

ELECTRICITY INDUSTRY PARTICIPATION CODE DISTRIBUTOR AUDIT REPORT

For
**THE POWER COMPANY LIMITED,
ELECTRICITY INVERCARGILL LIMITED,
OTAGONET JOINT VENTURE,
ELECTRICITY SOUTHLAND LIMITED
(MANAGED BY POWERNET)**

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Date audit commenced: 4 August 2020

Date audit report completed: 8 September 2020

Audit report due date: 15-Sep-20

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EXECUTIVE SUMMARY

This distributor audit was performed at the request of PowerNet as required by clause 11.10 of Part 11, to assure compliance with the Electricity Industry Participation Code 2010. PowerNet is a management company which manages the electricity network assets of:

- The Power Company Limited – TPCO
- Electricity Invercargill Limited – ELIN
- OtagoNet Joint Venture – OTPO
- Electricity Southland Limited (Trading name Lakeland Network) – LLNW

The relevant rules audited are as required by the Distributor Auditor Guidelines V7.0, issued by the Electricity Authority.

PowerNets new ICP management system implementation Power Connect and associated process enhancements were driven by acknowledgement of previous distributor audit results and the intention to improve those results. These changes were made in the latter half of the audit period and some processes were still bedding in. There were noticeable reductions in Registry information discrepancies in some areas after March 2020. The management of Decommissioned ICPs in the Registry for example has been addressed with no discrepancies found during this audit. However the area where discrepancies did increase during this audit period was the update of registry information. Common industry reasons were noted such as requests for information updates to be backdated and historic data clean ups creating discrepancies. More specific to PowerNet were high volumes of Pricing Code changes.

There were two main issues observed during the audit:

- The management of new ICP connection information

Whilst the volume of ICP connection information discrepancies is relatively low the concern is that the discrepancies are across multiple areas, for example sect 3.4 ICPs Initially electrically connected prior to the ICPs being setup in the Registry, sect 4.6 Missing IECD information in the Registry but ICP active, sect 3.6 new ICP connections were connected without a Trader recorded in the Registry as taking responsibility for the ICPs. PowerNet staff are confident that the new PowerNet Connect system and associated processes will correct historical gaps.

- The high volume of pricing code changes causing late updates to the Registry.

This issue is driven by Traders requesting the pricing changes. PowerNet is very diligent in approving and actioning the changes however it takes time with the consequence that Registry updates are late. PowerNet are very much aware of the challenge this presents.

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 Distribution Participant audit provides some guidance on this matter. The Future Risk Rating score for each Distribution Network is:

- | | |
|--|----|
| • The Power Company Limited – TPCO | 14 |
| • Electricity Invercargill Limited – ELIN | 10 |
| • OtagoNet Joint Venture – OTPO | 8 |
| • Electricity Southland Limited (Trading name Lakeland Network) – LLNW | 10 |

The average Future Risk Rating score for the four distribution Networks is 10.5 which results in an indicative audit frequency of 12 months. We agree with this result.

We thank PowerNet staff for their full and complete cooperation in this audit.

The audit period was 1 July 2019 to 17 July 2020

AUDIT SUMMARY

NON-COMPLIANCES

TPCO

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide complete and accurate information	2.1	<i>Clause 11.2(1) and 10.6(1)</i>	A relatively small quantity of information in the Registry was inaccurate, they were spread broadly across the code requirements	Moderate	Low	2	Identified
Timeliness of Provision of ICP Information to the registry manager	3.4	<i>Clause 7(2) of Schedule 11.1</i>	1 ICP was initially Electrically Connected to the Network prior to the ICP information being input to the Registry.	Moderate	Low	2	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	<i>Clause 7(2A) of Schedule 11.1</i>	TPCO - 7.8% of IECD input to Registry late	Moderate	Low	2	Identified
Connection of ICP that is not an NSP	3.6	<i>Clause 11.17</i>	TPCO – 1 x new ICP was connected without a Trader recorded in the Registry as taking responsibility for the ICP	Moderate	Low	2	Identified
Monitoring of “new” & “ready” statuses	3.14	<i>Clause 15 Schedule 11.1</i>	The number of ICPs in READY status in the Registry for two years or more: TPCO - 6	Moderate	Low	2	Identified
Changes to registry information	4.1	<i>Clause 8 Schedule 11.1</i>	Registry information not updated within 3 business days	Moderate	Low	2	Identified

			across all Networks.				
Distributors to Provide ICP Information to the Registry	4.6	<i>Clause 7(1) Schedule 11.1</i>	Missing IECD information in the Registry X 3 Incorrect Installation type in the Registry X 5 Missing Distributed Generation Capacity in Registry X 5 Missing Distributed Generation Fuel Type in Registry X 5	Moderate	Low	2	Identified
Future Risk Rating						14	

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

ELIN

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide complete and accurate information	2.1	<i>Clause 11.2(1) and 10.6(1)</i>	A relatively small quantity of information in the Registry was inaccurate, they were spread broadly across the code requirements	Moderate	Low	2	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	<i>Clause 7(2A) of Schedule 11.1</i>	ELIN - 2.2% of IECD input to Registry late	Moderate	Low	2	Identified

Monitoring of “new” & “ready” statuses	3.14	<i>Clause 15 Schedule 11.1</i>	The number of ICPs in READY status in the Registry for two years or more: ELIN - 2	Moderate	Low	2	Identified
Changes to registry information	4.1	<i>Clause 8 Schedule 11.1</i>	Registry information not updated within 3 business days	Moderate	Low	2	Identified
Distributors to Provide ICP Information to the Registry	4.6	<i>Clause 7(1) Schedule 11.1</i>	Missing IECD information in Registry X 5 Incorrect Installation type in Registry X1 Missing Distributed Generation Capacity in Registry X1 Missing Distributed Generation Fuel Type in Registry X1	Moderate	Low	2	Identified
Future Risk Rating						10	

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

OTPO

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide complete and accurate information	2.1	<i>Clause 11.2(1) and 10.6(1)</i>	A relatively small quantity of information in the Registry was inaccurate, they were spread broadly across	Moderate	Low	2	Identified

			the code requirements				
Timeliness of Provision of Initial Electrical Connection Date	3.5		OTPO - 18.7% of IECD input to Registry late	Moderate	Low	2	Identified
Changes to registry information	4.1	<i>Clause 8 Schedule 11.1</i>	Registry information not updated within 3 business days	Moderate	Low	2	Identified
Distributors to Provide ICP Information to the Registry	4.6	<i>Clause 7(1) Schedule 11.1</i>	Missing IECD information in the Registry X 4 Incorrect Installation type in the Registry X3 Missing Distributed Generation Capacity in Registry X2 Missing Distributed Generation Fuel Type in Registry X 2	Moderate	Low	2	Identified
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

LLNW

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide complete	2.1	<i>Clause 11.2(1)</i>	A relatively small quantity of information	Moderate	Low	2	Identified

and accurate information		<i>and 10.6(1)</i>	in the Registry was inaccurate, they were spread broadly across the code requirements				
Timeliness of Provision of Initial Electrical Connection Date	3.5		LLNW - 4.6% of IECD input to Registry late	Moderate	Low	2	Identified
Connection of ICP that is not an NSP	3.6		LLNW – 2 x new ICPs were connected without a Trader recorded in the Registry as taking responsibility for the ICPs	Moderate	Low	2	Identified
Changes to registry information	4.1	<i>Clause 8 Schedule 11.1</i>	Registry information not updated within 3 business days	Moderate	Low	2	Identified
Distributors to Provide ICP Information to the Registry	4.6	<i>Clause 7(1) Schedule 11.1</i>	Missing IECD information in the Registry X 5	Moderate	Low	2	Identified
Future Risk Rating						10	

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

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

The Electricity Authority Website was checked.

