ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT

For

THE POWER COMPANY LTD, ELECTRICITY INVERCARGILL LTD, OTAGONET JOINT VENTURE, ELECTRICITY SOUTHLAND LTD (MANAGED BY POWERNET)

Prepared by: Ewa Glowacka of TEG & Associates

Date audit commenced: 21 February 2023

Date audit report completed: 9 March 2023

Audit report due date: 10-Mar-23

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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.

During the audit period 2,011 ICPs were created across four networks. There was a further improvement in compliance results during this audit period compared to the previous audit. The ICP management system PowerNet Connect appears to have contributed to this improvement. An area mentioned by staff to be a constant challenge however is receiving timely information from the field.

The audit found 5 non-compliances and number of recommendation for Electricity Invercargill, The Power Company and OtagoNet JV, 7 non-compliances plus recommendations for Lakeland Network. The level of compliance has improved in the following areas:

- Quality of information in the registry
- Number of backdated updated entries in the registry decreased
- Number of information not populated in the registry decreased

The main issues identified during this audit are:

- Incorrect date used as the Effective Date for distributed generation
- Inconsistency what date is used as the Effective Date in the registry for newly created ICP identifiers
- Review what and when initial information for customer of capacity greater than 100 kVA are uploaded to the registry

The audit period is 01/08/2021 to 31/01/2023.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. Table 1 of the Guidelines for Distributor audit provides some guidance on this matter. The Future Risk Rating score is 10 which results in an indicative audit frequency of 12 months. Our suggestion is 15 months.

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

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	11.2(1) and 10.6(1)	A relatively small quantity of information in the Registry was inaccurate,.	Moderate	Low	2	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	TPCO - 1.56% of IECD input to Registry late	Moderate	Low	2	Identified
Changes to registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Moderate	Low	2	Identified
ICP Location Address	4.4	2 of Schedule 11.1	A small number of duplicate addresses was identified across all networks	Moderate	Low	2	Identified
Distributors to Provide ICP Information to the Registry	4.6	7(1) of Schedule 11.1	No IECD entry for TPCO (3 ICP)	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

RECOMMENDATIONS

Subject	Section	Recommendation	Description
Connection of ICP that is not an NSP	3.6	Review process of uploading new ICPs to the registry. Create a consistent process what date is used as the	It appears that in some instances when a new ICP identifier is firstly uploaded to the registry, the Creation Date is uploaded to the registry, not the Trader Authority Date field. This leads to

		Effective Date in the registry	incorrect information in the registry and increases the number of backdated entries which impacts PowerNet compliance
Distributors to Provide ICP Information to the Registry manager	4.6	Use ROI date as the Effective Date for population of distributed generation information in the registry	The date of Network approval of DG application is used as the Effective Date in the registry
Creation of loss Factors	8.1	Review loss factors for TPCO	UFE for TPCO which is outside of the EA recommendation of +/-1 %.

ISSUES

Subject	Section	Issue	Description
			Nil

ELIN

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide complete and accurate information	2.1	11.2(1) and 10.6(1)	A relatively small quantity of information in the Registry was inaccurate,.	Moderate	Low	2	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	2.47% of IECD input to registry late IECD populated for ICP with the status "New" - ELIN	Moderate	Low	2	Identified
Changes to registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Moderate	Low	2	Identified
ICP Location Address	4.4	2 of Schedule 11.1	A small number of duplicate addresses was identified	Moderate	Low	2	Identified

			across all networks				
Distributors to Provide ICP Information to the Registry	4.6	7(1) of Schedule 11.1	No UML entry for ELIN (3 ICP) No IECD entry for ELIN (1 ICP) IECD populated for ICP with the status "New" - ELIN	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

RECOMMENDATIONS

Subject	Section	Recommendation	Description
Connection of ICP that is not an NSP	3.6	Review process of uploading new ICPs to the registry. Create a consistent process what date is used as the Effective Date in the registry	It appears that in some instances when a new ICP identifier is firstly uploaded to the registry, the Creation Date is uploaded to the registry not the Trader Authority Date field This leads to incorrect information in the registry and increases the number of backdated entries which impacts PowerNet compliance
Distributors to Provide ICP Information to the Registry manager	4.6	Use ROI date as the Effective Date for population of distributed generation information in the registry	The date of Network approval of DG application is used as the Effective Date in the registry

ISSUES

Subject	Section	Issue	Description
			Nil

OTPO

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide complete and accurate information	2.1	11.2(1) and 10.6(1)	A relatively small quantity of information in the Registry was inaccurate,.	Moderate	Low	2	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	4.8% of IECD input to registry late Incorrect IECD for 2 ICPs	Moderate	Low	2	Identified
Changes to registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Moderate	Low	2	Identified
ICP Location Address	4.4	2 of Schedule 11.1	A small number of duplicate addresses was identified across all networks	Moderate	Low	2	Identified
Distributors to Provide ICP Information to the Registry	4.6	7(1) of Schedule 11.1	No UML entry for No IECD entry for OTPO (2 ICPs)	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

RECOMMENDATIONS

Subject	Section	Recommendation	Description
Connection of ICP that is not an NSP	3.6	Review process of uploading new ICPs to	It appears that in some instances when a new ICP identifier is firstly uploaded to

		the registry. Create a consistent process what date is used as the Effective Date in the registry	the registry, the Creation Date is uploaded to the registry, not the Trader Authority Date field This leads to incorrect information in the registry and increases the number of backdated entries which impacts PowerNet compliance
Distributors to Provide ICP Information to the Registry manager	4.6	Use ROI date as the Effective Date for population of distributed generation information in the registry	The date of Network approval of DG application is used as the Effective Date in the registry

ISSUES

Subject	Section	Issue	Description
			Nil

LLNW

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide complete and accurate information	2.1	11.2(1) and 10.6(1)	A relatively small quantity of information in the Registry was inaccurate.	Moderate	Low	2	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	1.16% of IECD input to registry late	Moderate	Low	2	Identified
Connection of NSP that is not point of connection to grid	3.9	10.30	The meter installation certification expiry date advised 5 days after certification for NSP NTU0111	Strong	Low	1	Identified
Changes to registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3	Moderate	Low	2	Identified

			business days				
ICP Location Address	4.4	2 of Schedule 11.1	A small number of duplicate addresses was identified across all networks	Moderate	Low	2	Identified
Distributors to Provide ICP Information to the Registry	4.6	7(1) of Schedule 11.1	No UML entry for LLNW(1 ICP) No IECD entry for LLNW (1 ICP)	Moderate	Low	2	Identified
Responsibility for metering information when creating an NSP that is not a POC to the grid	6.9	10.25(2)	The meter installation certification expiry date for NTU0111 was provided to the reconciliation manager more than five business days after certification.	Strong	Low	1	Identified
Future Risk Rating						12	

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

RECOMMENDATIONS

Subject	Section	Recommendation	Description
Connection of ICP that is not an NSP	3.6	Review process of uploading new ICPs to the registry. Create a consistent process what date is used as the Effective Date in the registry	It appears that in some instances when a new ICP identifier is firstly uploaded to the registry, the Creation Date is uploaded to the registry not the Trader Authority Date field This leads to incorrect information in the registry and increases the number of

			backdated entries which impacts PowerNet compliance
Distributors to Provide ICP Information to the Registry manager	4.6	Use ROI date as the Effective Date for population of distributed generation information in the registry	The date of Network approval of DG application is used as the Effective Date in the registry
Creation of loss Factors	8.1	Review loss factors for LLNW	UFE for LLNW which is outside of the EA recommendation of +/-1 %.

ISSUES

Subject	Section	Issue	Description
			Nil

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

The Electricity Authority Website was checked.

