2017
0000568417NR9BF	13/02/17	20/02/17	2/05/17	08/05/2017
0000568444NRD77	23/02/17	2/03/17	3/03/17	07/03/2017
0000568456NR75F	2/03/17	4/03/17	6/03/17	27/04/2017
0000568528NR89D	16/03/17	21/03/17	26/04/17	27/04/2017
0000568548NR76D	24/03/17	24/03/17	27/03/17	28/03/2017
0000568579NRCD0	29/03/17	10/04/17	11/04/17	19/04/2017
0000568607NR915	3/04/17	13/04/17	26/04/17	02/05/2017
0000568683NRD55	25/08/16	8/05/17	9/05/17	25/07/2017
0000568710NR776	10/05/17	12/05/17	18/05/17	17/08/2017
0000568750NR5D3	18/05/17	23/05/17	25/05/17	06/06/2017
0000568791NRE79	18/05/17	6/06/17	7/06/17	22/06/2017
0000568863NR1E4	27/06/17	29/06/17	30/06/17	06/07/2017
0000568887NRA54	4/07/17	7/07/17	11/07/17	01/08/2017
0000568911NRD38	12/07/17	19/07/17	28/07/17	03/08/2017
0000568956NR257	17/05/17	1/08/17	3/08/17	23/08/2017
0000568999NRA66	9/08/17	15/08/17	18/08/17	21/09/2017

Audit commentary

The process is robust. We did not find any installations which were electrically connected without an ICP being assigned. We also checked the EDA file to see if there were any ICPs where the Electrical Connection Date was earlier than the date when an ICP was assigned the status of “ready”. We found none.

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 16/8/16 to 22/9/17. There were 1,089 ICPs electrically connected. For all of them the registry manager was provided the Initial Electrical Connection Date within 4 business days.

Audit commentary

Installations on the Northpower Network are electrically connected only by the Northpower Contracting Division on the request of traders. In the majority of cases the Northpower Contracting Division also installs the meters which are either owned by Northpower or another meter asset owner. Once a job is

complete, the Network staff are notified and information in Gentrack updated then uploaded to the registry.

Audit outcome

Compliant

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

Code reference

Clause 11.17

Code related audit information

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

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

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

Audit observation

A review of the new connection process confirm compliance with clause 11.17(1A) because it does follow the process in clause 10.31 and connects ICPs on trader's request. Northpower acts as trader's agent to electrically connect installation.

Northpower notifies the registry of a proposed traders to their best knowledge.

There is ambiguity between the registry and the Code requirements. Northpower records a proposed trader in the registry as per Registry specification ver. 22.21, which says:

"Proposed Trader: A four-character code (Participant Identifier) that identifies a valid Trader. During the pre-commissioning phase, a Distributor can choose to record who they believe will be the initial Trader trading at an ICP. Notifications of all changes made to that ICP in the pre-commissioning phase are then required to be sent to that Trader. However, the actual initial Trader can be different from the one proposed."

Clause 11.17(2) puts 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 strictly speaking does not have a trader acceptance yet. The acceptance arrives later in a form of an SR. If a request for connection is issued by a different trader than recorded in the registry, Northpower updates the registry.

Some traders change the status to "inactive – new connection in progress" (001/12) well before a service request to liven is issued while others send the service request (SR), which is understood by Northpower as an acceptance of responsibility for the ICP, and the trader only changes the ICP status in the registry directly to "active" once the ICP has been electrically connected. We do agree with the Northpower's approach. In our view, the most definite confirmation of the acceptance of an ICP is changing the registry status to "001/12".

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 meets compliance with this clause

Audit outcome

Compliant

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

Code reference

Clause 10.31

Code related audit information

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

Audit observation

Northpower do not receive requests from traders to connect an ICP. According to the current process Northpower receives a service request (SR) from the trader as an indication of acceptance of an ICP and a request to connect and electrically connect and hang meters.

Audit commentary

Non-compliance is identified because Northpower connects an ICP without a request from a trader. Northpower receives the SR, which acts as acceptance of responsibility for the ICP and a request to electrically connect. One would say that when a trader accepts an ICP, it requests a connection at the same time. There is some logic in it.

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:

xxxxxxxxxxxccc where:

- *xxxxxxxxxxx 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. If an ICP does not meet the requirements of the algorithm, it is rejected by the Registry.

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 and we confirm compliance. It must be noted that the registry design prohibits the assigning of more than a single loss category 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

We reviewed the process of ICP creation. As it was described in section 3.3, when Gentrack uploads the newly created ICP to the registry it does not include a price category code. The status assigned by the registry is “new”. This status is changed the next business day to “ready” when a price category code of NEWICP is added to the ICP and uploaded to the Registry.