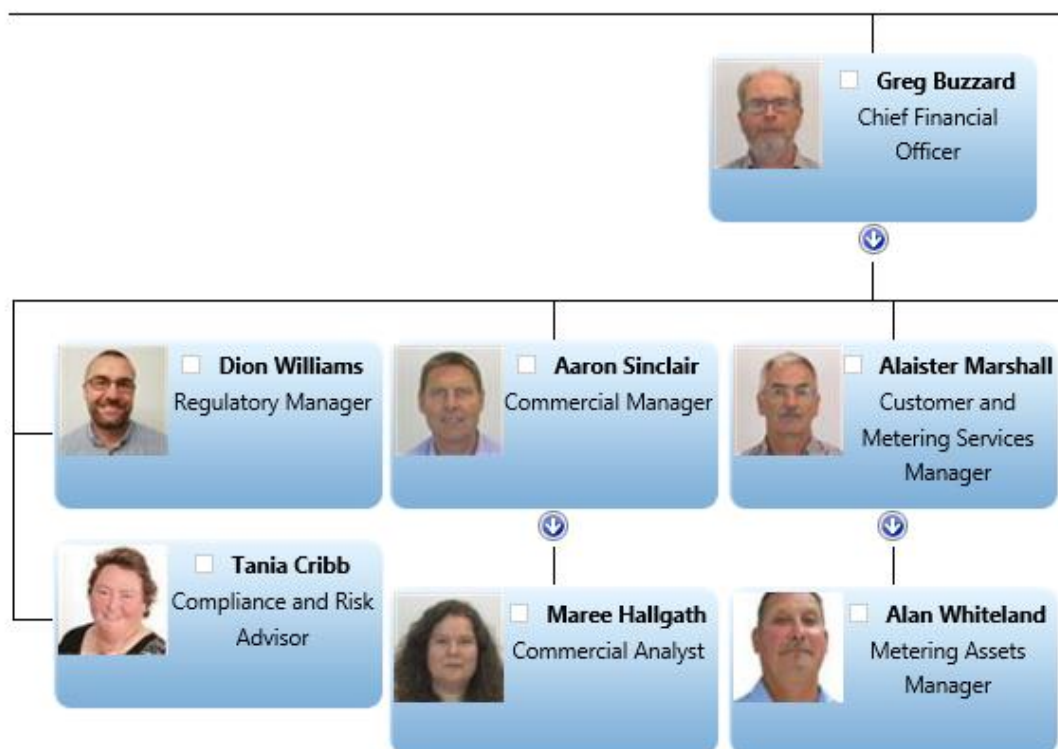
Audit commentary

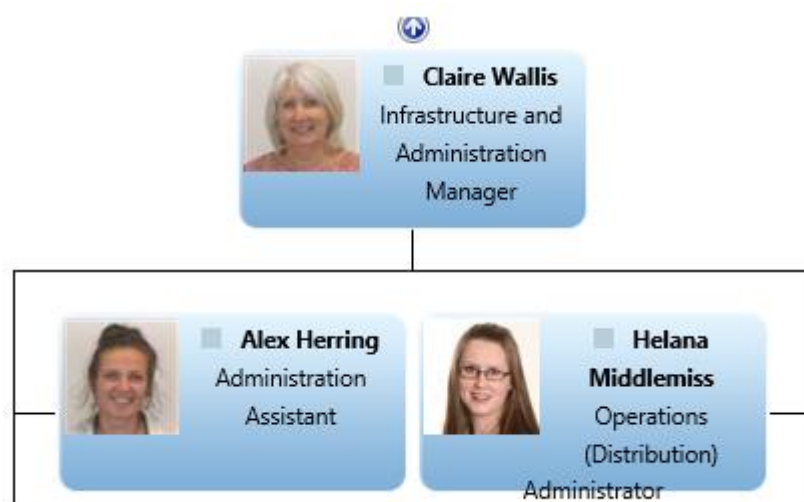
There is one exemption in place, Exemption Number 167 The Power Company Ltd.

This exempts TPCO from fitting metering to the interconnection point with ELIN that provides an emergency back-up supply to Southland Hospital.

The exemption expires 31 March 2023

1.2. Structure of Organisation





1.3. Persons involved in this audit

Name	Title	Company
Alaister Marshall	Customer and Metering Services Manager	PowerNet
Helana Middlemiss	Operations (Distribution) Administrator	PowerNet
Dion Williams	Regulatory manager	PowerNet
Aaron Sinclair	Commercial Manager	PowerNet
Jin Lo	Network Asset Engineer	PowerNet
Allan Borcoski	Electricity Authority Approved Auditor	Borcoski Energy Services 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 contractors 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

PowerNet does not use agents for the functions covered by this audit.

Audit commentary

All functions covered in this audit are performed in-house by PowerNet's staff, or by their database developers Ace Computer Consultants and Digital Stock Ltd.

1.5. Supplier list

- Ace Computer Consultants
- Digital Stock Ltd

1.6. Hardware and Software

The key infrastructure required for the audited processes comprises of:

- Microsoft SQL Server 2014
- MS Access 2016 – used for the Legacy ICP System
- PowerNet Connect runs on a virtual server running Microsoft Windows Server 2019 Version 1809 with IIS version 10.0.17763.1
- The virtual server runs on VMware ESX server v6.5 on a LENOVO Think System SR650 server, connected to a v5030 SAN

Connect Training / UAT database that can also be used for testing database mods

1.7. Breaches or Breach Allegations

No breaches and alleged breaches were recorded in the period covered by this audit.

1.8. ICP and NSP Data

TPCO

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
TPCO	BLF0111	Bluff	INV0331	TPCO	SOUTLDTPCOG	I	01/05/08	0
TPCO	EDN0331	Edendale			SOUTLDTPCOG	G	01/03/16	1831
TPCO	ELL0111	Elles Rd	INV0331	TPCO	SOUTLDTPCOG	I	01/05/08	0
TPCO	GOR0331	Gore			SOUTLDTPCOG	G	01/03/16	10116
TPCO	INV0331	Invercargill			SOUTLDTPCOG	G	01/05/08	10023
TPCO	LEV0331	Leven St	INV0331	TPCO	SOUTLDTPCOG	I	01/05/08	0
TPCO	NMA0331	Nth Makarewa			SOUTLDTPCOG	G	01/05/08	16057
TPCO	OCB0111	CB46	INV0331	TPCO	SOUTLDTPCOG	I	01/05/08	0
TPCO	SOU0331	Southern Sub	INV0331	TPCO	SOUTLDTPCOG	I	01/05/08	0
TPCO	STD0111	Stead St	INV0331	TPCO	SOUTLDTPCOG	I	01/05/08	0

Status	Number of ICPs 21/07/20	Number of ICPs 19/08/19	Number of ICPs 05/08/18
New (999,0)	0	1	1
Ready (0,0)	105	84	47
Active (2,0)	36,489	36,229	35,886
Distributor (888,0)	1	1	1
Inactive – new connection in progress (1,12)	51	58	33
Inactive – electrically disconnected vacant property (1,4)	1355	1381	1442
Inactive – electrically disconnected remotely by AMI meter (1,7)	85	57	48
Inactive – electrically disconnected at pole fuse (1,8)	14	17	11
Inactive – electrically disconnected due to meter disconnected (1,9)	10	7	6
Inactive – electrically disconnected at meter box fuse (1,10)	0	1	1
Inactive – electrically disconnected at meter box switch (1,11)	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	22	21	75
Inactive – reconciled elsewhere (1,5)	1	1	0
Decommissioned (3)	3819	3721	3581

ELIN

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
ELIN	BLF0111	Bluff	INV0331	ELIN	INVGILLELING	I	01/05/08	0
ELIN	ELL0111	Elles rd	INV0331		INVGILLELING	I	01/05/08	0
ELIN	INV0331	Invercargill		ELIN	INVGILLELING	G	01/05/08	17803
ELIN	LEVO331	Leven St	INV0331	ELIN	INVGILLELING	I	01/05/08	0
ELIN	OCB0111	IVC-CB13	INV0331	ELIN	INVGILLELING	I	01/05/08	0
ELIN	SOU0111	Southern Sub	INV0331	ELIN	INVGILLELING	I	01/05/08	0
ELIN	STD0111	Stead St	INV0331	ELIN	INVGILLELING	I	01/05/08	0
ELIN	BLF0111	Bluff	INV0331	ELIN	INVGILLELING	I	01/05/08	0

Status	Number of ICPs 21/07/20	Number of ICPs 19/08/19	Number of ICPs 05/08/18
New (999,0)	0	1	1
Ready (0,0)	8	20	8

Active (2,0)	17405	17416	17421
Distributor (888,0)	1	0	0
Inactive – new connection in progress (1,12)	18	15	0
Inactive – electrically disconnected vacant property (1,4)	298	321	320
Inactive – electrically disconnected remotely by AMI meter (1,7)	66	47	30
Inactive – electrically disconnected at pole fuse (1,8)	7	8	10
Inactive – electrically disconnected due to meter disconnected (1,9)	3	1	1
Inactive – electrically disconnected at meter box fuse (1,10)	2	3	1
Inactive – electrically disconnected at meter box switch (1,11)	0	1	0
Inactive – electrically disconnected ready for decommissioning (1,6)	4	4	17
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	1454	1350	1286

OTPO

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
OTPO	BAL0331	Balclutha			BALCTHAOTPOG	G	01/01/12	9776
OTPO	HWB0331	Halfway Bush			PALMSBYOTPOG	G	07/11/14	3573
OTPO	NSY0331	Naseby			PALMSBYOTPOG	G	01/05/08	2634

Status	Number of ICPs 21/07/20	Number of ICPs 19/08/19	Number of ICPs 05/08/18
New (999,0)	0	0	0
Ready (0,0)	27	23	11
Active (2,0)	15189	15103	14973
Distributor (888,0)	0	0	0
Inactive – new connection in progress (1,12)	30	22	15

Inactive – electrically disconnected vacant property (1,4)	678	661	695
Inactive – electrically disconnected remotely by AMI meter (1,7)	44	39	32
Inactive – electrically disconnected at pole fuse (1,8)	9	7	6
Inactive – electrically disconnected due to meter disconnected (1,9)	6	5	4
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	2	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	25	43	51
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	1902	1860	1816

LLNW

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
LLNW	FKN0331	Frankton			LAKELNDLLNWG	G	01/10/08	2235
LLNW	NLK0111	Outlet Rd Wanaka	CML0331	DUNE	NLK0111LLNWE	E	12/07/17	287

Status	Number of ICPs 21/07/20	Number of ICPs 19/08/19	Number of ICPs 05/08/18
New (999,0)	0	1	1
Ready (0,0)	53	15	15
Active (2,0)	2399	2025	1465
Distributor (888,0)	0	0	0
Inactive – new connection in progress (1,12)	79	45	91
Inactive – electrically disconnected vacant property (1,4)	23	7	12
Inactive – electrically disconnected remotely by AMI meter (1,7)	8	2	6
Inactive – electrically disconnected at pole fuse (1,8)	0	0	0
Inactive – electrically disconnected due to meter disconnected (1,9)	3	4	3
Inactive – electrically disconnected at meter box fuse (1,10)	1	0	0

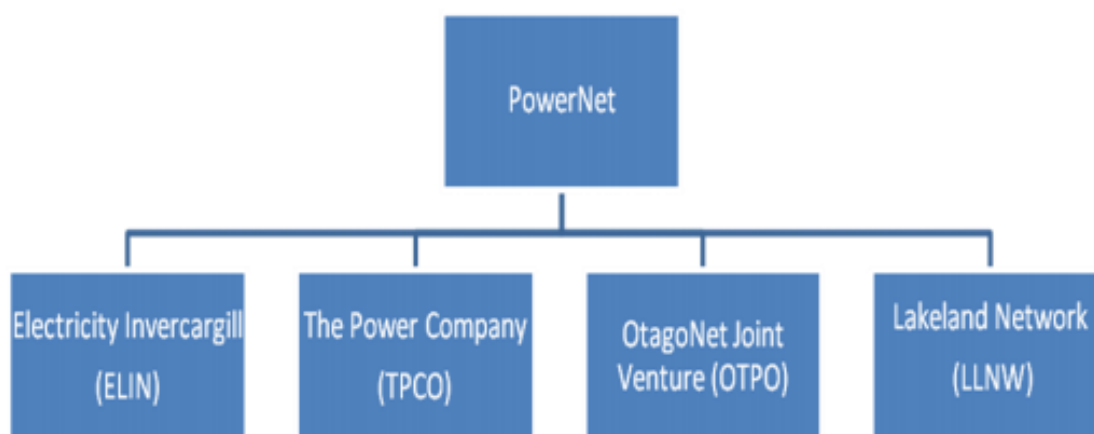
Inactive – electrically disconnected at meter box switch (1,11)	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	9	9	7
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	106	89	74

1.9. Authorisation Received

PowerNet 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 PowerNet as required by clause 11.10 of Part 11 to assure compliance with the Electricity Industry Participation Code 2010. PowerNet Limited is a joint venture company that manages the electricity reticulation networks of Electricity Invercargill Limited, The Power Company Limited, OtagoNet Joint Venture and Electricity Southland Limited (Lakeland Network.)