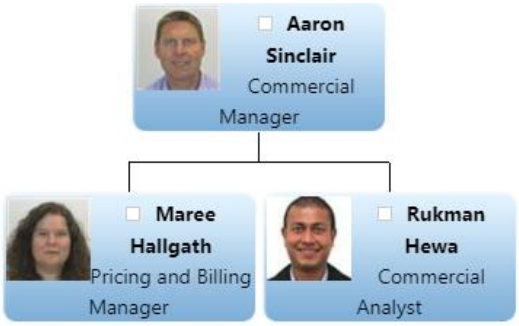
Audit commentary

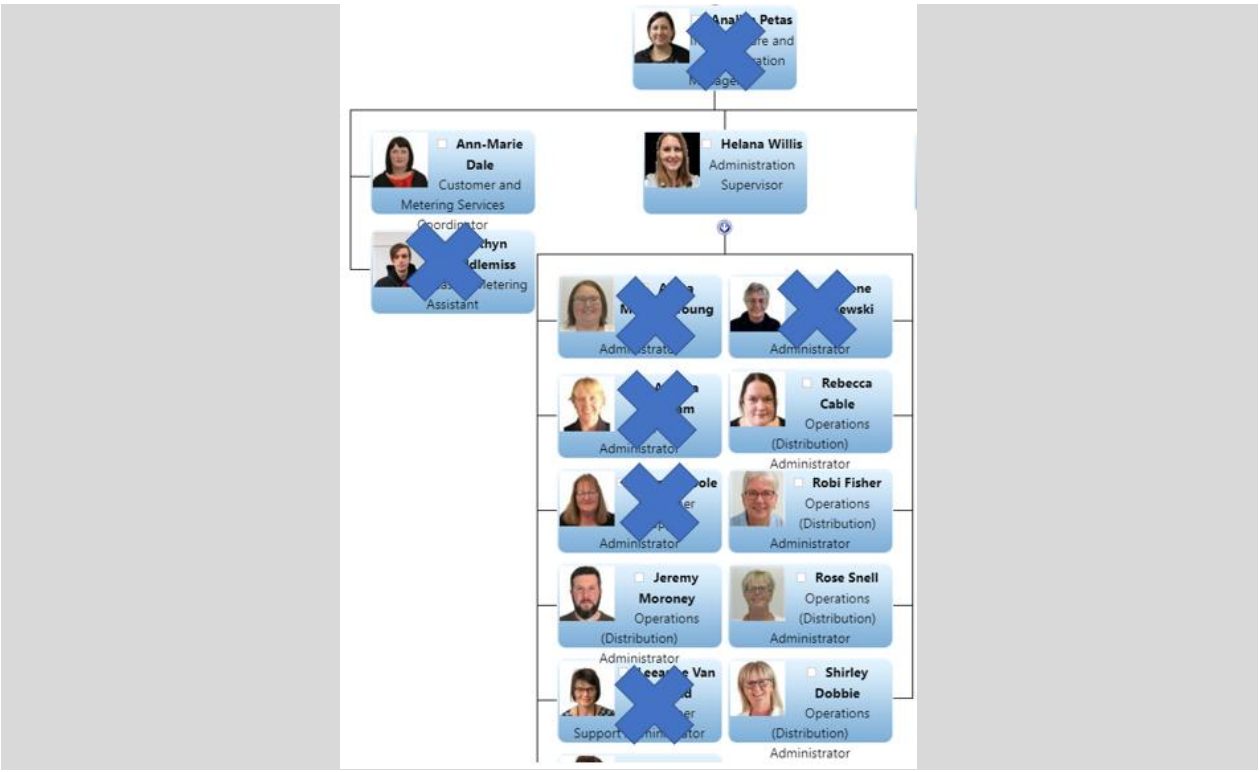
There is one exemption in place, Exemption Number 167 The Power Company Ltd.

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. PowerNet will apply for renewal.

1.2. Structure of Organisation





1.3. Persons involved in this audit

Name	Title	Company
Helana Willis	Administration Supervisor	PowerNet
Aaron Sinclair	Commercial Manager	PowerNet
Ann-Marie Dale	Customer and Metering Services Co-ordinator	PowerNet
Matthew Ting	Network Asset Engineer	PowerNet
Marie Hallgath	Pricing and Billing Manager	PowerNet
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates Ltd

1.4. Use of contractors (Clause 11.2A)

Code reference

Clause 11.2A

Code related audit information

A participant who uses a contractor

- *remains responsible for the contractors fulfillment 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 2017 (RTM) - 14.0.1000.169 (X64) Aug 22 2017 17:04:49 Copyright (C) 2017 Microsoft Corporation Standard Edition (64-bit) on Windows Server 2012 R2 Datacenter 6.3 <X64> (Build 9600:) (Hypervisor)

•MS Access 2016, MS Access 2019 & MS Access 365 – 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 v6.7.0.54000 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	SOUTHLDTPCOG	I	1/05/08	0
TPCO	EDN0331	Edendale			SOUTHLDTPCOG	G	1/03/16	1,852
TPCO	ELL0111	Elles Rd	INV0331	TPCO	SOUTHLDTPCOG	I	1/05/08	0
TPCO	GOR0331	GORE			SOUTHLDTPCOG	G	1/03/16	10,261
TPCO	INV0331	Invercargill			SOUTHLDTPCOG	G	1/05/08	10,381
TPCO	LEV0331	Leven St	INV0331	TPCO	SOUTHLDTPCOG	I	1/05/08	0
TPCO	NMA0331	Nth Makarewa			SOUTHLDTPCOG	G	1/05/08	16,602
TPCO	OCB0111	CB46	INV0331	TPCO	SOUTHLDTPCOG	I	1/05/08	0

TPCO	SOU0331	Southern Sub	INV0331	TPCO	SOUTHLDTPCOG	I	1/05/08	0
TPCO	STD0111	Stead St	INV0331	TPCO	SOUTHLDTPCOG	I		0

Status	Number of ICPs (2/02/2023)	Number of ICPs (2021)	Number of ICPs (2020)	Number of ICPs (2019)
New (999,0)	1	1	0	1
Ready (0,0)	93	101	105	84
Active (2,0)	37,530	36774	36,489	36,229
Distributor (888,0)	1	1	1	1
Inactive – new connection in progress (1,12)	48	94	51	58
Inactive – electrically disconnected vacant property (1,4)	1,241	1,348	1,355	1,381
Inactive – electrically disconnected remotely by AMI meter (1,7)	143	106	85	57
Inactive – electrically disconnected at pole fuse (1,8)	26	21	14	17
Inactive – electrically disconnected due to meter disconnected (1,9)	8	9	10	7
Inactive – electrically disconnected at meter box fuse (1,10)	0	2	0	1
Inactive – electrically disconnected at meter box switch (1,11)	1	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	1	10	22	21
Inactive – reconciled elsewhere (1,5)	3	1	1	1
Decommissioned (3)	4,161	3,981	3,819	3,721

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	19,554
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	STD0111	Stead St	INV0331	ELIN	INVGILLELING	I	01/05/08	0

Status	Number of ICPs (2/02/2023)	Number of ICPs (2021)	Number of ICPs (2020)	Number of ICPs (2019)
New (999,0)	3	0	0	1
Ready (0,0)	24	38	8	20
Active (2,0)	17,562	17,485	17,405	17,416
Distributor (888,0)	2	1	1	0
Inactive – new connection in progress (1,12)	38	19	18	15
Inactive – electrically disconnected vacant property (1,4)	266	265	298	321
Inactive – electrically disconnected remotely by AMI meter (1,7)	62	46	66	47
Inactive – electrically disconnected at pole fuse (1,8)	11	6	7	8
Inactive – electrically disconnected due to meter disconnected (1,9)	5	4	3	1
Inactive – electrically disconnected at meter box fuse (1,10)	2	3	2	3
Inactive – electrically disconnected at meter box switch (1,11)	1	0	0	1
Inactive – electrically disconnected ready for decommissioning (1,6)	0	1	4	4
Inactive – reconciled elsewhere (1,5)	0	0	0	0
Decommissioned (3)	1,587	1,530	1,454	1,350

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	9,972
OTPO	HWB0331	Halfway Bush			PALMSBYOTPOG	G	07/11/14	3,675
OTPO	NSY0331	Naseby			PALMSBYOTPOG	G	01/05/08	2,684

Status	Number of ICPs (2/02/2023)	Number of ICPs (2021)	Number of ICPs (2020)	Number of ICPs (2019)
New (999,0)	0	0	0	0
Ready (0,0)	31	31	27	23
Active (2,0)	15,553	15,343	15,189	15,103
Distributor (888,0)	0	0	0	0

Inactive – new connection in progress (1,12)	22	44	30	22
Inactive – electrically disconnected vacant property (1,4)	655	670	678	661
Inactive – electrically disconnected remotely by AMI meter (1,7)	44	45	44	39
Inactive – electrically disconnected at pole fuse (1,8)	13	11	9	7
Inactive – electrically disconnected due to meter disconnected (1,9)	10	10	6	5
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	2	2	2	0
Inactive – electrically disconnected ready for decommissioning (1,6)	0	10	25	43
Inactive – reconciled elsewhere (1,5)	1	2	0	0
Decommissioned (3)	2,062	1,965	1,902	1,860

LLNW

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
LLNW	CLVL0111	Kirimiko Crescent Wanaka	CML0331	DUNE	CLV011LLNWE	E	17/05/21	56
LLNW	FKN0331	Frankton			LAKELNDLLNWG	G	01/10/08	3,413
LLNW	NLK0111	Outlet Rd Wanaka	CML0331	DUNE	NLK0111LLNWE	E	12/07/17	595
LLNW	WTR0111	Shortcut Road Cromwell	CML0331	DUNE	WTR011LLNWE	E	20/05/21	42
LLNW	NTU0111	George Road Queenstown	FKN0331	DUNE	NTU011LLNWE	E	27/06/22	28

Status	Number of ICPs (2/02/2023)	Number of ICPs (2021)	Number of ICPs (2020)	Number of ICPs (2019)
New (999,0)	0	0	0	1
Ready (0,0)	23	32	53	15
Active (2,0)	4,308	3,032	2,399	2,025
Distributor (888,0)	0	0	0	0

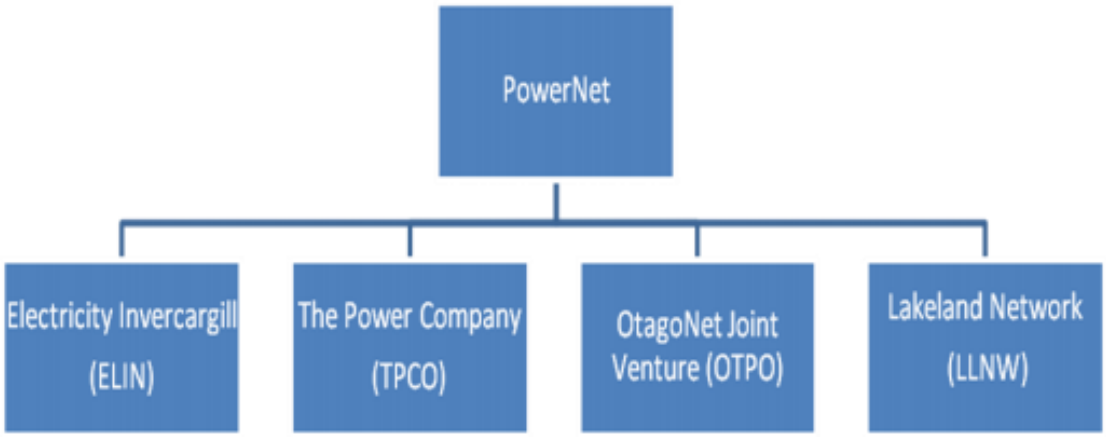
Inactive – new connection in progress (1,12)	47	105	79	45
Inactive – electrically disconnected vacant property (1,4)	14	37	23	7
Inactive – electrically disconnected remotely by AMI meter (1,7)	10	6	8	2
Inactive – electrically disconnected at pole fuse (1,8)	0	0	0	0
Inactive – electrically disconnected due to meter disconnected (1,9)	1	3	3	4
Inactive – electrically disconnected at meter box fuse (1,10)	1	0	1	0
Inactive – electrically disconnected at meter box switch (1,11)	0	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	0	2	9	9
Inactive – reconciled elsewhere (1,5)	0	0	0	0
Decommissioned (3)	159	131	106	89

1.9. Authorisation Received

PowerNet provided a letter of authorization 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 21-23 February 2023.