Audit commentary

The LIS file dated 22 September 2017 showed only 9 ICPs of the status “new”, which were uploaded to the registry quite recently.

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 identified 2 ICPs with the status of “ready” which had been created for more than 24 months. The first ICP 0000566065NR8A6 was created in 2014 and the customer confirmed in late November 2016 that they still want to use it in the future; the trader was happy to accept the ICP remain with a “ready” status. Another ICP was 0000566249NRCEA was created in 2015, the customer confirmed with the trader in March 2017 that they hoped to finish off by winter.

Audit commentary

Northpower closely monitors ICPs with the status of “new” and “ready”. According to the Northpower ICP creation process there would be a very small number of ICPs with the status of “new” which would all have been created recently. 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” (003/01) 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

Northpower has an embedded hydro generation station that has a capacity of 5MW (ICP: 0000100001NR87B). In addition, Trustpower has an embedded diesel “peaking plant” generator with 10 MW capacity situated at Bream Bay (ICP: 0000100002NR4BB).

Audit commentary

We checked the registry information and confirm that both ICPs have unique loss category codes assigned. In the case of ICP 0000100001NR87B the loss category code is G1 while the “peaking plant” 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 16/8/16 to 15/9/17 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	5,773	137 (2.4%)	4 to 2134	Comments below
Network	2,792	58 (2.1%)	4 to 1380	Comments below
Pricing	3,702	174 (4.7%)	4 to 37	There were 3 exceptional circumstances ICPs, they are described in Audit commentary
Status (0)	1,062			All within 1 or 2 business days
Status (999)	1,279			All within 1 or 2 business days
Status (3)	190	151 (79.5%)	4 to 645	43 ICPs were decom because not required anymore; their updates were mostly backdated; 6 ICPs were amalgamated;

Audit commentary

Addresses - The number of late updates of addresses decreased in comparison with the last year. Last year it was 7.9%, this year only 2.3%. 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. Northpower had a temporary staff member work through the monthly District Council address notifications to identify any properties where an ICP had been built since the address notification file had been originally processed. Unfortunately, the temporary staff

member used historic event dates for any address updates rather than the date the address change was being completed in Gentrack.

Changes to the “decommissioned” status as a result of dismantling installations are updated reasonably quickly within up to two months. Northpower must wait for traders to change the status to “ready for decommissioning” in most cases and the traders are very often slow to do this. Northpower has a process in place where a report is run daily to check on ICPs that need the status changed to Decommissioned in the Registry. If a trader needs to reverse “blocking” entries from the Registry or needs to change the ICP Registry Status to De-energised – Ready for Decommissioning (001/06) the Northpower process includes regular email requests/reminders to the trader to do this.

Pricing - The number of late updates of price code decreased in comparison with the last year. Last year it was 22.8%, this year only 4.7%. We identified three ICPs 0000539942NRB24, 0000542124NR00F, and 0000548421NR605, for which the price code was backdated to 2011. It was discussed with Northpower, their comment is below

- 0000539942NRB24 - went from DM4 to DM1 on 2/9/2014 because of a meter change by Contact Energy contractors (not Northpower Contracting). Northpower was not advised of the meter/price plan change until early July 2017 when AMS updated the metering into the Registry on 30/6/2017.
- 0000542124NR00F - went from DM4 to DM1 on 11/7/2014 because of a meter change by Contact Energy contractors (not Northpower Contracting). Northpower was not advised of the meter/price plan change until early May 2017 when AMS updated the metering into the Registry on 6/5/2017.
- 0000548421NR605 – an unmetered Telecom cabinet was changed to metered on 21/11/2011 however paperwork had been misplaced and the existence of the meter was not discovered until the trader initiated a site visit on 23/8/2016. The price category was corrected effective on the actual meter installation date which allowed for the line charges to be correctly billed using the Trustpower supplied consumption data.