This audit covers the following processes under clause 11.10(4) of Part 11 performed by PowerNet on behalf of the networks listed above:

- (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 PowerNet premises at 251 Racecourse Road in Invercargill, on the 4/5 August 2020.

1.11. Summary of previous audit

The previous audit was conducted in August 2019 by Ewa Glowacka of TEG Associates. The following non-compliances were found:

TPCO

Subject	Section	Clause	Non Compliance	Comment
Requirement to provide complete information	2.1	11.1(1)	The Effective Date of changing ICPs status to “decommissioned” is incorrect. Incomplete information for a small number of ICPs	Still exists
Timeliness of information provided to the registry	3.4	7(2) of Schedule 11.1	5 ICPs were electrically connected without an ICP recorded in the registry	Still exists
Timeliness of provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late update of Initial Electrical Connection Date for 15 ICPs	Still exists
Connection of ICP that is not an NSP	3.6	11.7	For 5 ICPs the connection process set out in clause 10.31 was not followed	Still exists
Monitoring of “new” and “ready” statuses	3.14	15 of Schedule 11.1	The process for asking the trader who intends to trade at the ICP whether the ICP should continue to have that status was not followed. Number of ICPs with the status “new” and “ready” increased	Still exists
Changes to the registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Still exists
Distributor to provide information to the registry	4.6	7 (1) of Schedule 11.1	Lack of information in the registry for a small number of ICPs	Still exists
Management of “decommissioned” status	4.11	20 of Schedule 11.1	Effective Date for ICPs being decommissioned is the same as the date of update of the registry	Cleared

ELIN

Subject	Section	Clause	Non Compliance	Comment
Requirement to provide complete information	2.1	11.1(1)	The Effective Date of changing ICPs status to “decommissioned” is incorrect. Incomplete information for a small number of ICPs	Still exists

Timeliness of provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late update of Initial Electrical Connection Date for 1 ICP	Still exists
Monitoring of “new” and “ready” statuses	3.14	15 of Schedule 11.1	The process for asking the trader who intends to trade at the ICP whether the ICP should continue to have that status was not followed. Number of ICPs with the status “new” and “ready” increased	Still exists
Changes to the registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Still exists
Distributor to provide information to the registry	4.6	7 (1) of Schedule 11.1	Lack of information in the registry for a small number of ICPs	Still exists
Management of “decommissioned” status	4.11	20 of Schedule 11.1	Effective Date for ICPs being decommissioned is the same as the date of update of the registry	Cleared

OTPO

Subject	Section	Clause	Non Compliance	Comment
Requirement to provide complete information	2.1	11.1(1)	The Effective Date of changing ICPs status to “decommissioned” is incorrect. Incomplete information for a small number of 15 ICPs	Still exists
Timeliness of provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late update of Initial Electrical Connection Date for 1 ICP	Still exists
Monitoring of “new” and “ready” statuses	3.14	15 of Schedule 11.1	The process for asking the trader who intends to trade at the ICP whether the ICP should continue to have that status was not followed. Number of ICPs with the status “new” and “ready” increased	Cleared
Changes to the registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Still exists
Distributor to provide information to the registry	4.6	7 (1) of Schedule 11.1	Lack of information in the registry for a small number of ICPs	Still exists
Management of “decommissioned” status	4.11	20 of Schedule 11.1	Effective Date for ICPs being decommissioned is the same as the date of update of the registry	Cleared

LLNW

Subject	Section	Clause	Non Compliance	Comment
Requirement to provide complete information	2.1	11.1(1)	The Effective Date of changing ICPs status to “decommissioned” is incorrect. Incomplete information for a small number of ICPs	Still exists
Timeliness of information provided to the registry	3.4	7(2) of Schedule 11.1	2 ICPs were electrically connected without an ICP recorded in the registry	Still exists
Timeliness of provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late update of Initial Electrical Connection Date for 19 ICPs	Still exists
Connection of ICP that is not an NSP	3.6	11.7	For 2 ICPs the connection process set out in clause 10.31 was not followed	Cleared
Monitoring of “new” and “ready” statuses	3.14	15 of Schedule 11.1	The process for asking the trader who intends to trade at the ICP whether the ICP should continue to have that status was not followed. Number of ICPs with the status “new” and “ready” increased	Cleared
Changes to the registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Still exists
Distributor to provide information to the registry	4.6	7 (1) of Schedule 11.1	Lack of information in the registry for a small number of ICPs	Still exists
Management of “decommissioned” status	4.11	20 of Schedule 11.1	Effective Date for ICPs being decommissioned is the same as the date of update of the registry	Cleared
Updating table of loss category codes	5.1	21 of Schedule 11.1	New Loss Factor Code was recorded in the registry late by 19 days	Cleared

2. OPERATIONAL INFRASTRUCTURE

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

Code reference

Clause 11.2(1) and 10.6(1)

Code related audit information

A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under Parts 10 or 11 is:

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

Audit observation

The Audit Compliance Summary Reports for the audit period, the LIS, PR255 and EDA files 21 July 2020 were checked and also the Material Change Audit Report. It was discussed with PowerNet staff what processes were in place to ensure correct information is in their systems (PowerNet Connect) and provided to the registry.

Audit commentary

During the audit period new software called PowerNet Connect was developed and implemented PowerNet Connect delivers distributor functions such as creation of ICPs, maintenance of Registry information and the creation and maintenance of NSP. Changes to any data in PowerNet Connect will be sent automatically, overnight, to the registry. The changes can also be sent manually.

Despite the efforts to maintain accurate information PowerNet are reliant on timely information from third parties and data entry is largely manual, so errors are understandable from time to time. Trader requests to backdate changes also impact heavily on timeliness of information upload to the Registry.

Section	Registry Discrepancy
3.4	ICPs were Initially electrically connected prior to the ICPs being setup in the Registry <ul style="list-style-type: none">• TPCO x 1• LLNW x2
3.5	IECD Input to Registry later than 10 business days <ul style="list-style-type: none">• TPCO x 32• ELIN x 2• OTPO x 28• LLNW x 22
3.6	New ICP connections were connected without a Trader recorded in the Registry as taking responsibility for the ICPs <ul style="list-style-type: none">• TPCO x 1• LLNW x 2
3.14	ICPs in READY status in the Registry for two years or more <ul style="list-style-type: none">• TPCO x 6• ELIN x 2

4.1	Registry information not updated within 3 business days by all PowerNet Distribution Networks ELIN, TPCO, LLNW, OTPO
4.6	<p>Missing IECD information in the Registry but ICP ACTIVE</p> <ul style="list-style-type: none"> • TPCO x 3 • ELIN x 5 • OTPO x 4 • LLNW x 5 <p>Incorrect installation type (Distributed Generation)</p> <ul style="list-style-type: none"> • TPCO x 5 • ELIN x 1 • OTPO x 3 • LLNW x 0 <p>Distributed Generation – no Capacity in Registry</p> <ul style="list-style-type: none"> • TPCO x 5 • ELIN x 1 • OTPO x 2 <p>Distributed Generation – no Fuel Type in Registry</p> <ul style="list-style-type: none"> • TPCO x 5 • ELIN x 1 • OTPO x 2

Audit outcome

Non-compliant

NON-COMPLIANCE

Non-compliance	Description		
Audit Ref: 2.1 With: <i>Clause 11.2(1) and 10.6(1)</i> From: 01-Jul-19 To: 17-Jul-20	A relatively small quantity of information in the Registry was inaccurate, they were spread broadly across the code requirements. Potential impact: Low Actual impact: Low Audit history: Three times previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because a new ICP management system and related processes were implemented during the audit period and some improvement has been observed. The audit Risk Rating is assigned as low due to the relatively low number of ICPs involved.		
Actions taken to resolve the issue		Completion date	Remedial action status
Operation of the new data processing tool PowerNet Connect has shown discrepancies were created in application of Event Dates. Instructions have been given to operators and enhancement of the tool is noted for development.		14/08/20	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Development of PowerNet Connect to assist entering of correct Event Dates		07/21	

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

Code reference

Clause 11.2(2) and 10.6(2)

Code related audit information

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

Audit observation

The Audit Compliance Summary Reports for the audit period, the LIS and EDA files 21 July 2020 were checked along with the Material Change Audit Report 2019. It was discussed with