1.11. Summary of previous audit

TPCO

Subject	Section	Clause	Non Compliance	Comment
Requirement to provide complete and accurate information	2.1	*11.2(1) and 10.6(1)*	A relatively small quantity of information in the Registry was inaccurate	Still exist
Timeliness of Provision of Initial Electrical Connection Date	3.5	*7(2A) of Schedule 11.1*	1.55% of IECD input to Registry late	Still exist
Changes to registry information	4.1	*8 Schedule 11.1*	Registry information not updated within 3 business days across all Networks.	Still exist
ICP Location Address	4.4	*2 Schedule 11.1*	A number of duplicate addresses created as an unintended consequence of address data cleansing	Still exist
Distributors to Provide ICP Information to the Registry	4.6	*7(1) Schedule 11.1*	Incorrect Installation type in the Registry X 4 Missing Distributed Generation Capacity in Registry X 4 Missing Distributed Generation Fuel Type in Registry X 4	Still exist

ELIN

Subject	Section	Clause	Non Compliance	Comment
Requirement to provide complete and accurate information	2.1	*11.2(1) and 10.6(1)*	A relatively small quantity of information in the Registry was inaccurate.	Still exist

Timeliness of Provision of Initial Electrical Connection Date	3.5	*7(2A) of Schedule 11.1*	3.13% of IECD input to Registry late	Still exist
Changes to registry information	4.1	*8 Schedule 11.1*	Registry information not updated within 3 business days	Still exist
ICP Location Address	4.4	*2 Schedule 11.1*	A number of duplicate addresses created as an unintended consequence of address data cleansing	Still exist

OTPO

Subject	Section	Clause	Non Compliance	Controls
Requirement to provide complete and accurate information	2.1	*11.2(1) and 10.6(1)*	A relatively small quantity of information in the Registry was inaccurate	Still exist
Timeliness of Provision of Initial Electrical Connection Date	3.5	*7(2A) of Schedule 11.1*	10% of IECD input to Registry late	Still exist
Changes to registry information	4.1	*8 Schedule 11.1*	Registry information not updated within 3 business days	Still exist
ICP Location Address	4.4	*2 Schedule 11.1*	A number of duplicate addresses created as an unintended consequence of address data cleansing	Still exist
Distributors to Provide ICP Information to the Registry	4.6	*Clause 7(1) Schedule 11.1*	Incorrect Installation type in the Registry X3 Missing Distributed Generation Capacity in Registry X3 Missing Distributed Generation Fuel Type in Registry X 3	Still exist

LLNW

Subject	Section	Clause	Non Compliance	Comment
Requirement to provide complete and accurate information	2.1	*11.2(1) and 10.6(1)*	A relatively small quantity of information in the Registry was inaccurate.	Still exist
Timeliness of Provision of Initial Electrical Connection Date	3.5	*7(2A) of Schedule 11.1*	0.47% of IECD input to Registry late	Still exist
Changes to registry information	4.1	*8 Schedule 11.1*	Registry information not updated within 3 business days	Still exist
ICP Location Address	4.4	*2 Schedule 11.1*	A number of duplicate addresses created as an unintended consequence of address data cleansing	Still exist

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 Reports, LIS and EDA files for the audit period and registry were checked. 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

PowerNet Connect is fully operational and it performs well. It delivers distributor functions such as the creation of ICPs, maintenance of registry information and the creation and maintenance of NSPs. 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.

According to the new connection process, new ICPs are uploaded once an acceptance email is received from the trader and logged in PowerNet Connect the ICP identifier is uploaded to the registry. It appears that in some instances when a new ICP identifier is firstly uploaded to the registry, the Creation Date is uploaded to the registry not the Trader Authority Date field. This leads to incorrect information in the registry and increases the number of backdated entries which impacts PowerNet compliance.

Section	Registry Discrepancy
3.5	TPCO - 1.56% of IECD input to Registry late ELIN - 2.47% of IECD input to Registry late OTPO – 4.8% of IECD input to Registry late, incorrect IECD for 2 ICPs LLNW – 1.16% of IECD input to Registry late IECD populated for ICP with the status “New” – ELIN
4.1	Registry information not updated within 3 business days by all PowerNet Distribution Networks ELIN, TPCO, LLNW, OTPO
4.4	A number of duplicate addresses created • EIL – 22 ICPs • LLNW – 14 ICPs

	• OTPO – 6 ICPs • TPCO – 63 ICPs
4.6	• No UML entry ELIN – 3 ICPs LLNW – 1 ICP • No IECD entry TPCO – 3 ICPs ELIN – 1 ICP OTPO – 2 ICPs LLNW – 1 ICP

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: 11.2(1) and 10.6(1) From: 01-Aug-21 To: 31-Jan-23	A relatively small quantity of information in the registry was inaccurate, it was spread broadly across all PowerNet networks ELIN, TPCO, LLNW, OTPO. Potential impact: Low Actual impact: Low Audit history: Many times previously Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are recorded as moderate, since the new ICP management implemented during the previous audit period, some improvement has been demonstrated this audit period. 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
Continual development of PowerNet Connect and additional support reporting is created after the audit to monitor these details and work towards resolving the issue.	On Going	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
As Above		

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.

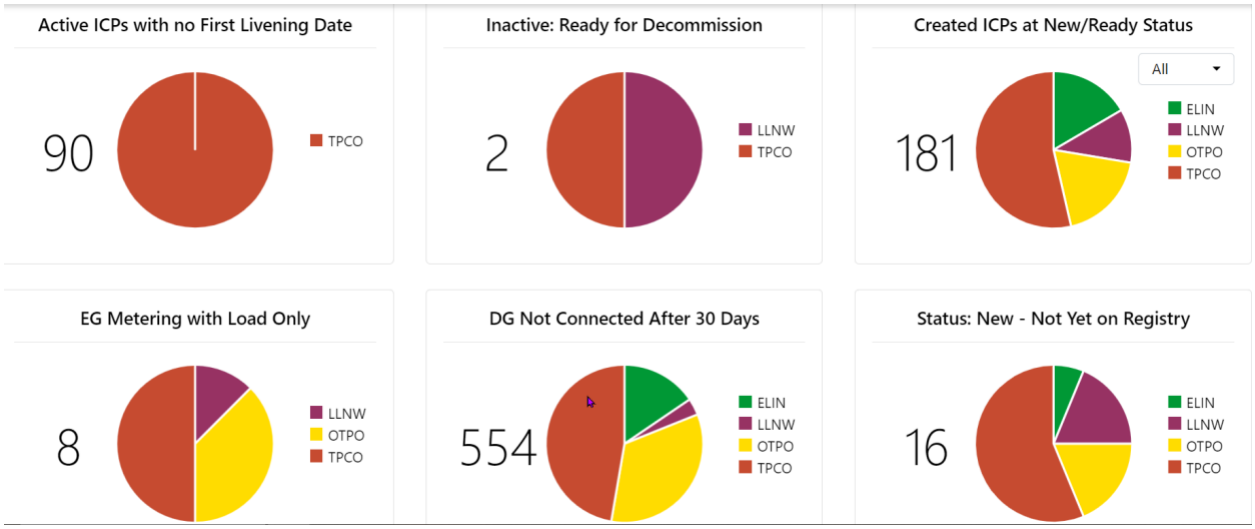
Audit observation

The Audit Compliance Reports for the audit period, the LIS and EDA files were checked. 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 Connect has a range of exception reports and a dashboard view to more closely monitor key information, enabling investigation and leading to timely error correction. Some of the new exception reports are:

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



Audit outcome

Compliant

2.3. Removal or breakage of seals (Clause 48(1A) and 48(1B) of Schedule 10.7)

Code reference

Clause 48(1A) and 48(1B) of Schedule 10.7

Code related audit information

If the distributor provides a load control signal to a load control switch in the metering installation, the distributor can remove or break a seal without authorisation from the MEP to bridge or unbridge the load control device or load control switch – as long a the load control switch does not control a time block meter channel.

If the distributor removes or breaks a seal in this way it must:

- *ensure personal are qualified to remove the seal and perform the permitted work and they replace the seal in accordance with the Code*
- *replace the seal with its own seal*
- *have a process for tracing the new seal to the personnel*
- *notify the metering equipment provider and trader*

Audit observation

This was discussed during the audit.