Northpower does not receive a big list of ICPs from traders for which price category code changes are required. On average, the price category code for 14 ICPs per day is updated; many of these price category code changes are due to normal metering changes such as builders supply moving to permanent. Northpower does not have low and high domestic fixed charges, although a “non-principal residence” price plan was introduced from 1/4/2015. 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. We walked through them with Northpower and some of them with explanations are listed below:

- 0000545365NR088 – 1380 BD; Whangarei Base Hospital, emergency backup generator. This ICP had an installation flag of “B” even though it is known that emergency generation will never export energy. After confirmation from the Electricity Authority the generation capacity and generation type was populated in the Registry backdated to the last meter change.
- 0000548421NR605 – 1243 BD; removed UML when it was discovered that it was metered (refer Pricing section above)
- 0000536715NR18D – 820 BD; removed UML from Gentrack in 2010 as the result of a site visit; however, a Gentrack problem with how it updates UML to the Registry was discovered quite some time later which meant the Registry did not get updated in 2010.
- 0000536716NRD4D – 820 BD; removed UML from Gentrack in May 2009 as the result of a site visit; however, a Gentrack problem with how it updates UML to the Registry was discovered quite some time later which meant the Registry did not get updated in May 2009.
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Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.1</p> <p>With: 8 of Schedule 11.1</p> <p>From: 16-Aug-16</p> <p>To: 15-Sep-17</p>	<p>Small number of updates (about 3%) to the registry later than 3BD.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>We have recorded the controls as strong. Northpower constantly review, using specially design queries, its data 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's issue. 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	
<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

At the time, an ICP identifier is created, it is assigned a transformer, to which it will be electrically connected. An interface between Gentrack and the GIS which holds the Network Asset Configuration links transformers and NSPs together. We examined the LIS files and all ICPs have NSPs assigned.

Audit commentary

During the creation of an ICP, an NSP (indirectly) is assigned and uploaded to the registry. 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. Calls from customers happen often and Northpower also receives phone calls from traders or electricians asking to confirm an ICP or asking for additional 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 22 September 2017 was examined. We identified 6 ICPs with identical addresses (three pairs), they were changed during the audit.

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

Audit commentary

Gentrack does not have a built-in functionality to check for duplicate addresses. Northpower from time to time run a special query to check for duplicate address. The fact that we found only 6 ICPs confirm how good the process is.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: 2 of Schedule 11.1 From: 16-Aug-16 To: 15-Sep-17	6 ICPs had duplicate addresses, hard to locate 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.		
Actions taken to resolve the issue		Completion date	Remedial action status
The Northpower Network is predominantly a rural based network and therefore a large number of ICPs (pumps, cow sheds, etc.) do not have distinct addresses. We use the Property Name field where possible to help make addresses unique. In addition, many rural properties, and newly created urban subdivisions, do not have a "street number" issued by the local Council. The Councils will only issue "street numbers" to existing properties if the owner specifically requests this.			Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	

Northpower will continue to run the address audit reports and attempt to give any ICPs identified meaningful address information.		
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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

We 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. There is also a case where a motel 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. 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 (NPOW legacy meter but there is access to the board).

Audit commentary

Non-compliance was identified

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 4.5</p> <p>With: 2 of Schedule 11.1</p> <p>From: 16-Aug-16</p> <p>To: 15-Sep-17</p>	<p>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.</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	We have recorded the controls as weak. It is a known problem, which was “created” in 2008 during split of an existing motel into separate holiday units; there is no impact on settlement outcome, audit risk rating recorded as low.

Actions taken to resolve the issue	Completion date	Remedial action status
Northpower management believe the problem was caused by the property owner splitting the existing motel into separate "holiday units" and so are not prepared to take any action.	Not Applicable	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Northpower Network has re-iterated the requirements of the Code for ICPs created after 2002 to be able to be separately disconnected without disconnecting any other ICP.	31/8/2017	

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. No UML details in the "Unmetered Load Details – distributor" field in the registry for 23 ICPs but traders recorded daily units. We checked with Northpower to see what information was in Gentrack and the results were as follows:
 - 4 ICPs – UML data had been removed in Gentrack as Northpower could not confirm whether unmetered load existed at the ICPs. The trader had not removed their unmetered load data from the Registry.
 - 13 ICPs – traders removed their entries by the time this report was finished. The reason for the difference between Northpower (Distributor Unmetered Load) and the trader Registry unmetered load data was the same as that noted above. Northpower is proactively following up with traders where they have not removed their unmetered load data from the Registry.
 - 3 ICPs traded by CTCT – data looks unreliable - ICP 0000524332NR6B2, 0000536887NR1E0, and 0000539880NR54A. In one case Northpower had never recorded unmetered load at the rural shed and it is unlikely this ICP ever had unmetered load. In the other two cases, the existing unmetered load entry in Gentrack had been removed as Northpower could not confirm whether unmetered load existed at the ICPs. The trader had not removed their unmetered load data from the Registry.