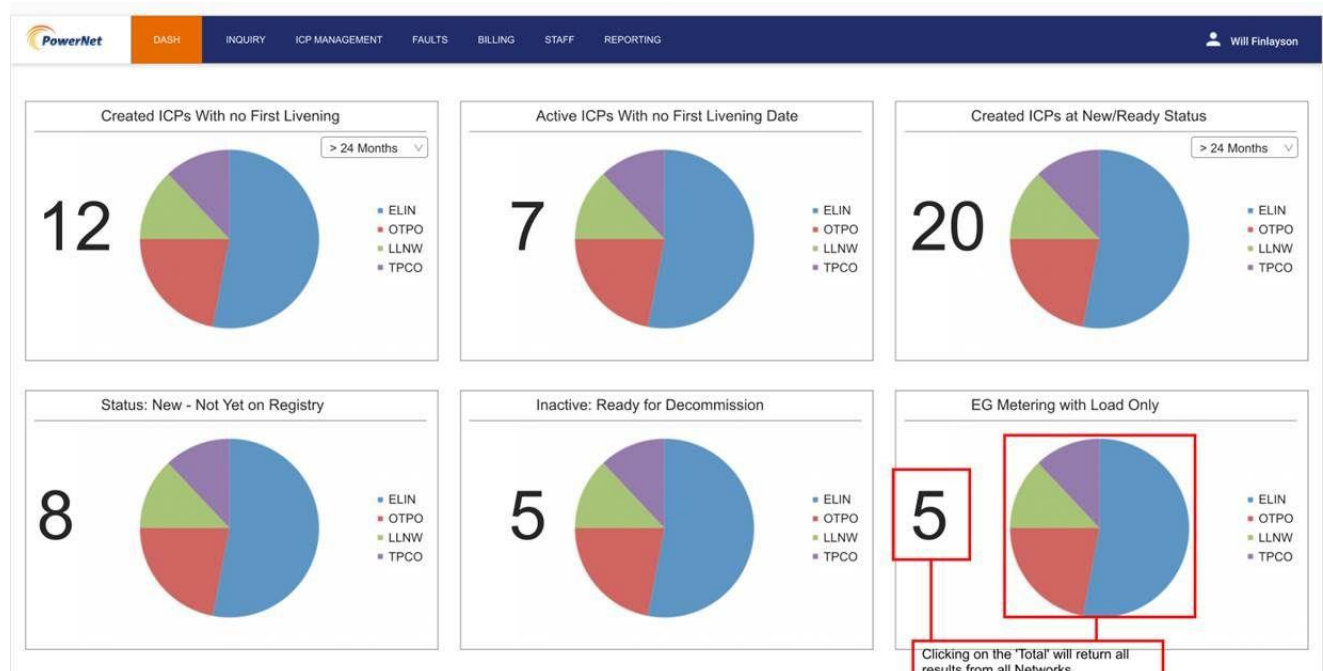
PowerNet staff what processes were in place to identify incorrect information in their systems and the registry, and the process to correct that data as soon as practicable.

Audit commentary

PowerNet aim to maintain accurate registry information and alignment with PowerNet Connect and the efforts being made to implement new processes have started to show some improved results during the later part of the audit period.

PowerNet Connect has a range of exception reports and under development in the new PowerNet Connect tool is a dashboard view to more closely monitor key errors enabling timely error correction. Some of the new exception reports are:

- Capacity changes pending
- Distributed Generation Not Connected
- New Not yet on the Registry
- ICPs with status INACTIVE DE-ENERGISED READY FOR DECOMMISSIONING
- ICPs made ACTIVE with no first livening date



Previous audits have well documented a high volume of price code changes outside of required timeframes. The reason has been identified as Trader requests to move ICPs to/from the low user Price Code, and the Trader requests to backdate Price Code changes. In line with previous audits Price Code changes have not been treated as data corrections.

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 Audit Compliance Summary Reports, LIS and EDA reports 21 July 2020 were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

PowerNet uses their PowerNet Connect to create ICPs for connections on all of its networks. The ICP identifiers created by PowerNet Connect were compliant.

Customers apply to PowerNet for a new connection using an Installation Connection Application form. New connection applications are assessed to ensure the proposed connection meets PowerNet requirements. Once the application is approved and costs associated with the new connection are calculated a quote is provided to the customer for acceptance. After the customer notifies PowerNet they have accepted the quote, an ICP identifier is created in PowerNet Connect. The installation owner or their representative, is provided with the ICP identifier. An email is also sent to the trader nominated by the customer. Once an acceptance email is received from the trader and logged in PowerNet Connect the ICP identifier is uploaded to the registry. The process is well documented and appears to be followed as no discrepancies were identified in the sample.

Network	ICPs Connected During Audit Period
TPCO	411
ELIN	92
OTPO	150
LLNW	477
	Total 1130

Note: PowerNet has agreements with Contact Energy and Trustpower, whereby for all new connections where a customer nominates them as a proposed trader the ICPs are automatically accepted by those traders.

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

The Audit Compliance Summary Reports, LIS and EDA reports 21 July 2020 were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

Customers or their agents apply directly to PowerNet for a new ICP connection to any of the networks. Participants do not apply for or request ICPs on any of the PowerNet networks, however PowerNet are aware of this code requirement. It was noted that PowerNet uploaded new ICPs into the registry within 3 working days (usually the same day) of receiving acceptance of new connection ICPs from Traders.

Audit outcome

Compliant

3.3. Provision of ICP Information to the registry manager (Clause 11.7)

Code reference

Clause 11.7

Code related audit information

The distributor must provide information about ICPs on its network in accordance with Schedule 11.1.

Audit observation

The Audit Compliance Summary Reports, LIS and EDA reports 21 July 2020 were checked for the audit period along with the Material Change Audit Report 2019. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

New connection application information is captured in PowerNet Connect. Once the application is approved a connection proposal including costs is provided to the customer for acceptance. After the customer notifies PowerNet they have accepted the quote, an ICP identifier is created in PowerNet Connect and provided to the installation owner or their representative. An email is also sent to the trader nominated by the customer. Once an acceptance email is received from the trader and logged in PowerNet Connect the ICP identifier and associated information is provided to the Registry in an overnight upload. The upload process includes functionality to ensure mandatory fields are populated before the information is uploaded to the registry.

Audit outcome

Compliant

3.4. Timeliness of Provision of ICP Information to the registry manager (Clause 7(2) of Schedule 11.1)

Code reference

Clause 7(2) of Schedule 11.1

Code related audit information

The distributor must provide information specified in Clauses 7(1)(a) to 7(1)(o) of Schedule 11.1 as soon as practicable and prior to electricity being traded at the ICP.

Audit observation

The Audit Compliance Summary Reports, LIS, EDA reports 21 July 2020 and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

It was observed that largely ICP information was uploaded to the registry soon after the Trader acceptance of a new ICP connection was received. ICPs were set to the ready status PowerNet has agreements with Contact Energy and Trustpower, whereby for all new connections where a customer nominates them as a proposed trader the ICPs are automatically accepted by those traders.

However there were a very small number of exceptions (0.27%):

ICP	Network	ICP Input to Registry	IECD	Days	Trader
0003802511TPC38	TPCO	16/12/2019	6/12/19	6	TRUS
0009904200LNC70	LLNW	05/09/19	28/08/19	6	TRUS
0000981574LNC4F	LLNW	15/08/19	07/08/19	6	TRUS

These exceptions appear to have occurred prior to the implementation of the new Power Connect system and associated process enhancements.

Audit outcome

Non-compliant

NON-COMPLIANCE

Non-compliance	Description		
Audit Ref: 3.4 With: <i>Clause 7(2) of Schedule 11.1</i> From: 01-Jul-19 To: 17-Jul-20	3 ICPs (TPCO x1, LLNW x2) of 1130 ICPs (0.27%) were initially Electrically Connected to the Network prior to the ICP information being input to the Registry. Potential impact: Low Actual impact: Low Audit history: Once Before Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because a new ICP connection management system and processes were implemented during the audit period. This appears to have resolved historical issues as there were no further such exceptions after December 2019. The audit Risk Rating is assigned as low due to the very low number of ICPs involved (0.27% of IECD).		
Actions taken to resolve the issue		Completion date	Remedial action status
ICPs being electrically connected prior to the ICP being loaded to the Registry have only ever occurred on ICPs with trader TrustPower. Until recently TrustPower did not issue a specific Meter and Liven instruction and their field operators could carry out this function with no intervention from TrustPower. Recent changes to MEP arrangements will see TrustPower issuing such instructions, it is expected they will need the ICP on the Registry for this to occur. This is expected to provide a safeguard which will prevent electrical connection being completed prior to an ICP being on the Registry.		05/20	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above		05/20	

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

The Audit Compliance Summary Reports, LIS, EDA reports 21 July 2020 and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

Network	ICPs Connected During Audit Period	IECD Input to Registry later than 10 business days	Comment
TPCO	411	32 (7.8%)	Range 11-66 days Another 3 appeared to be solar installs that used the IECD
ELIN	92	2 (2.2%)	Range 30-40 days
OTPO	150	28 (18.7%)	Range 11-91 days
LLNW	477	22 (4.6%)	Range 11-66 days
Total	1130		

There was a similar level of compliance as found in the last audit. Late information from the field appears to still be a key reason for late updates. The new exception monitoring dashboard is anticipated to help in future.

Audit outcome

Non-compliant

NON-COMPLIANCE

Non-compliance	Description		
Audit Ref: 3.5 With: <i>Clause 7(2A) of Schedule 11.1</i> From: 01-Jul-19 To: 17-Jul-20	TPCO - 7.8% of IECD input to Registry late ELIN - 2.2% of IECD input to Registry late OTPO - 18.7% of IECD input to Registry late LLNW - 4.6% of IECD input to Registry late Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because a new ICP connection management system and processes were implemented during the audit period. It could be anticipated this area will improve in the near future. The audit Risk Rating is assigned as low due to minimal impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
Tools continue to be developed in the new PowerNet Connect tool to monitor and ensure correct Event Dates are being loaded to the Registry. This will highlight exceptions and facilitate improvements.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above		Ongoing	

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

Code reference

Clause 11.17

Code related audit information

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

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

In respect of ICPs across which unmetered load is shared, the distributor must not connect an ICP unless a trader is recorded in the registry as accepting responsibility for the shared unmetered load, and all traders that are responsible for an ICP on the shared unmetered load have been advised.