Audit commentary

It is PowerNet's policy to not work on the customers' installation. If there is a problem with the meter, customers are advised to contact their retailer or their electrician.

The only time seals are broken and replaced are in emergency situations or during the annual metering inspections. In each situation the MEP is notified.

Audit outcome

Compliant

2.4. Provision of information on dispute resolution scheme (Clause 11.30A)

Code reference

Clause 11.30A

Code related audit information

A distributor must provide clear and prominent information about Utilities Disputes:

- *on their website*
- *when responding to queries from consumers*
- *in directed outbound communications to consumers about electricity services and bills.*

If there are a series of related communications between the distributor and consumer, the distributor needs to provide this information in at least one communication in that series.

Audit observation

This was discussed during the audit.

Audit commentary

We examined the PowerNet website and confirmed that information about Utilities Disputes is present in the Disclosures section.

At the bottom of the email sent to customers there is the following text:

Customer service is important to us at PowerNet. If we don't meet your expectations, we would like the opportunity to work through a solution with you; please call our office on 03 211 1899. If we are unable to resolve your concern, there is a free and independent resolution service available through Utilities Disputes Limited www.udl.co.nz

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 Reports, LIS and EDA reports were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 19 new ICP connection records, proportioned by network, was also checked.

Audit commentary

PowerNet uses PowerNet Connect to create ICPs for connections on all of its networks.

Customers apply to PowerNet for a new connection using an online Installation Connection Application form. New connection applications are assessed to ensure the proposed connection meets PowerNet requirements. Any customer charges associated with the new connection are calculated and a quote is provided to the customer for acceptance. When the customer notifies PowerNet that they have accepted the quote the application is approved and 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 registry is populated with the new ICP in the overnight update.

PowerNet has agreements with Contact Energy, Genesis, 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 process is well documented and appears to be followed as no discrepancies were identified in the sample.

Network	ICPs issued during the audit period
TPCO	646
ELIN	179
OTPO	256
LLNW	928
Total	**2,009**

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 Reports, LIS and EDA reports were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 19 new ICP connection records proportioned by network were also checked.

Audit commentary

PowerNet is requested to create an ICP identifier by customers not a participant. Historically there had been situations when a trader asked for a new ICP to split an ICP with multiple metering points into separate ICPs, but there were no such occurrences during this audit period.

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 Reports, LIS and EDA reports were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 19 new ICP connection records, proportioned by network, was also checked.

Audit commentary

New connection application information is recorded in PowerNet Connect. Once technical issues are evaluated and the customer agrees to all charges relating to the application, it is approved. Then 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. PowerNet has agreements with Contact Energy, Genesis, and Trustpower whereby, for all new connections where a customer nominates them as a proposed trader, the ICPs are automatically accepted by those traders.

Once the trader's acceptance of the ICP is in hand it is logged in PowerNet Connect and the ICP identifier and associated information is provided to the registry in an overnight upload. The upload process includes the functionality to ensure mandatory fields are populated before the information is uploaded to the registry. The registry assigns the status "READY".

During the audit we came across a small number of ICPs (capacity >100 kVA) which were uploaded with no price category and loss category codes and therefore the status assigned by the registry was "NEW". These customers had their price category and loss category codes assigned later on, after a verification of its initial capacity recorded on the application by the Billing Section. Once a price category and loss category is uploaded, the registry status is changed to "READY".

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 Reports, LIS and EDA reports were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 19 new ICP connection records, proportioned by network, was also checked.

Audit commentary

ICP information is uploaded to the registry soon after the trader acceptance of a new ICP connection was received. ICPs are set to the "READY" status. PowerNet has agreements with Contact Energy and Trustpower, and Genesis for all new connections where a customer nominates them as a proposed trader, the ICPs are automatically accepted by those traders.

The Audit Compliance report identified the two ICPs which remain in the Status "NEW" prior to electricity being traded at the ICP. After closer analyses we found reasonable justification for compliance.

ICP	Audit Compliance Report	Comment
0000917443NV987	Made "Active" by CTCT 31/08/21 but made "Ready" by ELIN 30/08/21 backdated to 27/08/21, which a creation date recorded in PowerNet Connect	ICP remains in the status "NEW" prior to electricity being traded at the ICP however PowerNet has agreements with Contact for all new connections where a customer nominates them as a proposed trader the ICPs are automatically accepted by those traders. It is a technical breach.
0074471011NV36B	Made "Active" by MEEN 31/01/23 effective 30/01/23. Made "Ready" by ELIN 31/01/23 backdated to 20/01/23	Landlord supply to the Mall in Invercargill. Acceptance received 7/11/22 but because there was no price and loss codes uploaded to the registry the ICP status remained as "NEW". Once the price and loss codes were uploaded the registry changed the status to "READY".

Audit outcome

Compliant

3.5. Timeliness of Provision of Initial Electrical Connection Date (Clause 7(2A) of Schedule 11.1)

Code reference

Clause 7(2A) of Schedule 11.1

Code related audit information

The distributor must provide the information specified in subclause (1)(p) to the registry manager no later than 10 business days after the date on which the ICP is initially electrically connected.

Audit observation

The Audit Compliance Reports, LIS and EDA reports were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 19 new ICP connection records, proportioned by network, was also checked.

Audit commentary

We reviewed the Audit Compliance reports, the summary of findings are in the table below.

Network	ICPs Connected During Audit Period	IECD Input to the registry later than 10 business days	Comment
TPCO	511	8 (1.56%)	Range 11- 31 days
ELIN	121	3 (2.47%)	Range 14 - 15 days
OTPO	208	10 (4.8%)	Range 11 - 25 days
LLNW	856	10 (1.16%)	Range 11 - 115 days
Total	**1,696**	**31 (1.82%)**	

We would like to acknowledge that PowerNet compliance has improved in this area compared to the last audit (2.37% total).

Late information from the field appears to still be a key reason for late updates. PowerNet staff commented that the exception monitoring dashboard in PowerNet Connect has contributed to this improvement. The dashboard is monitored daily therefore PowerNet followed up with installations which have been livened but no paperwork received in the office yet.

Daily monitoring of the PowerNet Connect dashboard identifies ICPs which have become Active, but no IECD has been loaded. This prompts updating of the registry and investigation into missing information from the field.

<u>IECD recorded but the status no "Active"</u>

ELIN – 1 ICP (0074471015NV261) – status "NEW", proposed trader MEEN,

TPCO – 1 ICP (0000613050TPF41) – updated to "Active" during the audit by MERX

<u>IECD is different to that of the first active date and/or the meter certification date</u>

The Audit Compliance reports identified the following discrepancies between IECD and the date of the first "Active" date. We sampled ICPs with the highest difference between two dates (IECD and made "Active"

- ELIN – 4 ICPs – 2 ICPs are decommissioned, IECD for 2 ICPs recorded in the registry is correct
- LLNW – 10 ICPs

- OTPO – 8 ICPs – we found 2 ICPs (0001130515TGDA7 and 0003781620TG7AF) for which IECD was incorrect
- TPCO – 10 ICPs – in most cases it is only one day difference between IECD and the date being made "Active". We checked 3 ICPs with the highest difference, TPCO entries were correct

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.5 With: Clause 7(2A) of Schedule 11.1 From: 01-Aug-21 To: 31-Jan-23	TPCO - 1.56% of IECD input to Registry late ELIN - 2.47% of IECD input to Registry late OTPO – 4.8% of IECD input to Registry late, incorrect IECD for 2 ICPs LLNW – 1.16% of IECD input to Registry late IECD populated for ICP with the status "New" - ELIN 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. The ICP connection management system and processes applied have demonstrated improved results. They are inconsistent across networks. 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
Creation of PowerNet Connect Dashboard that identifies "ACTIVE" ICPs without IECD is updated and monitored daily. This is now available to all Operators who enter this data.	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 Reports, LIS and EDA reports were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 19 new ICP connection records, proportioned by network, was also checked.

Audit commentary

New connection information is captured in PowerNet Connect and once the customer's application is approved. An ICP identifier is created in PowerNet Connect and information 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 , Genesis, 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 date the trader took responsibility for the ICP is recorded in the Trader Authority Date field in PowerNet Connect.

The Trader Authority Date field is uploaded to the registry. We observed some inconsistencies. On some occasions PowerNet Connect uploads the Creation Date of ICP not the Trader Authority Date field as the Effective Date in the registry. This leads to incorrect information in the registry and increases the number of backdated entries which impacts PowerNet compliance.

It was discussed with PowerNet and it will be clarified with the PowerNet Connect developers.

The sampling demonstrated that ICPs had traders recorded in PowerNet Connect prior to IECD.

Audit outcome

Compliant

Recommendation	Description	Audited party comment	Remedial action
Review process of uploading new ICPs to the registry. Create a consistent process what date is used as the Effective Date in the registry	It appears that in some instances when a new ICP identifier is firstly uploaded to the registry, the Creation Date is uploaded to the registry, not the Trader Authority Date field. This leads to incorrect information in the registry and increases the number of backdated entries which impacts PowerNet compliance		

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.