- 4 ICPs still needs to be checked - 0000541171NR7A8, 0000536895NRBC8, 0000536827NR9FF, and 0000536715NR18D. The existing unmetered load entries in Gentrack had been removed as Northpower could not confirm whether unmetered load existed, or had confirmed that the unmetered load was now metered, at these ICPs. The trader had not removed their unmetered load data from the Registry.
2. Initial Electrical Connection Date – incorrect for ICP 0000526648NR73B as the ICP had been lived prior to 1999 however the Initial Energisation Date field in Gentrack was populated with the embedded generation livening date in error. The incorrect Initial Electrical Connection Date data was removed from the Registry (it cannot be removed from Gentrack) by the time the report was finished
 3. Different NSP on the same street – we identified 4 ICPs; it was discussed with Northpower; the results of investigation are shown below:
 - 0000568639NRD76 – incorrect ICP physical address
 - 0000520340NR5EA – incorrect ICP physical address
 - 0000532764NRE15 – incorrect ICP physical address
 - 0000568101NR798 – incorrect NSP

Audit commentary

Northpower has robust processes in place to validate data stored in the registry. There are a number 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 Schedule11.1 From: 16-Aug-16 To: 15-Sep-17	Less than 10 ICPs had incorrect data in the registry Potential impact: Low Actual impact: Low Audit history: Twice before 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 any data errors discovered in Gentrack or the Registry. This often requires existing historical Registry entries to be replaced. As a consequence of correcting some Registry data we have found that additional work is involved in chasing traders to update their Registry data (notably unmetered load). It appears that many traders do not seem to be reviewing 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 any data errors discovered in Gentrack or the Registry. This often requires existing historical Registry entries to be replaced.	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 ICPs are created in Gentrack with all the information for 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

Northpower Contracting division installs the metering at all new ICPs regardless of which MEP is nominated by a trader. The inspectors complete the required electrical compliance testing and certification before electrically connecting the ICP to the network. Once this work is completed the meter report is passed to Northpower Network staff. The details of the metering and tariff information is entered into Gentrack along with the new price category code. Gentrack automatically uploads any changes to Registry data each evening to the registry.

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 was reviewed. 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

Audit commentary

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

New ICPs are created in Gentrack based on information provided by a customer in the Application for Network Connection. Gentrack creates the UIS file (DC-010/DM-020) which is uploaded to the registry overnight to create the ICP in the registry. 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. It allows the registry to move the ICP status to “ready”. A trader can now pick-up the ICP and assign it the status code of “New Connection in Progress” (001/12) so they can nominate a MEP where this is the trader’s chosen process (e.g. Genesis Energy and Trustpower). Once the ICP is electrically connected a price category code, which reflects the configuration of the installation, is entered into Gentrack and the registry.

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

A trader is notified when a new ICP is created if a customer specifies them as the trader from whom they want to buy electricity. This is not exactly an agreement from a trader to take responsibility for the ICP. The ICP is only connected and electrically connected once a service request (SR) has been received from a trader (or their agent) with a request to liven.

Northpower does not have “a blanket” agreement with any trader to accept new ICPs.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.9 With: 14 of Schedule 11.1 From: 16-Aug-16 To: 15-Sep-17	Northpower receives a confirmation form a trader accepting responsibility for the ICP after the registry changes the ICP status to “ready” because a proposed trader specified by a customer was uploaded 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 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		
Actions taken to resolve the issue		Completion date	Remedial action status
Northpower will not be changing any of the current processes around creating or livening ICPs.		Not Applicable	Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	

<p>Traders have varying processes for handling, in their systems, newly created ICPs. Some use the Registry status “inactive – new connection in progress” (001/12) while others do not update the Registry at all prior to the ICP being livened (connected). Northpower has to work with all these different processes in the most efficient way possible to avoid unnecessary problems for the end customer.</p> <p>Northpower expects all traders to send a service request prior to an ICP being livened (connected) as authority to liven (connect) and an indication of their taking responsibility for the electricity supplied to the ICP.</p> <p>The term “connect” used in Clause 10.31 is not a defined term under the Code. Northpower applies the commonly accepted meaning, within the industry, to this term to mean an ICP is livened and electricity may flow.</p>	Not Applicable	
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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

Northpower has 9 ICPs with the status of “distributor”, representing shared unmetered load, which are correctly populated in the registry. We checked the LIS and confirm that the information is correctly populated.

Audit commentary

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

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.

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 (288 as at September 2017) 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 54 of these ICPs with a status of "Inactive – ready for decommissioning" in the registry, which is incorrect. This issue was identified in the last two audits to draw attention to it.

ICP's are transferred to the Long Term De-energised Price plan (ND13), which helps to identify these ICPs in the Registry, when the meters have been physically removed and the service line has been completely disconnected at the Network Connection Point but permission has not been obtained to permanently dismantle (decommission) the supply.