Audit observation

The Audit Compliance Summary Reports, LIS, EDA reports 21 July 2020 and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

New connection application information is captured in PowerNet Connect and once approved a connection proposal is provided to the customer. After the customer notifies PowerNet they have accepted the quote, an ICP identifier is created in PowerNet Connect and provided to the installation owner or their representative. An email is also sent to the trader nominated by the customer. Once an acceptance email is received from the trader and logged in PowerNet Connect the ICP identifier and associated information is provided to the Registry in an overnight upload. PowerNet has agreements with Contact Energy and Trustpower, whereby for all new connections where a customer nominates them as a proposed trader the ICPs are automatically accepted by those traders.

There were two new ICP connections on the Lakeland Network and one on The Power Company Network that were connected without a trader recorded in the Registry as taking responsibility for the ICPs.

It was noted that there were no such discrepancies after March 2020 and it is anticipated this area should improve following the bedding in of the new processes associated with the Power Connect implementation.

Audit outcome

Non-compliant

NON-COMPLIANCE

Non-compliance	Description		
Audit Ref: 3.6 With: <i>Clause 11.17</i> From: 01-Jul-19 To: 17-Jul-20	LLNW – 2 x new ICPs were connected without a Trader recorded in the Registry as taking responsibility for the ICPs TPCO – 1 x new ICP was connected without a Trader recorded in the Registry as taking responsibility for the ICP Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because a new processes in this area was implemented during the audit period. It is anticipated this area will improve in future. The audit Risk Rating is assigned as low due to the very low number of ICPs involved .		
Actions taken to resolve the issue		Completion date	Remedial action status
Tools are being developed to monitor and identify instances of delay in loading data, which will initiate investigation into these situations with a view to applying preventative action going forward.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above		Ongoing	

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

Code reference

Clause 10.31

Code related audit information

A distributor must not connect an ICP that is not an NSP unless requested to do so by the trader trading at the ICP, or if there is only shared unmetered load at the ICP and each trader has been advised.

Audit observation

The Audit Compliance Summary Reports, LIS, EDA reports 21July 2020 and the Registry were checked for the audit period. The new connection process documents were reviewed and

discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

New connection application information is captured in PowerNet Connect and once approved a connection proposal is provided to the customer. After the customer notifies PowerNet they have accepted the quote, an ICP identifier is created in PowerNet Connect and provided to the installation owner or their representative. An email is also sent to the trader nominated by the customer, this email also asks the Trader to approve the connection of the ICP when it is ready to do so. Once an acceptance email is received from the trader and logged in PowerNet Connect the ICP identifier and associated information is provided to the Registry in an overnight upload. The upload process includes functionality to ensure mandatory fields are populated before the information is uploaded to the registry. PowerNet has agreements with Contact Energy and Trustpower, whereby for all new connections where a customer nominates them as a proposed trader the ICPs are automatically accepted by those traders.

The Trader ICP acceptance email also including the Trader request to connect is one of the process enhancements implemented during the audit period alongside the implementation of PowerNet Connect. The trader request to connect is inherent in the date the trader took responsibility for the ICP recorded in the **Trader Authority Date** field in PowerNet Connect.

It is suggested that the Trader request to connect date be recorded in its own discrete field within PowerNet Connect (even though it may be the same date as the ICP responsibility) in the near future to provide clarity and avoid confusion.

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.*

If the ICP is only shared unmetered load, the distributor must advise the traders of the intention to temporarily connect the ICP unless:

advising all traders would impose a material cost on the distributor, and

in the distributor's reasonable opinion the advice would not result in any material benefit to any of the traders.

Audit observation

The new connection process documents were reviewed and discussed with PowerNet staff.

Audit commentary

PowerNet staff state there have not been any requests to temporarily electrically connect any installation during this audit period.

PowerNet staff are aware of the code requirements in this area.

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

The Audit Compliance Summary Reports, LIS, EDA reports 21 July 2020 and the Registry were checked for the audit period. The Registry NSP table was reviewed and the clause discussed with PowerNet staff.

Audit commentary

One new NSP ICP 0000900392NVB03 was created on the ELIN network during the audit period. This is an embedded network known by PowerNet as the KMart embedded network connected on 26/09/19. This Network is operated by Smart Net Ltd and listed in the registry with a distributor code of SMRT and NSP POC of LVF0011.

Audit outcome

Compliant

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

Code reference

Clause 10.30(A)

Code related audit information

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

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

Audit observation

The clause was discussed with PowerNet staff.

Audit commentary

PowerNet staff state there have not been any requests to temporarily electrically connect any NSP that is not a point of connection to the grid during this audit period.

PowerNet staff are aware of the code requirements in this area.

Audit outcome

Compliant

3.11. Definition of ICP identifier (Clause 1(1) Schedule 11.1)

Code reference

Clause 1(1) Schedule 11.1

Code related audit information

Each ICP created by the distributor in accordance with Clause 11.4 must have a unique identifier, called the “ICP identifier”, determined in accordance with the following format:

xxxxxxxxxxxx where:

- *xxxxxxxxxx is a numerical sequence provided by the distributor*
- *xx is a code that ensures the ICP is unique (assigned by the Authority to the issuing distributor)*
- *ccc is a checksum generated according to the algorithm provided by the Authority.*

Audit observation

The Audit Compliance Summary Reports, LIS, EDA reports 21 July 2020 and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

ICP identifiers for the PowerNet Networks are produced by PowerNet Connect. A unique sequential number is generated by the system and combined with one of the distributor codes in the following table, to create each ICP associated with that distribution network.

Network	Distributor code
TPCO – The Power Company	TP
ELIN – Electricity Invercargill	NV
OTPO – Otago Net JV	TG
LLNW - Lakeland	LN

It was verified that Power Connect creates correctly formatted ICPs and uploads them to 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 report and the Registry were checked for the audit period. The new connection process documents were reviewed. A random sample of 30 new ICP connection records proportioned by network were also checked and discussed with PowerNet staff.

Audit commentary

All Network ICPs with the status of READY, ACTIVE, and INACTIVE have a single loss category code assigned. The loss category code is assigned to an ICP when it is first uploaded to the registry.

Audit outcome

Compliant

3.13. Management of “new” status (Clause 13 Schedule 11.1)

Code reference

Clause 13 Schedule 11.1

Code related audit information

The ICP status of “New” must be managed by the distributor to indicate:

- *the associated electrical installations are in the construction phase (Clause 13(a) of Schedule 11.1)*
- *the ICP is not ready for activation (Clause 13(b) of Schedule 11.1).*

Audit observation

The LIS, EDA reports and the Registry were checked for the audit period. The new connection process documents were reviewed. A random sample of 30 new ICP connection records proportioned by network were also checked and discussed with PowerNet staff.

Audit commentary

PowerNet staff state that the NEW status is not used by PowerNet on any of the networks they are responsible for. All ICPs are uploaded into the Registry as READY.

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 Audit Compliance Summary Reports, LIS, EDA reports 21 July 2020 and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

There were no ICPs in the Registry with NEW status for two years or more for any of the Distributor Networks PowerNet are responsible for.

The following table shows the number of ICPs by Distributor Network in READY status in the Registry for 24 months or more.

Distributor Network	READY 2020	READY 2019	READY 2018	READY 2017
TPCO	6	7	6	49
ELIN	2	2	0	2
OTPO	0	2	2	3
LLNW	0	1	0	0

An improvement on the past audit. This is expected to improve further with the implementation during the audit period of new exception reporting and monitoring dashboard.

Audit outcome

Non-compliant

NON-COMPLIANCE

Non-compliance	Description
<p>Audit Ref: 3.14</p> <p>With:</p> <p><i>Clause 15</i></p> <p><i>Schedule 11.1</i></p> <p>From: 01-Jul-19</p> <p>To: 17-Jul-20</p>	<p>The process was not followed to ask the trader who intends to trade at the ICP whether the ICP should continue to have that status.</p> <p>The number of ICPs in READY status in the Registry for two years or more:</p> <p>TPCO - 6</p> <p>ELIN - 2</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	Controls are recorded as moderate because new exception reporting and monitoring processes were implemented during the audit period. It could be anticipated this area will improve in the near future. The audit Risk Rating is assigned as low due to a small number of ICPs with minimal impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
A backlog of aged ICPs is presently being investigated to establish their status. This is carried out directly with the applicant who had initially requested the new connection. The trader for each ICP will be consulted on the outcome for decisions to be made on the future of the ICP.		Ongoing	Choose an item.
Preventative actions taken to ensure no further issues will occur		Completion date	
Through the use of the recently developed reports, and enhanced by new dashboard already mentioned as under development, this follow-up of aged ICPs will be much improved.		Ongoing	

3.15. Embedded generation loss category (Clause 7(6) Schedule 11.1)

Code reference

Clause 7(6) Schedule 11.1

Code related audit information

If the ICP connects the distributor's network to an embedded generating station that has a capacity of 10 MW or more (clause 7(1)(f) of Schedule 11.1):

- *The loss category code must be unique; and*
- *The distributor must provide the following to the reconciliation manager:*
 - o *the unique loss category code assigned to the ICP*
 - o *the ICP identifier of the ICP*
 - o *the NSP identifier of the NSP to which the ICP is connected*
 - o *the plant name of the embedded generating station.*

Audit observation

The LIS, EDA reports and the Registry were checked for the audit period. The Registry NSP table was reviewed and the clause discussed with PowerNet staff.

Audit commentary

TPCO – ICP 0000315340TPEFC White Hill wind farm has a capacity of 58M with a Loss Factor Code **PNL42**

OtagoNet JV – ICP 0002751984TGB5D Paerau-Patearoa Power Station has a capacity of 12.25MW with Loss a Factor Code **2751984**

It is confirmed that each ICP has an individual loss category code.