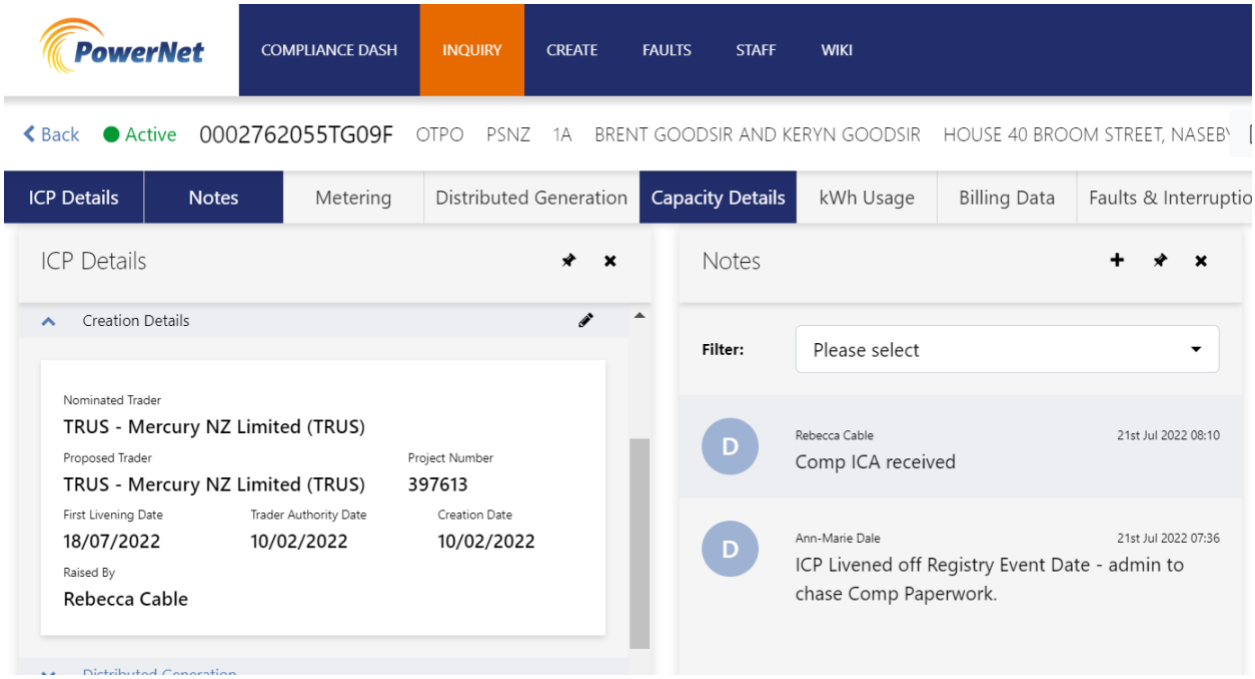
Audit observation

The Audit Compliance Reports, LIS and EDA reports were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 19 new ICP connection records, proportioned by network, was also checked.

Audit commentary

New connection information is captured in PowerNet Connect and once the customer's application is approved an ICP identifier is created in PowerNet Connect and information 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 the functionality to ensure mandatory fields are populated before the information is uploaded to the registry. PowerNet has agreements with Contact Energy, Genesis, 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 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.



PowerNet does not allow any new shared unmetered load connected to networks managed by them.

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 trader responsible for ensuring there is a metering installation for the point of connection.

The distributor that initiates the connection under Part 11 and connects the NSP 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 Reports, LIS, EDA reports and the registry were checked for the audit period. The registry NSP table and the Network Supply Point table were reviewed. The clause was discussed with PowerNet staff.

Audit commentary

One new NSP was created by the LLNW network during the audit period. It is an embedded network operated by PowerNet located on the Aurora network. The details are below.

Distributor	NSP POC	Parent POC	Network type	Start Date	MEP
LLNW	NTU0111	FKN0331	E	27/06/2022	PWNT

PowerNet staff provided evidence that the reconciliation manager was notified on 26/05/2022.

The Code requires the distributor which connect the NSP to advice the reconciliation manager, within 5 business days of connecting the NSP, the certification expiry date of metering installation for the NSP.

The meter was certified on 27/06/2022 by AccuCal and the certification details were provided to the reconciliation manager on 07/07/2022, more than five business days after certification.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.9 With: Clause 10.30 From: 27-Jul-22 To: 03-May-22	**LLNW** - The meter installation certification expiry date for NTU0111 was provided to the reconciliation manager more than five business days after certification Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong because one update was late. The audit risk rating is low because the metering was always certified.

Actions taken to resolve the issue	Completion date	Remedial action status
The NSP creation procedure process list has been updated to ensure all information required to be sent to the RM is identified and timelines clearly marked.		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

3.10. Electrical connection of NSP that is not point of connection to grid (Clause 10.30A and 10.30B)

Code reference

Clause 10.30A and 10.30B

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.*

A distributor may only electrically connect an NSP if:

- *each distributor connected to the NSP agrees*
- *the trader responsible for delivery of submission information has requested the electrical connection*
- *the metering installations for the NSP are certified and operational metering*

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:

yyyyyyyyyyxxccc where:

- *yyyyyyyyyy 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 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 19 new ICP connection records, proportioned by network, was also checked.

Audit commentary

ICP identifiers for the PowerNet Networks are produced by PowerNet Connect. Using a structure of road number and connection location along the road, a unique installation number is created by the operator, which is then combined with one of the distributor codes in the following table, to create each ICP associated with that distribution network.

- 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 Audit Compliance Reports, LIS and EDA reports were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 19 new ICP connection records, proportioned by network, was also checked.

Audit commentary

All 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. It excludes ICP identifiers for big customers (capacity > 100 kVA) for which loss category code is individually calculated/assigned and loaded to the registry after the initial uploading of the ICP identifier.

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 Audit Compliance Reports, LIS and EDA reports were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff. A random sample of 19 new ICP connection records, proportioned by network, was also checked.

Audit commentary

ICPs identifiers for new connections with capacity >100 kVA are uploaded with no price category and loss category codes and therefore the status assign by the registry is "NEW". These customers have the price category and loss category codes assigned later on, after verification of its initial capacity recorded on the

application by the Billing Section. The registry status is changed to "READY" after price category and loss category codes are uploaded.

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 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 19 new ICP connection records, proportioned by network, was 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.

Distributor Network	READY 2023	READY 2021	READY 2020	READY 2019	READY 2018
TPCO	2	0	6	7	6
ELIN	5	0	2	2	0
OTPO	2	0	0	2	2
LLNW	0	0	0	1	0

PowerNet staff advise they have been actively contacting customers and checking if ICPs are still required for any that have appeared on the monitoring dashboard. As a result of these checks, where appropriate, this situation is also referred to the trader.

Audit outcome

Compliant

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

Code reference

Clause 7(6) Schedule 11.1

Code related audit information

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

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

Audit observation

The LIS, 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 58MW with a Loss Factor Code PNL42

OTPO – ICP 0002751984TGB5D Paerau-Patearoa Power Station has a capacity of 12.25MW with Loss 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 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 19 new ICP connection records, proportioned by network, was 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 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 the initial electrical connection.

Audit outcome

Compliant

3.17. Electrical disconnection of a point of connection (Clause 10.30C and 10.31C)

Code reference

Clause 10.30C and 10.31C

Code related audit information

A distributor can only disconnect, or electrically disconnect an ICP on its network:

- *if empowered to do so by legislation (including the Code)*
- *under its contract with the trader for that ICP or NSP*
- *under its contract with the consumer for that ICP*

Audit observation

This was discussed during the audit with PowerNet staff.

Audit commentary

PowerNet does complete disconnections only when an ICP is decommissioned. PowerNet will electronically disconnect ONLY with authorisation from the Owner of the property in conjunction with any tenant. This may come as a request direct from them via the online Disconnection Form or via a Retailer Service Request that PNET would then contact the owner and ask for the form to be completed.

PowerNet will send their linemen out to totally remove the line from the network, pull the fusing and, where they are the MEP or agent for the MEP (SMCO), they will also retrieve the meters. The retailer is notified and request the ICP status be moved as of the de-energisation date and decommission the ICP in the registry.

Audit outcome

Compliant

3.18. Meter bridging (Clause 10.33C)

Code reference

Clause 10.33C

Code related audit information

An distributor may only electrically connect an ICP in a way that bypasses a meter that is in place ("bridging") if the distributor has been authorised by the responsible trader.

The distributor can then only proceed with bridging the meter if, despite best endeavours:

- *the MEP is unable to remotely electrically connect the ICP*
- *the MEP cannot repair a fault with the meter due to safety concerns*
- *the consumer will likely be without electricity for a period which would cause significant disadvantage to the consumer*

If the distributor bridges a meter, the distributor must notify the responsible trader within 1 business day, and include the date of bridging in its advice.

Audit observation

This was discussed during the audit with the PowerNet staff.

Audit commentary

PowerNet stated that their policy is not to bridge meters. It is always done by MEPs, however if for hot water issues it is not possible to fix, they are carried out on the network side i.e. in pillar, pole etc.

If the problem is with the meter, customers are advised to contact their retailer.

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 Reports were checked for the audit period and it was discussed with PowerNet staff.

The management of registry updates and NSP changes was reviewed. The process was discussed with PowerNet's staff.

Audit commentary

Any changes to ICP information is done in PowerNet Connect. The updates to the registry are uploaded each evening.

Pricing events

On 01/12/2021 the Code was changed in relation to pricing events in the registry. As long the registry is updated within 3 business days of receiving a notification, there is no non-compliance of the backdated price code. The Audit Compliance report cannot accurately assess compliance in this area because the registry does not know when a price code change request was received by a network.