We sampled 30 decommissioned ICPs to follow the decommissioning process. They are ICPs decommissioned since the last audit. The results are shown below

ICP	SR	Site visit	Trader change registry to "1,6"	NPOW registry update
0000503129NR561	03/03/2017	06/03/2017	23/03/17	24/03/17
0000504192NRD67	28/04/2017	01/05/2017	05/05/17	08/05/17
0000507281NRAE9	no paperwork	03/04/2017	25/05/17	26/05/17
0000507474NR1B7	no paperwork	10/11/2016	02/02/17	10/02/17
0000511223NRF52	13/03/2017	15/03/2017	07/04/17	10/04/17
0000513586NR640	10/04/2017	11/04/2017	28/04/17	03/05/17
0000514390NRF04	04/07/2017	05/07/2017	04/07/17	06/07/17
0000516048NR011	no paperwork	20/06/2017	28/07/17	31/07/17
0000516470NR9FC	24/07/2017	26/07/2017	31/07/17	31/07/17

0000516806NR122	15/05/2017	17/05/2017	29/06/17	30/06/17
0000519182NR50B	11/11/2016	11/11/2016	28/11/16	29/11/16
0000521231NR456	23/09/2016	23/09/2016	06/10/16	07/10/16
0000522987NR685	15/07/2016	21/07/2016	16/08/16	17/08/16
0000523532NR4D4	07/06/2017	09/06/2017	20/07/17	25/07/17
0000523785NR1AB	26/07/2017	28/07/2017	01/08/17	02/08/17
0000524221NR9DB	no paperwork	16/02/2017	01/03/17	02/03/17
0000524633NRFF2	no paperwork	12/12/2016	22/02/17	02/03/17
0000524933NR0FD	26/06/2016	26/06/2017	08/08/17	10/08/17
0000526166NR6F7	no paperwork	10/10/2016	05/04/17	06/04/17
0000526391NR12D	no paperwork	28/01/2017	09/02/17	10/02/17
0000527143NR74D	no paperwork	08/08/2016	08/09/16	09/09/16
0000529436NR29A	06/10/2016	12/10/2016	21/10/16	31/10/16
0000529724NRBB1	02/12/2016	05/12/2016	06/01/17	12/01/17
0000530371NR6B6	no paperwork	13/03/2017	20/04/17	21/04/17
0000531890NR2E7	05/09/2016	07/09/2016	29/09/16	30/09/16
0000532132NR194	17/10/2016	19/10/2016	02/11/16	03/11/16
0000534661NRF9E	03/03/2017	07/03/2017	26/04/17	27/04/17
0000536900NR064	24/01/2017	20/01/2017	01/03/17	02/03/17
0000538380NR7E4	no paperwork	03/04/2017	01/05/17	02/05/17
0000552253NR37A	08/07/2016	12/07/2016	12/07/16	05/09/16

Audit commentary

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.

The company closely monitors changes to ICPs statuses. As soon as it is noted that a trader has changed the ICP status to "1,6", Northpower will decommission the ICP in the registry. The last column of the table above shows how prompt the response of Northpower is.

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, which was covered in the previous audit. It was a compliant update.

Audit commentary

The last update of the Price Category Code registry table was in January 2015. Northpower did not add or remove any price category codes in the 2016 or 2017 annual price reviews so no changes to the registry table was necessary.

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 9 Loss Factor Codes in the registry, no new entries were added since the last audit.

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 and compared this to the Northpower Loss Factor information disclosed on the Northpower web site. 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 commentary

Loss factors recorded in the registry meet clause 22 of Schedule 11.1 compliance.

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 shared unmetered load, it does not accept requests for any new ones.

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 16/8/16 to 15/9/17. 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.

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 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 current loss factor for LV metered customers (99% of ICPs) is 1.073. 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

Northpower commented that they don't concern themselves with the non-technical losses; however, they do perform an annual (for the Information Disclosure) check on where the overall network loss factor sits as a broad confirmation that the loss factors are correct. Over the past few years (last being 1/4/2015) there have been a couple of GXP "decommission" events on the Northpower network where the Transpower GXPs have been sold to Northpower. This has caused some variance in the overall network loss factor which resulted in the review of all loss factors effective 1/4/2016.

The overall network loss factors have been:

2013-2014 3.66%

2014-2015 4.12%

2015-2016 3.68%

3016-2017 3.47%

Audit outcome

Compliant

CONCLUSION

PARTICIPANT RESPONSE