Audit outcome

Compliant

3.16. Electrical connection of a point of connection (Clause 10.33A)

Code reference

Clause 10.33A(4)

Code related audit information

No participant may electrically connect a point of connection or authorise the electrical connection of a point of connection, other than a reconciliation participant.

Audit observation

The Audit Compliance Summary Reports, LIS, EDA reports and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

An email is sent to the trader nominated by the customer, this email also asks the Trader to approve the connection of the ICP when it is ready to do so. Once an acceptance email is received from the trader and logged in PowerNet Connect the ICP identifier and associated information is provided to the Registry in an overnight upload.

The Trader ICP acceptance email also including the Trader request to connect is one of the process enhancements implemented during the audit period alongside the implementation of PowerNet Connect. The trader request to connect is inherent in the date the trader took responsibility for the ICP recorded in the **Trader Authority Date** field in PowerNet Connect.

It was noted that PowerNet Staff do not electrically connect new ICP connections to the network. Traders issue instructions directly to MEP metering technicians that hold PowerNet warrants to electrically connect ICPs on the Distribution Networks PowerNet are responsible for. PowerNet provides authorisation to electrically connect each ICP via approval of the connection application form, which is provided to the metering technician by the customer applicant or their agent (usually the customer electrician) who must have this on site at initial electrical connection.

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 10 business days, the notification must be provided no later than the 13th business day and be backdated to the date the change took effect.

In the case of decommissioning an ICP, notification must be given by the later of 3 business days after the registry manager has advised the distributor that the ICP is ready to be decommissioned, or 3 business days after the distributor has decommissioned the ICP.

Audit observation

The EDA files were analysed and the Audit Compliance Summary Reports were checked for the audit period. and the clause discussed with PowerNet staff.

Audit commentary

The tables below outline the EDA file analysis for this clause for the audit period:

TPCO

Activity	Total number of updates		No of updates later than 3BD		Date range of updates [BD]	
	2020	2019	2020	2019	2020	2019
Address	719	1,177	66 (9.18%)	9 (0.8%)	Up to 4443	Up to 40
Network	3,752	3,078	1,544 (41.15%)	871 (28.3%)	Up to 4558	Up to 246
Pricing	40,638	3,455	29,659 (73.0%)	2,606 (75.4%)	Up to 202	Up to 119

ELIN

Activity	Total number of updates		No of updates later than 3BD		Date range of updates [BD]	
	2020	2019	2020	2019	2020	2019
Address	244	145	6 (2.46%)	2 (1.38%)	Up to 4382	Up to 35
Network	197	169	14 (7.11%)	10 (5.9%)	Up to 31	Up to 88
Pricing	20,683	1962	13,936 (67.38%)	1,1171 (56.3%)	Up to 54	Up to 223

OTPO

Activity	Total number of updates		No of updates later than 3BD		Date range of updates [BD]	
	2020	2019	2020	2019	2020	2019
Address	234	216	7 (3%)	0	Up to 60	Up to 3
Network	3,951	327	51 (1.29%)	9 (2.8%)	Up to 149	Up to 22
Pricing	6,528	1,089	940 (14.40%)	759 (69.7%)	Up to 95	Up to 251

LLNW

Activity	Total number of updates		No of updates later than 3BD		Date range of updates [BD]	
	2020	2019	2020	2019	2020	2019
Address	642	647	105 (16.36%)	7 (1.1%)	Up to 499	Up to 40
Network	1, 081	1,065	212 (19.6%)	22 (2.1%)	Up to 1340	Up to 1298
Pricing	1,310	792	851 (64.96%)	231 (29.2%)	Up to 89	Up to 120

PowerNet staff advise the high volume of pricing changes during the audit period was driven by Traders requesting backdated changes to or from low user pricing in monthly batches. PowerNet policy is to backdate no more than two months. PowerNet implements the changes within the same billing month as the request to minimise the financial impacts.

PowerNet has a process in place to monitor weekly logs from System Control to identify NSP changes in order to satisfy clause 8 (4) of Schedule 11.1. Whilst no actual NSP change discrepancies were identified a small number of data entry of errors of NSPs against new ICP connections were identified and corrected during the audit period.

Audit outcome

Non-compliant

NON-COMPLIANCE

Non-compliance	Description		
Audit Ref: 4.1 With: <i>Clause 8 Schedule 11.1</i> From: 01-Jul-19 To: 17-Jul-20	Registry information not updated within 3 business days by all PowerNet Distribution Networks ELIN, TPCO, LLNW, OTPO Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because new exception reporting and monitoring processes were implemented during the audit period. It could be anticipated this area will improve in the near future. The audit Risk Rating is assigned as low due to minimal impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
For changes of Price Code of PowerNet continues to operate the timeframes policy outlined in recognition of traders requests relating to arrangements they have made with their customers. Other types of data changes in general will have Event Date on the same date as actioned, or only backdated if necessary to meet compliance for completeness of accuracy.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above		Ongoing	

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

Code reference

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

Code related audit information

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

If the distributor cannot identify the NSP that an ICP is connected to, the distributor must nominate the NSP that the distributor thinks is most likely to be connected to the ICP, taking into account the flow of electricity within its network, and the ICP is deemed to be connected to the nominated NSP.

Audit observation

The LIS reports and the Registry were checked for the audit period. The Registry NSP table was checked and the PowerNet Distributor Material Change Audit 2019 reviewed, the clause was also discussed with PowerNet staff.

Audit commentary

NSP identifiers are uploaded into the Registry when ICPs are initially loaded into the Registry as READY. PowerNet Connect has a network model integrated with it where NSP- transformer- ICP are linked together. If the NSP - transformer relationship changes then all ICPs linked to the transformer are identified so a registry update to the new NSP can be performed.

Audit outcome

Compliant

4.3. Customer queries about ICP (Clause 11.31)

Code reference

Clause 11.31

Code related audit information

The distributor must advise a customer (or any person authorised by the customer) or embedded generator of the customer or embedded generator's ICP identifier within 3 business days after receiving a request for that information.

Audit observation

The clause was discussed with PowerNet staff.

Audit commentary

It was stated by PowerNet staff that requests from a customer for advice around existing ICP connections are actioned immediately, usually while the customer is on the phone or at the office.

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 files and the Registry were checked for the audit period. The Registry NSP table was checked and the PowerNet Distributor Material Change Audit 2019 reviewed, the clause was also discussed with PowerNet staff.

Audit commentary

PowerNet Connect has functionality that ensures assigned addresses are valid and easily located. ICPs creation first involves setting up a project in Maximo (PowerNet Asset Management system) which includes the address which needs to be verified to produce a project number. The project number and address are input into PowerNet Connect where the address is validated against existing addresses in PowerNet Connect. If the address is already used the ICP creation will not progress.

Review of the LIS files indicates there is enough information in the Registry for ICPs to be readily located.

Audit outcome

Compliant

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

Code reference

Clause 3 Schedule 11.1

Code related audit information

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

Audit observation

This clause was discussed with PowerNet staff.

Audit commentary

PowerNet staff state there are no known ICPs that could not be electrically disconnected without electrically disconnecting another ICP.

Audit outcome

Compliant

4.6. Distributors to Provide ICP Information to the Registry manager (Clause 7(1) Schedule 11.1)

Code reference

Clause 7(1) Schedule 11.1

Code related audit information

For each ICP on the distributor's network, the distributor must provide the following information to the registry manager:

- *the location address of the ICP identifier (Clause 7(1)(a) of Schedule 11.1)*
- *the NSP identifier of the NSP to which the ICP is usually connected (Clause 7(1)(b) of Schedule 11.1)*
- *the installation type code assigned to the ICP (Clause 7(1)(c) of Schedule 11.1)*
- *the reconciliation type code assigned to the ICP (Clause 7(1)(d) of Schedule 11.1)*
- *the loss category code and loss factors for each loss category code assigned to the ICP (Clause 7(1)(e) of Schedule 11.1)*
- *if the ICP connects the distributor's network to an embedded generating station that has a capacity of 10MW or more (Clause 7(1)(f) of Schedule 11.1):*
 - a) *the unique loss category code assigned to the ICP*
 - b) *the ICP identifier of the ICP*
 - c) *the NSP identifier of the NSP to which the ICP is connected*
 - d) *the plant name of the embedded generating station*
- *the price category code assigned to the ICP, which may be a placeholder price category code only if the distributor is unable to assign the actual price category code because the capacity or volume information required to assign the actual price category code cannot be determined before electricity is traded at the ICP (Clause 7(1)(g) of Schedule 11.1)*
- *if the price category code requires a value for the capacity of the ICP, the chargeable capacity of the ICP as follows (Clause 7(1)(h) of Schedule 11.1):*
 - a) *a placeholder chargeable capacity if the distributor is unable to determine the actual chargeable capacity*
 - b) *a blank chargeable capacity if the capacity value can be determined for a billing period from metering information collected for that billing period*
 - c) *if there is more than one capacity value at the ICP, and at least one, but not all, of those capacity values can be determined for a billing period from the metering information collected for that billing period-*
 - (i) *no capacity value recorded in the registry field for the chargeable capacity; and*
 - (ii) *either the term "POA" or all other capacity values, recorded in the registry field in which the distributor installation details are also recorded*
 - d) *if there is more than one capacity value at the ICP, and none of those capacity values can be determined for a billing period from the metering information collected for that billing period-*
 - (i) *the annual capacity value recorded in the registry field for the chargeable capacity; and*
 - (ii) *either the term "POA" or all other capacity values, recorded in the registry field in which the distributor installation details are also recorded*
 - e) *the actual chargeable capacity of the ICP in any other case*
- *the distributor installation details for the ICP determined by the price category code assigned to the ICP (if any), which may be placeholder distributor installation details only if the distributor is unable to assign the actual distributor installation details because the capacity or volume information required to assign the actual distributor installation details*

cannot be determined before electricity is traded at the ICP (Clause 7(1)(i) of Schedule 11.1)