The PowerNet allows the back dating of a price code within a month. If the retailer provides an Effective Date of the prior month – it will be changed the 1st day of the current month. If it is PowerNet fault that it is not processed within the current month –the price change will be backdated to their requested date.

The network pricing structure for TPCO and ELIN is complex. In some cases files requesting a price code change provided by traders contain a lot of ICPs. It require a lot of time and resource to evaluate correctness of traders' requests. PowerNet commented that it is not always possible to finalise the evaluation within 3 business days but the company is committed to process files as soon as possible.

We sampled 47 ICPs and confirm that the registry was updated within 3 business days.

Distributed generation

We sampled 10 ICP to confirm correctness information in the registry. A randomly chosen sample of 10 DG ICPs was examined. The capacity is correctly recorded in the registry. The Effective Date in the registry

is the same as The Input Date which is incorrect. PowerNet stated that the date of application is used as the Effective Date in the registry. The outcome of such process is that information recorded in the Audit Compliance reports related to timeliness of updates of distributed generation information in the registry do not truly reflect a level of compliance.

The Audit Compliance reports were analysed to identify backdated event updates. The summary of late updates is below:

ELIN

Activity	Number of late entries	Percentage Compliance	Average Business Days between Network Event Date and Network Event input date
Address	0	100%	
Network	18	92.91%	1.38
Decommissioning	16	70.00%	7.90
Distributed generation	1	91.67%	1.17

LLNW

Activity	Number of late entries	Percentage Compliance	Average Business Days between Network Event Date and Network Event input date
Address	0	100%	
Network	84	91.83%	1.08
Decommissioning	5	75%	3.83
Distributed generation	5	85.19%	6.30

OTPO

Activity	Number of late entries	Percentage Compliance	Average Business Days between Network Event Date and Network Event input date
Address	2	99.33%	16.90

Network	36	90.32%	1.40
Decommissioning	11	85.71%	4.77
Distributed generation	0	100%	

TPCO

Activity	Number of late entries	Percentage Compliance	Average Business Days between Network Event Date and Network Event input date
Address	20	97.53%	0.32
Network	112	83.66%	5.08
Decommissioning	36	89.58%	2.02
Distributed generation	1	96.15%	0.88

Pricing events

On 01/12/2021 the Code was changed in relation to pricing events in the registry. As long the registry is updated within 3 business days of receiving a notification, there is no non-compliance of the backdated price code. The Audit Compliance report can't accurately assess compliance in this area because the registry does not know when a price code change was received by a network.

The PowerNet allows the back dating of a price code within a month. If the retailer provides an effective date of the prior month – it will be changed the 1st day of the current month. it is PowerNet fault that it is not processed within the current month –the price change will be backdated to their requested date. The network pricing structure for TPCO and ELIN is complex. In some cases files requesting a price code change provided by traders contain a lot of ICPs. It require a lot of time and resource to evaluate correctness of traders' requests. PowerNet commented that it is not always possible to finalise it within 3 business days but files are process as soon as possible.

We sampled 47 ICPs and confirm that the registry was updated within 3 business days.

Distributed generation

We sampled 10 ICP to confirm correctness information in the registry. A randomly chosen sample of 10 DG ICPs was examined. The capacity is correctly recorded in the registry but the Effective Date in the registry is the same as The Input Date for all of them. PowerNet stated the date of DG application is used as the Effective Date in the registry. It means that information recorded in the Audit Compliance reports do not truly reflect not a level of compliance because it incorrect.

NSP changes

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 possible data entry errors for the TPCO network of NSPs was noted in the Audit Compliance report. PowerNet reviewed the finding and found that NSPs allocated to ICPs in question are correct.

Status update ("New" and "Ready")

The analyses of the EDA files for four networks showed that some uploads of ICP identifiers are backdated. It was discussed with PowerNet staff.

Network	Number of entries	Number of late entries	Percentage Compliance	Average Business Days between Network Event Date and Network Event input date
ELIN	157	18	88.5%	1.78
LLNW	543	90	83.4%	1.21
OTPO	200	44	78%	2.29
TPCO	586	116	80.2%	4.61

It was discussed with PowerNet. It appears that in some instances when a new ICP identifier is firstly uploaded to the registry, the Creation Date is uploaded to the registry not the Trader Authority Date field

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.1 With: Clause 8 of Schedule 11.1 From: 01-Aug-21 To: 31-Jan-23	Registry information not updated within 3 business days by all PowerNet Distribution Networks ELIN, TPCO, LLNW, OTPO The date of Network approval of DG application is recorded as the Effective Date of DG installation in the registry Potential impact: Low Actual impact: Low Audit history: Multiple times previously Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are recorded as moderate, in majority cases the registry is updated within timeframe specified by the Code. 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
Audit Compliance Report showed instances of this happening for several ICPs on the same day and so possibly identified as a glitch/failure of the database upload to the registry. PowerNet Connect Operators have also identified this at the time, in some instances, thus being able to correct the data before it is uploaded to the registry.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
PowerNet assessing the data going through from PowerNet Connect to the Registry to identify any patterns to put in possible corrective measures.	05-2023	

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 EDA files were analysed, and the Audit Compliance Reports were checked for the audit period and it was discussed with PowerNet staff.

Audit commentary

NSPs are uploaded into the registry when ICPs are initially loaded into the registry. PowerNet Connect has a network model integrated within 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 conducted.

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

Any request from a customer for advice on an ICP for an existing connection is actioned immediately, 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, EDA, and Audit Compliance reports were checked for the audit period. It was discussed with the PowerNet staff.

Audit commentary

PowerNet Connect has a functionality that ensures assigned addresses are valid and easily located. ICP 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 creation of the ICP will not progress. Addresses for new ICPs meet code requirements.

The review of the Audit Compliance reports identified a number of ICPs for which the location address does not allow the ICP to be readily located.

- EIL – 22 ICPs
- LLNW – 14 ICPs
- OTPO – 6 ICPs
- TPCO – 63 ICPs

All identified ICPs were created outside of this audit period.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.4 With: clause 2 of Schedule 11.1 From: 01-Aug-21 To: 31-Jan-23	A small number of duplicate addresses were identified across all networks Potential impact: Low Actual impact: Low Audit history: Once previously Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are recorded as moderate. The reason for this non-compliance is recognised and remedial action will be implemented. 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
Audit Compliance Report to be used to correct data manually in PowerNet Connect by Operators	05-2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Additional fields identified and to be added to PowerNet Connect reporting to help further highlight duplicated addresses	05-2023	

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, 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 19 new ICP connection records proportioned by network were also checked.

Audit commentary

19 new ICPs were randomly selected and data checked. No issues were found with the new ICP information.

Unmetered Load

The examination of the LIS files identified 3 ICPs on the ELIN network (0007301722NVE99, 0007301722NVE99, and 0007302943NV9C7) and one ICP (0009596000LN03D) on the LLNW network for which traders submit volumes to the reconciliation manager but PowerNet does not uploaded any information in the registry on behalf of networks which they manage

Distributed Generation

The Audit Compliance reports recorded one ICP (0009865199LN951) on the LLNW network and 3 ICPs (0000213786TP531, 0000595852TP998, and 0004210861TPD45) on the TPCO network for which the profile used by traders indicate distributed generation installed, but no installed generation is recorded in the registry by PowerNet on behalf of networks which they manage.

A randomly chosen sample of 10 DG ICPs was examined. The capacity is correctly recorded in the registry but the Effective Date in the registry is the same as the Input Date for all of them. PowerNet stated the date of Network approval of DG application is used as the Effective Date in the registry. Our recommendation is to use the ROI date which is recorded in PowerNet Connect.

Initial Electrical Connection Date (IECD)

The examination of the Audit Compliance reports showed the number of ICPs, per network, for which IECD was not recorded

- TPCO – 3 ICPs (0005270085TP219, 0004327422TPE0C, 0006303482TP42C)
- OTPO – 2 ICPs (0001160255TG374, 0001570135TGED9)
- LLNW – 1 ICP (0009866013LN56E) – it was populated during the audit
- ELIN – 1 ICP (0008676931NV103)

The summary of non-compliance is below

Network	No IECD in registry	Distributed Generation (retailer PV1 profile)	No distributor UML entry	IECD recorded (ICP no "Active "status)
TPCO	3	3	0	1
ELIN	1	0	3	1
OTPO	2	0	0	0
LLNW	1	1	1	0

We noted some improvements in distributed correctness in generation entries from last audit.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.6 With: Clause 7(1) Schedule 11.1 From: 01-Aug-21 To: 31-Jan-23	No UML entry for ELIN (3 ICP), LLNW(1 ICP) No IECD entry for TPCO (3 ICP), ELIN (1 ICP), OTPO (2 ICPs), and LLNW (1 ICP) Potential impact: Low Actual impact: Low Audit history: Many times previously Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are recorded as moderate. PowerNet depends a lot on timeliness of information provided by the third parties. 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
IT notified of discrepancies of ICPs with no IECD date in the registry but livening date entered into PowerNet Connect, which resulted as a system failure and data will be corrected. All other ICPs resolved since Audit Compliance Reporting run.	03/2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Looking to identify cause of System failure to work to prevent future occurrences.	03/2023	

Recommendation	Description	Audited party comment	Remedial action
Use ROI date as the Effective Date for population of distributed generation information in the registry	The date of Network approval of DG application is used as the Effective Date in the registry	Agree with recommendation	Use ROI date as the Effective Date for population of distributed generation information in the registry

4.7. Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1)

Code reference

Clause 7(3) Schedule 11.1

Code related audit information

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

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

Audit observation

The Audit Compliance Reports, LIS, EDA 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 19 new ICP connection records was checked.