- *the participant identifier of the first trader who has entered into an arrangement to sell or purchase electricity at the ICP (only if the information is provided by the first trader) (Clause 7(1)(j) of Schedule 11.1)*
- *the status of the ICP (Clause 7(1)(k) of Schedule 11.1)*
- *designation of the ICP as "Dedicated" if the ICP is located in a balancing area that has more than 1 NSP located within it, and the ICP will be supplied only from the NSP advised under Clause 7(1)(b) of Schedule 11.1, or the ICP is a point of connection between a network and an embedded network (Clause 7(1)(l) of Schedule 11.1)*
- *if unmetered load, other than distributed unmetered load, is associated with the ICP, the type and capacity in kW of unmetered load (Clause 7(1)(m) of Schedule 11.1)*
- *if shared unmetered load is associated with the ICP, a list of the ICP identifiers of the ICPs that are associated with the unmetered load (Clause 7(1)(n) of Schedule 11.1)*
- *if the ICP is capable of generating into the distributors network (Clause 7(1)(o) of Schedule 11.1):*
 - a) *the nameplate capacity of the generator; and*
 - b) *the fuel type*
- *the initial electrical connection date of the ICP (Clause 7(1)(p) of Schedule 11.1).*

Audit observation

The Audit Compliance Reports, LIS, PR255 files and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

The table below outlines the LIS files and Audit compliance reports analysis for this clause for this audit period:

	No IECD in Registry But Active	Dist Generation Incorrect Installation Type	Dist Generation No Capacity in registry	Dist Generation No Fuel Type in registry
TPCO	3	5	5	5
ELIN	5	1	1	1
OTPO	4	3	2	2
LLNW	5	0	0	0

Some improvement from last audit.

Audit outcome

Non-compliant

NON-COMPLIANCE

Non-compliance	Description		
<p>Audit Ref: 4.6</p> <p>With:</p> <p><i>Clause 7(1)</i></p> <p><i>Schedule 11.1</i></p> <p>From: 01-Jul-19</p> <p>To: 17-Jul-20</p>	<p>Missing IECD information in the Registry from all PowerNet Distribution Networks ELIN (x5), TPCO (x3), LLNW (x5), OTPO (x4).</p> <p>Incorrect Installation type in the Registry for ELIN (x1), TPCO (x5), OTPO (x3)</p> <p>Missing Distributed Generation information type in the Registry capacity and fuel type for ELIN (x1), TPCO (x5), OTPO (x2)</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Three times previously</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls are recorded as moderate because new exception reporting and monitoring processes were implemented during the audit period. It could be anticipated this area will improve in the near future. The audit Risk Rating is assigned as low due to a small number of ICPs with minimal impact on settlement outcomes.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Most of ICPs with found no IECD were connected at the very end of the report period and dates have since been loaded. It has been timing of the report verses workflow which raises them in this report. 2 TPCO and 1 ELIN have had dates recorded in PowerNet data systems which are quite historic, and appear to have not uploaded to the Registry at the time, these are being corrected</p> <p>Discrepancies in DG ICP data is still under investigation</p>		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

For IECD it is believed there are no systemic errors exist. For DG data quality any discovered systemic errors will be corrected	Ongoing	
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4.7. Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1)

Code reference

Clause 7(3) Schedule 11.1

Code related audit information

The distributor must provide the following information to the registry manager no later than 10 business days after the trading of electricity at the ICP commences:

- *the actual price category code assigned to the ICP (Clause 7(3)(a) of Schedule 11.1)*
- *the actual chargeable capacity of the ICP determined by the price category code assigned to the ICP (if any) (Clause 7(3)(b) of Schedule 11.1)*
- *the actual distributor installation details of the ICP determined by the price category code assigned to the ICP (if any) (Clause 7(3)(c) of Schedule 11.1).*

Audit observation

The Audit Compliance Summary Reports, LIS, EDA files 21 July 2020 and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

New connection application information is captured in PowerNet Connect. Once the application is approved a connection proposal including costs is provided to the customer for acceptance. After the customer notifies PowerNet they have accepted the quote, an ICP identifier is created in PowerNet Connect and provided to the installation owner or their representative. An email is also sent to the trader nominated by the customer. Once an acceptance email is received from the trader and logged in PowerNet Connect the ICP identifier and associated information is provided to the Registry in an overnight upload. The upload process includes functionality to ensure mandatory fields are populated before the information is uploaded to the registry. The Trader ICP acceptance email also includes the Trader request to connect. The trader request to connect is inherent in the date the trader took responsibility for the ICP recorded in the **Trader Authority Date** field in PowerNet Connect.

ICPs are set to the ready status.

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 files 21 July 2020 and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

No GPS coordinates are loaded into the registry for any network managed by PowerNet

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 Audit Compliance Summary Reports, LIS, EDA files 21 July 2020 and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

New connection application information is captured in PowerNet Connect. Once the application is approved a connection proposal including costs is provided to the customer for acceptance. After the customer notifies PowerNet they have accepted the quote, an ICP identifier is created in PowerNet Connect and provided to the installation owner or their representative. An email is also sent to the trader nominated by the customer. Once an acceptance email is received from the trader and logged in PowerNet Connect the ICP identifier and associated information is provided to the Registry in an overnight upload. The upload process includes functionality to ensure mandatory fields such as price category, are populated before the information is uploaded to the registry. The Trader ICP acceptance email also includes the Trader request to connect. The trader request to connect is inherent in the date the trader took responsibility for the ICP recorded in the **Trader Authority Date** field in PowerNet Connect. It was noted that PowerNet has blanket acceptance arrangements with Contact Energy and Trustpower.

ICPs are set to the ready status.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 11.1

Code related audit information

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

Audit observation

The Audit Compliance Summary Reports and LIS files 21 July 2020 and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 30 new ICP connection records proportioned by network were also checked.

Audit commentary

PowerNet manages two DISTRIBUTOR Status ICPs; 0004031015TP9AA an embedded network known as Aurora on the TPCO network, and 0000900392NVB03 an embedded network known as KMart on the ELIN network.

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 Audit Compliance Summary Reports and EDA files 21 July 2020 and the Registry were checked for the audit period. The decommission process documents were reviewed and

discussed with PowerNet staff. A random sample of 24 decommissioned ICP records proportioned by network were also checked.

Audit commentary

This clause was non-compliant in the last audit.

ICPs are decommissioned when a request directly from a property owner/customer or a retailer on behalf of the property owner/customer is received. PowerNet send an authority to remove connection form to the property owner/customer, once the signed form has been returned to PowerNet it is logged in PowerNet Connect. The Trader is notified by email that a permanent disconnection of an ICP is taking place and the job is raised to complete the work including final meter readings and retrieval as required. On completion of the permanent disconnection of the ICP from the network the completed paperwork is returned to PowerNet the same day, PowerNet Connect is updated and the Trader notified including final meter readings as required. The Trader is asked to update the Registry status of the ICP to INACTIVE READY FOR DECOMMISSIONING. PowerNet monitor the Registry (reminding the Trader if necessary) and when the status has been changed update the ICP status to DECOMMISSIONED in PowerNet Connect which updates the Registry with an overnight file update.

The implementation of PowerNet Connect and associated new processes appear to have corrected the previous problem of the event input date to the Registry being used as the effective date. The status event date is now the physical date the permanent decommission took place.

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 table in the Registry was examined for all networks managed by PowerNet. This was discussed with PowerNet staff.

Audit commentary

There were no new Price Categories recorded in the Registry during the audit period.

Audit outcome

Compliant

5. CREATION AND MAINTENANCE OF LOSS FACTORS

5.1. Updating table of loss category codes (Clause 21 Schedule 11.1)

Code reference

Clause 21 Schedule 11.1

Code related audit information

The distributor must keep the registry up to date with the loss category codes that may be assigned to ICPs on the distributor's network.

The distributor must specify the date on which each loss category code takes effect.

A loss category code takes effect on the specified date.

Audit observation

The Loss Category Code table in the Registry was examined for all networks managed by PowerNet. This was discussed with PowerNet staff.

Audit commentary

This clause was non-compliant in the last audit.

Loss Factor Codes updated during the audit period were as follows:

TPCO

Loss factor code	Start/End Period	Price Code Start Date	Registry tables updated
3913392	15 - 46	01/05/20	18/02/20
3913392	47 - 14	01/05/20	18/02/20
3913392	15 - 46	01/10/20	18/02/20
3913392	47 - 14	01/10/20	18/02/20
INTRBAN	1 - 48	01/05/20	18/02/20
INTRBLF	1 - 48	01/05/20	18/02/20
PNLO1	1 - 48	01/05/20	19/02/20
TPCOGXP	15 - 46	01/10/20	19/02/20
TPCOGXP	47 - 14	01/05/20	19/02/20
TPCOGXP	15 - 46	01/10/20	19/02/20
TPCOGXP	47 - 14	01/10/20	19/02/20
TPCOL1	15 - 46	01/10/20	19/02/20
TPCOL1	47 - 14	01/05/20	19/02/20
TPCOL1	15 - 46	01/10/20	19/02/20
TPCOL1	47 - 14	01/10/20	19/02/20

TPCOL2	15 - 46	01/10/20	19/02/20
TPCOL2	47 - 14	01/05/20	19/02/20
TPCOL2	15 - 46	01/10/20	19/02/20
TPCOL2	47 - 14	01/10/20	19/02/20

ELIN

Loss factor code	Start/End Period	Price Code Start Date	Registry tables updated
ELIN2	15 - 46	01/05/20	18/02/20
ELIN2	47 - 14	01/05/20	18/02/20
ELIN2	15 - 46	01/10/20	18/02/20
ELIN2	47 - 14	01/10/20	18/02/20
ELINGXP	15 - 46	01/05/20	18/02/20
ELINGXP	47 - 14	01/05/20	18/02/20
ELINGXP	15 - 46	01/10/20	18/02/20
ELINGXP	47 - 14	01/10/20	18/02/20
ELIN1	15 - 46	01/05/20	18/02/20
ELIN1	47 - 14	01/05/20	18/02/20
ELIN1	15 - 46	01/10/20	18/02/20
ELIN1	47 - 14	01/10/20	18/02/20
PNL08	15 - 46	01/05/20	18/02/20
PNL08	47 - 14	01/05/20	18/02/20
PNL08	15 - 46	01/10/20	18/02/20
PNL08	47 - 14	01/10/20	18/02/20

OTPO

Loss factor code	Start/End Period	Price Code Start Date	Registry tables updated
OTPOL1	1 - 48	01/12/19	17/09/19

Audit outcome

Compliant

5.2. Updating loss factors (Clause 22 Schedule 11.1)

Code reference

Clause 22 Schedule 11.1

Code related audit information

Each loss category code must have a maximum of 2 loss factors per calendar month. Each loss factor must cover a range of trading periods within that month so that all trading periods have a single applicable loss factor.