Audit commentary

New connection information is captured in PowerNet Connect and once the customer's application is approved an ICP identifier is created in PowerNet Connect and information 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 the functionality to ensure mandatory fields are populated before the information is uploaded to the registry.

ICPs identifiers for new connections with capacity >100 kVA are uploaded with no price category and loss category codes and therefore the status assign by the registry is "NEW". These customers have the price category and loss category codes assigned later on, after verification of its initial capacity recorded on the application by the Billing Section. The registry status is changed to "READY" after price category and a loss category codes are uploaded.

We confirm that all ICPs have the actual price category code assign to them before the trading of electricity at the ICP commences

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 and the registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff.

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 Reports, LIS, EDA 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 19 new ICP connection records was checked.

Audit commentary

New connection information is captured in PowerNet Connect and once the customer's application is approved an ICP identifier is created in PowerNet Connect and information 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 a functionality to ensure mandatory fields such as price category, are populated before the information is uploaded to the registry. The registry assigns the status "Ready".

ICP identifiers for new connections which have a capacity greater than 100 kVA are uploaded without a price category and loss category codes therefore the "New" status is assigned. Missing information is later uploaded after an evaluation of the initial application information by the Billing Team and the registry changes to the status "New".

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 Reports, LIS, EDA files and the Registry were checked for the audit period. The new connection process documents were reviewed and discussed with PowerNet staff.

Audit commentary

PowerNet has two distributor status ICPs: 0004031015TP9AA is an embedded network known as Aurora on the TPCO network, and 0000900392NVB03 is an embedded network known as KMart on the ELIN network.

One new distributor ICPs (0090037054NVAED) was created during this audit period. It is a gate meter ICP for a new mall under construction in Invercargill.

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 Reports and EDA files 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 were also checked.

Audit commentary

PowerNet will electronically disconnect ONLY with authorisation from the Owner of the property in conjunction with any tenant. This may come as a request direct from them via the online Disconnection Form or via a Retailer Service Request that PowerNet would then contact the owner and ask for the form to be completed. PowerNet put this measure in place to ensure ICPs are not incorrectly de-energised as they often get permanent disconnection requests from the retailer that, after talking to the customer, turn out are only a safety/temporary disconnection only, or even in some instances a request for a change to Inactive – Vacant Property.

PowerNet sends their lineman out to totally remove the line from the network, pull the fusing and, where they are MEP or agent for MEP (SMCO), they also retrieve the meters, and take a final read.

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 a final meter reading as required. The trader is asked to update the registry status of the ICP to "Inactive Ready For Decommissioning". PowerNet monitor the registry via the dashboard 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.

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 codes 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 were examined for all networks managed by PowerNet. This was discussed with PowerNet staff.

Audit commentary

There were no new Loss Category Codes added to the registry tables for any of the PowerNet networks during this audit period.

Audit outcome

Compliant

5.2. Updating loss factors (Clause 22 Schedule 11.1)

Code reference

Clause 22 Schedule 11.1

Code related audit information

Each loss category code must have a maximum of 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 Code table in the registry were examined for all networks managed by PowerNet. This was discussed with PowerNet staff.

Audit commentary

PowerNet updated the Loss Factors on the TPCO and ELIN networks during the audit period.

The Loss Factor changes as observed on the registry met the 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.

The notice provided to the reconciliation manager must be provided no later than 30 days prior to the intended date or creation or decommissioning.

If the intended date of creation or decommissioning changes the distributor must provide an updated notice as soon as possible.

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 and Network Supply Points table and relevant notifications were examined and reviewed. It was discussed with PowerNet staff.

Audit commentary

PowerNet staff confirmed that PowerNet did create one NSP during the audit period as follows:

Distributor	NSP POC	Parent POC	Parent Network	Balancing Area	Network type	Start date
LLNW	NTU0111	FKN0331	DUNE	NTU0111LLNWE	E	27/06/2022

PowerNet staff provided evidence that the reconciliation manager was notified on 26/05/2022.

By the end of February PowerNet will decommission NSP HER0111 connected to the TPCO network, which was the embedded network owned by Aurora Energy. The network was de-established and all ICPs were transferred to the TPCO network as of 1/12/2022. The delay of NSP decommissioning is caused by the that fact that Aurora Energy did not have the resources to complete the agreed cable work and removal of the gateway meter on the 1/12/2022. Both these jobs required an outage. As the area is predominantly holiday secondary residences – it was decided that it was best for the community to have the outage after the holiday season.

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 and Network Supply Points table and relevant notifications were examined and reviewed. It was discussed with PowerNet staff.

Audit commentary

PowerNet staff confirmed that PowerNet did ask the reconciliation manager to create the following unique NSP identifier during the audit period.

Distributor	NSP POC	Parent POC	Parent Network	Balancing Area	Network type	Start date
LLNW	NTU0111	FKN0331	DUNE	NTU0111LLNWE	E	27/06/2022

PowerNet staff provided evidence that the reconciliation manager was notified on 26/05/2022.

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 and Network Supply Points table and relevant notifications were examined and reviewed. It was discussed with PowerNet staff.

Audit commentary

PowerNet staff confirmed that PowerNet did create one NSP and associated balancing area during the audit period as follows:

Distributor	NSP POC	Parent POC	Parent Network	Balancing Area	Start date
LLNW	NTU0111	FKN0331	DUNE	NTU0111LLNWE	27/06/2022

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 and Network Supply Points table and relevant notifications were examined and reviewed. It was discussed with PowerNet staff.

Audit commentary

PowerNet staff confirmed that PowerNet did create one NSP and associated balancing area during the audit period as follows:

Distributor	NSP POC	Parent POC	Parent Network	LE ICP	Start date
LLNW	NTU0111	FKN0331	DUNE	0000510728CE783	27/06/2022

PowerNet staff stated all Code requirements were met in the creation of this NSP.

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 and Network Supply Points table and relevant notifications were examined and reviewed. It was discussed with PowerNet staff.

Audit commentary

No balancing areas were changed during the audit period. The balancing area HERITGEDUNEE will be decommissioned probably in March 2023 after HER0111 is decommissioned as described in **section 6.1.**

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

The NSP mapping in the registry and Network Supply Points tables were examined.

Audit commentary

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

PowerNet staff advise they are aware of the Code requirements.

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

During this audit period, on 01/12/2022, TPCO transferred 146 ICPs from the Heritage embedded network to the TPCO network because the Heritage embedded network was disestablished.

Notifications to the Authority were provided as required.

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

The Network Supply Points table was examined. This was discussed with PowerNet staff.

Audit commentary

The network supply points table was reviewed. All NSPs had certified metering installations on the date the table was checked, and one metering installation (NTU0111) was certified during the audit period:

Distributor	NSP POC	Description	MEP	Current expiry	Comment
TPCO/ELIN	STD0111	Interconnection	PWNT	25/07/28	
TPCO/ELIN	ELL0111	Interconnection	PWNT		Exemption
TPCO/ELIN	OCB0111	Interconnection	PWNT	07/07/25	
TPCO/ELIN	BLF0111	Interconnection	PWNT	07/07/25	
TPCO/ELIN	LEV0331	Interconnection	PWNT	2705/23	
TPCO/ELIN	SOU0331	Interconnection	PWNT	13/09/24	
LLNW	CLV0111	Kirimoko Cresent Wanaka	PWNT	8/07/31	
LLNW	NLK0111	Outlet Road Wanaka	PWNT	27/07/27	

Distributor	NSP POC	Description	MEP	Current expiry	Comment
LLNW	NTU0111	Gorge Road Queenstown	PWNT	27/06/32	New network
LLNW	WTR0111	Shortcut Road Cromwell	PWNT	4/06/31	

There was no recertification conducted during this audit period.

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 the reconciliation participant for the NSP (Clause 10.25(2)(b)); and*
- *no later than 5 business days after the date of certification of each metering installation, advise the reconciliation manager of*
  - *a) the MEP for the NSP (Clause 10.25(2)(c)(i)); and*
  - *b) the NSP of the certification expiry date(Clause 10.25(2)(c)(ii)).*

Audit observation

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

Audit commentary

A new NSP NTU0111 was created during the audit period with a start date of 27/06/2022. The meter was certified on 27/06/2022 and the certification details were provided to the reconciliation manager on 07/07/2022, more than five business days after certification.

The Code requires the distributor which connect the NSP to advice the reconciliation manager, within 5 business days of connecting the NSP, the certification expiry date of metering installation for the NSP. The Network Supply Point table has the date recorded but PowerNet was not able to locate a record when this information was provided to the reconciliation manager. We asked the reconciliation manager to confirm when they were informed. . At the time of finalising this audit report, we were waiting for reply from the reconciliation manager.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.9 With: Clause 10.25(2) of Schedule 11.1 From: 27-Jul-22 To: 03-May-22	**LLNW** - The meter installation certification expiry date for NTU0111 was provided to the reconciliation manager more than five business days after certification Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong because one update was late. The audit risk rating is low because the metering was always certified.

Actions taken to resolve the issue	Completion date	Remedial action status
The NSP creation procedure process list has been updated to ensure all information required to be sent to the RM is identified and timelines clearly marked.		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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. The LIS files for the audit period and the registry were checked.

Audit commentary

The Heritage embedded network was destabilised on 01/12/2022. All ICPs were transferred to the TPCO network. Notifications were provided as required.