If the distributor wishes to replace an existing loss factor on the table in the registry, the distributor must enter the replaced loss factor on the table in the registry.

Audit observation

The Loss Category Codes table in the Registry was examined for all networks managed by PowerNet. This was discussed with PowerNet staff.

Audit commentary

PowerNet updated the Loss Factors on the TPCO, ELIN and OTPO Distribution Networks during the audit period, the changes are shown in the tables above in **section 5.1**.

The Loss Factor changes met code requirements.

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

The NSP mapping table in the registry was reviewed and this was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not create or decommission any NSPs during the audit period.

Audit outcome

Compliant

6.2. Provision of NSP information (Clause 26(1) and (2) Schedule 11.1)

Code reference

Clause 26(1) and (2) Schedule 11.1

Code related audit information

If the distributor wishes to create an NSP or transfer an ICP as described above, the distributor must request that the reconciliation manager create a unique NSP identifier for the relevant NSP.

The request must be made at least 10 business days before the NSP is electrically connected, in respect of an NSP that is an interconnection point between 2 local networks. In all other cases, the request must be made at least 1 month before the NSP is electrically connected or the ICP is transferred.

Audit observation

The NSP mapping table in the registry was reviewed and this was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not ask the Reconciliation manager to create any unique NSP identifiers during the audit period.

PowerNet staff advise they are aware of the code requirements.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

If a participant has notified the creation of an NSP on the distributor's network, the distributor must give written notice to the reconciliation manager of the following:

- *if the NSP is to be located in a new balancing area, all relevant details necessary for the new balancing area to be created and notification that the NSP to be created is to be assigned to the new balancing area*
- *in all other cases, notification of the balancing area in which the NSP is located.*

Audit observation

The NSP mapping table in the registry was reviewed and this was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not create an NSP or balancing area during the audit period.

PowerNet staff advise they are aware of the code requirements.

Audit outcome

Compliant

6.4. Notice of supporting embedded network NSP information (Clause 26(4) Schedule 11.1)

Code reference

Clause 26(4) Schedule 11.1

Code related audit information

If a participant notifies the creation of an NSP, or the transfer of an ICP to an NSP that is a point of connection between a network and an embedded network owned by the distributor, the distributor must give notice to the reconciliation manager at least 1 month before the creation or transfer of:

- *the network on which the NSP will be located after the creation or transfer (Clause 26(4)(a))*
- *the ICP identifier for the ICP that connects the network and the embedded network (Clause 26(4)(b))*

- the date on which the creation or transfer will take effect (Clause 26(4)(c)).

Audit observation

The NSP mapping table in the registry was reviewed and this was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not create an NSP or transfer an ICP to a NSP during the audit period.

PowerNet staff advise they are aware of the code requirements

Audit outcome

Compliant

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

Code reference

Clause 24(2) and (3) Schedule 11.1

Code related audit information

The distributor must give written notice to the reconciliation manager of any change to balancing areas associated with an NSP supplying the distributor's network. The notification must specify the date and trading period from which the change takes effect, and be given no later than 3 business days after the change takes effect.

Audit observation

The NSP mapping table in the registry was reviewed and this was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not change any balancing areas associated with NSPs supplying any of the Distribution Networks PowerNet has responsibility for during the audit period.

Audit outcome

Compliant

6.6. Notice when an ICP becomes an NSP (Clause 27 Schedule 11.1)

Code reference

Clause 27 Schedule 11.1

Code related audit information

If a transfer of an ICP results in an ICP becoming an NSP at which an embedded network connects to a network, or in an ICP becoming an NSP that is an interconnection point, in respect of the distributor's network, the distributor must give written notice to any trader trading at the ICP of the transfer at least 1 month before the transfer.

Audit observation

This was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet during the audit period did not transfer an ICP which resulted in an ICP becoming an NSP at which an embedded network connected to a network or an ICP became an NSP that is an interconnection point.

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

This was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not transfer any ICPs during the audit period.

PowerNet staff advise they are aware of the code requirements

Audit outcome

Compliant

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

Code reference

Clause 10.25(1) and 10.25(3)

Code related audit information

A network owner must, for each NSP that is not a point of connection to the grid for which it is responsible, ensure that:

- *there is 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

This was discussed with PowerNet staff.

Audit commentary

There are a 6 interconnections between the two networks TPCO and ELIN are recorded in the registry as network type I as follows:

1. STD0111 TPCO - STD0111ELIN
2. ELL0111 TPCO - ELL0111ELIN
3. OCB0111 TPCO - OCB0111ELIN
4. BLF0111 TPCO - BLF0111ELIN
5. LEV0331TPCO - LEV0331ELIN
6. SOU0331 TPCO - SOU0331 ELIN

Interconnections between the two networks are all metered except the interconnection ELL0111 TPCO/ELL0111 ELIN, which is the back-up supply (emergency) to Southland Hospital. The exemption #167 was granted on 11 April 2013 and expires 31 March 2023. The MEP for the metered interconnections is PowerNet (PWNT).

Audit outcome

Compliant

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

Code reference

Clause 10.25(2)

Code related audit information

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

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

Audit observation

The NSP mapping table in the registry was reviewed and this was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not create an NSP during the audit period.

PowerNet staff advise they are aware of the code requirements

Audit outcome

Compliant

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

Code reference

Clause 29 Schedule 11.1

Code related audit information

If a network owner acquires all or part of a network, the network owner must give written notice to:

- *the previous network owner (Clause 29(1)(a) of Schedule 11.1)*
- *the reconciliation manager (Clause 29(1)(b) of Schedule 11.1)*
- *the Authority (Clause 29(1)(c) of Schedule 11.1)*
- *every reconciliation participant who trades at an ICP connected to the acquired network or part of the network acquired (Clause 29(1)(d) of Schedule 11.1).*

At least 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

This was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not acquire all or part of any network during the audit period.

This clause is not applicable. 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

This was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not change MEP for any of the interconnections between TPCO and ELIN during the audit period.

PowerNet staff advise they are aware of the code requirements

Audit outcome

Compliant

6.12. Confirmation of consent for transfer of ICPs (Clauses 5 and 8 Schedule 11.2)

Code reference

Clauses 5 and 8 Schedule 11.2

Code related audit information

The distributor must give the Authority confirmation that it has received written consent to the proposed transfer from:

- *the distributor whose network is associated with the NSP to which the ICP is recorded as being connected immediately before the notification (unless the notification relates to the creation of an embedded network) (Clause 5(a) of Schedule 11.2)*
- *every trader trading at an ICP being supplied from the NSP to which the notification relates (Clause 5(b) of Schedule 11.2).*

The notification must include any information requested by the Authority (Clause 8 of Schedule 11.2).

Audit observation

This was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not create an embedded network during the audit period.

This clause is not applicable. 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

This was discussed with PowerNet staff.

Audit commentary

PowerNet staff stated that PowerNet did not create an embedded network during the audit period.

This clause is not applicable. 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 LIS files 21 July 2020 and the Registry were checked for the audit period. This was discussed with PowerNet staff.

Audit commentary

PowerNet policy is not to allow shared unmetered load to be connected on any of the Distribution Networks it is responsible for.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

7.2. Changes to shared unmetered load (Clause 11.14(5))

Code reference

Clause 11.14(5)

Code related audit information

If the distributor becomes aware of a change to the capacity of a shared unmetered load ICP or if a shared unmetered load ICP is decommissioned, it must give written notice to all traders affected by that change or decommissioning as soon as practicable after the change or decommissioning.

Audit observation

The LIS files 21 July 2020 and the Registry were checked for the audit period. This was discussed with PowerNet staff.

Audit commentary

PowerNet policy is not to allow shared unmetered load to be connected on any of the Distribution Networks it is responsible for.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

8. CALCULATION OF LOSS FACTORS

8.1. Creation of loss factors (Clause 11.2)

Code reference

Clause 11.2

Code related audit information

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

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

Audit observation

This was discussed with PowerNet staff and the Asset management Plans, Information Disclosure documents and Loss Factor information on the PowerNet website was reviewed.

Audit commentary

Network Loss Factors for the Distribution networks PowerNet is responsible for are published on the PowerNet website.

PowerNet has published a Loss Factor Calculation Procedure on its website. The document clearly describes PowerNets philosophy and methodology for calculating Network Loss Factors. PowerNet uses PSS Adept software to calculate the technical loss for its networks.

For major customers the loss factors are reviewed annually as they may have a noticeable impact on losses. General customer loss factors have not been recalculated in recent times. PowerNet viewpoint is that the influencing factors on loss factors such as customer behaviour have not changed significantly over the years to justify recalculation.

Audit outcome

Compliant

CONCLUSION

PARTICIPANT RESPONSE

As always PowerNet welcome the scrutiny of this audit, as we continue to strive for the highest level of compliance. We always look for positive actions to take internally from the shortcomings discovered.

We are developing internal tools to assist our own monitoring of our ongoing activity and will also run the Registry reports for our own routine checks of data aside from at audit time.