Audit outcome

Compliant

6.11. Change of MEP for embedded network gate meter (Clause 10.22(1)(b))

Code reference

Clause 10.22(1)(b)

Code related audit information

If the MEP for an ICP which is also an NSP changes the participant responsible for the provision of the metering installation under Clause 10.25, the participant must advise the reconciliation manager and the gaining MEP.

Audit observation

The Network Supply Points table was examined to determine whether there have been any MEP changes during the audit period. This was discussed with PowerNet staff.

Audit commentary

There are no plans to change the MEP for interconnections between Electricity Invercargill and The Power Company and any embedded network managed by PowerNet.

If such a situation occurs, PowerNet will advise the reconciliation manager.

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. The LIS files for the audit period and the registry were checked.

Audit commentary

By the end of February 2023 PowerNet will decommission NSP HER0111 connected to TPCO network , which was the connection to the Aurora Energy embedded network. The network was de-established and all ICPs were transferred to the TPCO network as of 1/12/2022.

We identified 146 ICPs that have been transferred from the Heritage embedded network to the TPCO network. We examined the registry information.

Permission from the trader was gained in all instances prior to the transfer of the ICPs. PowerNet provided a copy of correspondence.

Audit outcome

Compliant

6.13. Transfer of ICPs for embedded network (Clause 6 Schedule 11.2)

Code reference

Clause 6 Schedule 11.2

Code related audit information

If the notification relates to an embedded network, it must relate to every ICP on the embedded network.

Audit observation

This was discussed with PowerNet staff. The LIS reports for the audit period and the registry were checked.

Audit commentary

PowerNet staff stated that PowerNet did not transfer any ICPs during the audit period. None of the networks managed by PowerNet created a new embedded network.

Audit outcome

Compliant

7. MAINTENANCE OF SHARED UNMETERED LOAD

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

Code reference

Clause 11.14(2) and (4)

Code related audit information

The distributor must give written notice to the registry manager and each trader responsible for the ICPs across which the unmetered load is shared of the ICP identifiers of those ICPs.

A distributor who receives notification from a trader relating to a change under Clause 11.14(3) must give written notice to the registry manager and each trader responsible for any of the ICPs across which the unmetered load is shared of the addition or omission of the ICP.

Audit observation

The LIS file and the registry were checked for the audit period. This was also discussed with PowerNet staff.

Audit commentary

PowerNet policy is not to allow shared unmetered load to be connected on any of the 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 file and the registry were checked for the audit period. This was also discussed with PowerNet staff.

Audit commentary

PowerNet policy is not to allow shared unmetered load to be connected on any of the 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 Calculation on the PowerNet website were reviewed.

Audit commentary

Network Loss Factors for the 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 PowerNet's philosophy and methodology for calculating Network Loss Factors. PowerNet uses PSS Adept software to calculate the technical loss for its networks.

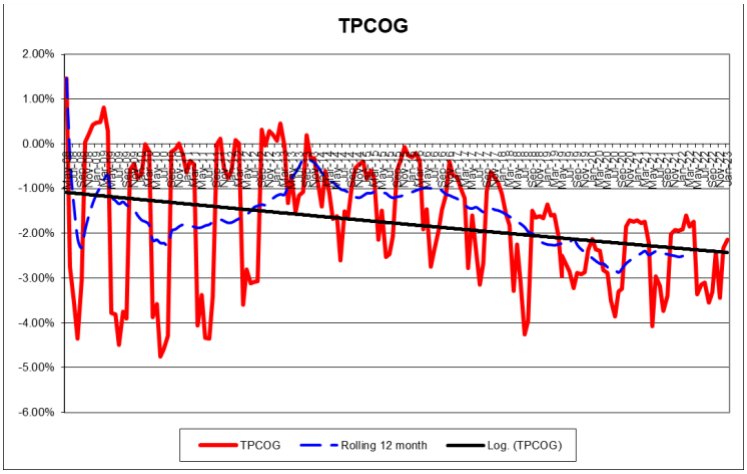
For major customers the loss factors are reviewed periodically as they may have a noticeable impact on losses.

A review of the general customer loss factors was completed in late 2021 for all networks for which PowerNet is responsible. Following this review PowerNet decided on a minor adjustments which were made to the Electricity Invercargill Ltd and The Power Company Limited Loss Factors from 1 May 2021.

This year PowerNet is planning to conduct a review of Loss Factors.

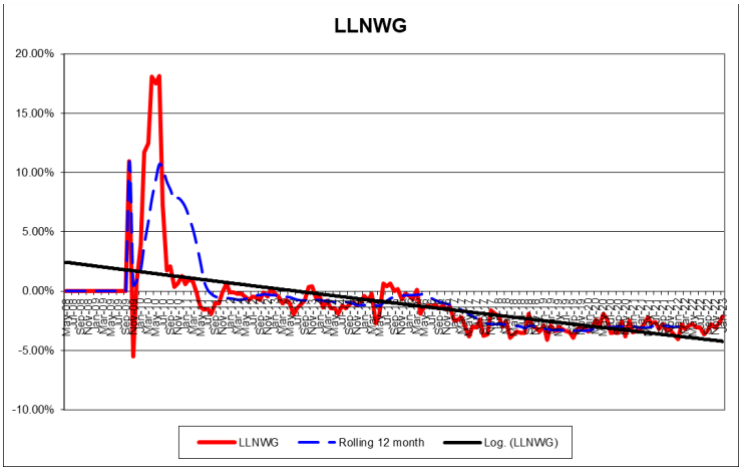
Below are shown graphs of UFE on each network managed by PowerNet. UFE is influenced by many factors, not all of them could be controlled by PowerNet. The UFE figures are different for each network. UFE for Lakeland, and the Power Company is negative, for Electricity Invercargill and Otago Net JV it is positive.

The Guidelines published by the Authority recommend reviewing RLF every 2 years if a 12 months UFE trend is outside +/-1 %.



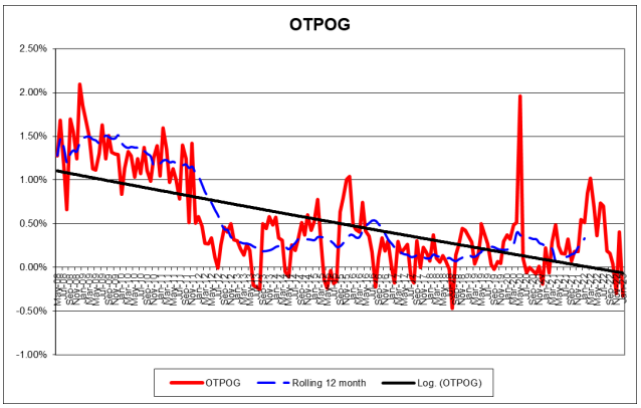
UFE approx. -2.5%, which is outside of the EA recommendation. Negative UFE occurs when traders overstate volumes purchased and/or distributors overestimate loss factors.

We would like to recommend investigating reasons why the UFE on TPCO is outside +/-1 %.

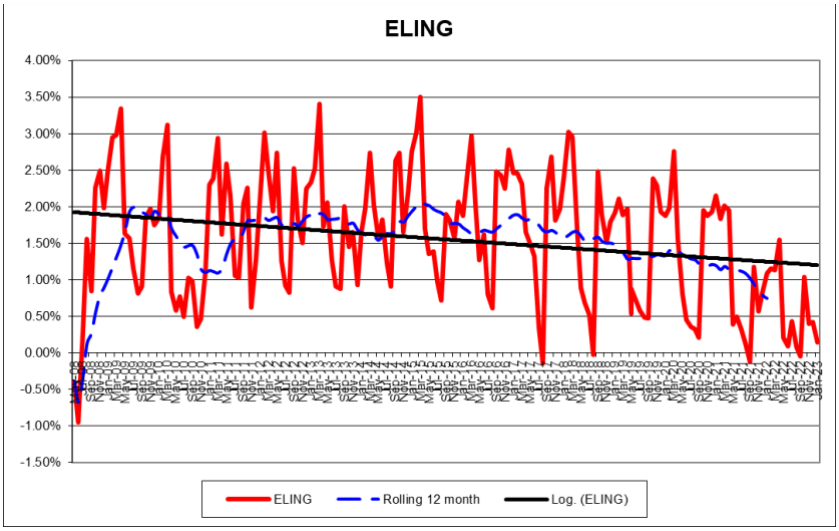


UFE approx. -2.5%, which is outside of the EA recommendation. Negative UFE occurs when traders overstate volumes purchased and/or distributors overestimate loss factors.

We would like to recommend investigating reasons why the UFE on LLNW is outside +/-1 %.



UFE approx.+0.4%, which is within the EA recommendation.



UFE approx. +0.75% (trending down) which is within the EA recommendation.

Audit outcome

Compliant

Recommendation	Description	Audited party comment	Remedial action
Review loss factors for LLNW and TPCO	UFE for LLNW and TPCO which is outside of the EA recommendation of +/-1 %.	Agree with recommendation	Engineering are already currently reviewing the Loss Factors have committed to completing the reviews by: TPCO by 30/04/2023 and LLNW by 31/05/2023. The Loss factors will be updated on the Registry with the appropriate notice.

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

PowerNet acknowledge the findings of the report shows a high level of compliance and so surprised that this is not at a lower-level future risk rating of at least 5-9.

PowerNet is also adding to our internal audit schedule this work to monitor and audit internally from 2023 in the attempt to minimise noncompliance and add extra monitoring of our working processes.