

**ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT**



For

POWERCO

Prepared by: Tara Gannon

Date audit commenced: 12 August 2020

Date audit report completed: 4 September 2020

Audit report due date: 10 October 2020

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EXECUTIVE SUMMARY

This Distributor audit was conducted at the request of **Powerco Ltd (Powerco)** to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11.

The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the Electricity Authority.

Powerco continues to prioritise data accuracy, and promptly investigates and resolves new data discrepancies. I saw evidence of processes continually being improved, and also found some minor process improvements identified during the audit which were implemented by the time the audit report was complete. Powerco is devoting resources to resolving historical data accuracy issues, and the number of historic discrepancies is decreasing over time.

Some significant improvements have been made during the audit period:

1. Initial electrical connection date validation and event date selection processes have improved and have increased initial electrical connection date accuracy.
2. The distributed generation application, validation and monitoring processes have been improved to ensure that data is consistently and accurately captured.
3. An improved new connection process for unmetered streetlights is being trialled.

Compliance could be increased by improving the NSP change process, to prevent the unmetered load details for shared unmetered ICPs from being omitted.

This audit found 12 non-compliances and makes two recommendations. The majority of the non-compliances relate to late population of data (many of which were caused by backdated corrections, or backdated creation of ICPs for existing unmetered load at the request of the trader), and some incorrect or incomplete data (which were mainly isolated data entry issues). Several non-compliances are minor and affect small numbers of ICPs or percentages of transactions.

The audit frequency table indicates that the next audit is due in 12 months. I recommend that the next audit is due in 14 months, after considering that:

- all non-compliances had control ratings of moderate or higher, and
- Powerco have continued to improve their validation processes during the audit period; and are making progress in resolving historical data inaccuracies.

The matters raised are set out in the table below.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide complete and accurate information	2.1	Clause 11.2(1) and 10.6(1)	Two network events did not have a correct effective date recorded; and were corrected during the audit.	Strong	Low	1	Cleared
Requirement to correct errors	2.2	11.2(2) and 10.6(2)	3,132 active ICPs have duplicate addresses. 1,062 active ICPs have addresses which do not have a street number or property name.	Moderate	Low	2	Identified
Distributors must create ICPs	3.1	11.14	36 private lights in the Palmerston North City Council region do not have shared unmetered load created.	Strong	Low	1	Identified
Timeliness of Provision of ICP Information to the registry manager	3.4	7(2) of Schedule 11.1	Registry not updated prior to commencement of trading for 102 ICPs (2.1%).	Moderate	Low	2	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late population of initial electrical connection date for 4,315 ICPs.	Strong	Low	1	Identified
Connection of ICP that is not an NSP	3.6	Clause 11.17	Trader acceptance was not confirmed for ICP1000585445PC6F2 prior to initial electrical connection.	Strong	Low	1	Identified
Connection of ICP that is not an NSP	3.7	Clause 10.31	Trader acceptance was not confirmed for ICP1000585445PC6F2 prior to initial electrical connection.	Strong	Low	1	Identified
Changes to registry information	4.1	Clause 8 of Schedule 11.1	107 late address updates. 690 late distributed generation updates. 5,407 late network updates. 15 late NSP changes. 2,170 late pricing updates. 139 late updates to decommissioned status.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Notice of NSP for each ICP	4.2	7(1),(4) and (5) Schedule 11.1	62 ICPs had incorrect NSPs assigned and were corrected during the audit.	Strong	Low	1	Cleared
ICP location address	4.4	Clause 2 of Schedule 11.1	3,132 active ICPs have duplicate addresses. 1,062 active ICPs have addresses which do not have a street number or property name. Nine ICPs had incorrect address towns or regions assigned; and were corrected during the audit.	Strong	Low	1	Identified
Distributors to Provide ICP Information to the Registry manager	4.6	Clause 7(1) of Schedule 11.1	3,132 active ICPs have duplicate addresses. 1,062 active ICPs have addresses which do not have a street number or property name. Nine ICPs had incorrect address towns or regions assigned; and were corrected during the audit. 62 ICPs had incorrect NSPs assigned and were corrected during the audit. Four ICPs had incorrect initial electrical connection dates; and were corrected during the audit. 114 active ICPs had missing initial electrical connection dates. 40 were corrected during the audit, and 74 are still to be investigated and corrected. 31 ICPs with known unmetered load (28 distributed unmetered load and three standard unmetered load) did not have distributor unmetered load details recorded on the registry and were corrected during the audit. 36 private lights in the Palmerston North City Council region do not have shared unmetered load created. Two ICPs invalidly had "unmetered load" recorded in the distributor unmetered load details; and were corrected during the audit. Powerco had incorrect distributor unmetered load details recorded	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			for three ICPs and out of date details recorded for six ICPs, which were corrected during the audit.				
Provision of information to registry after the trading of electricity at the ICP commences	4.7	7(3) Schedule 11.1	Pricing was not provided within ten business days of initial electrical connection for 11 ICPs.	Moderate	Low	2	Identified
Maintenance of price category codes	4.12	23 Schedule 11.1	Price category codes NLC, NLCT and NLCV were incorrectly end dated, and were corrected during the audit period.	Strong	Low	1	Identified
Future Risk Rating						18	

Future risk rating	0-1	2-5	6-8	9-20	21-29	30+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Recommendation	Description
Changes to registry information	4.1	NSP changes for ICPs with shared unmetered load	Ensure that shared unmetered load details are retained when processing NSP changes for ICPs with shared unmetered load.
Notification of shared unmetered load ICP list	7.1	Shared unmetered load	Liaise with councils to identify shared unmetered load and create relevant ICPs. Notify traders of created shared load in accordance with clause 11.14 of part 11.

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.

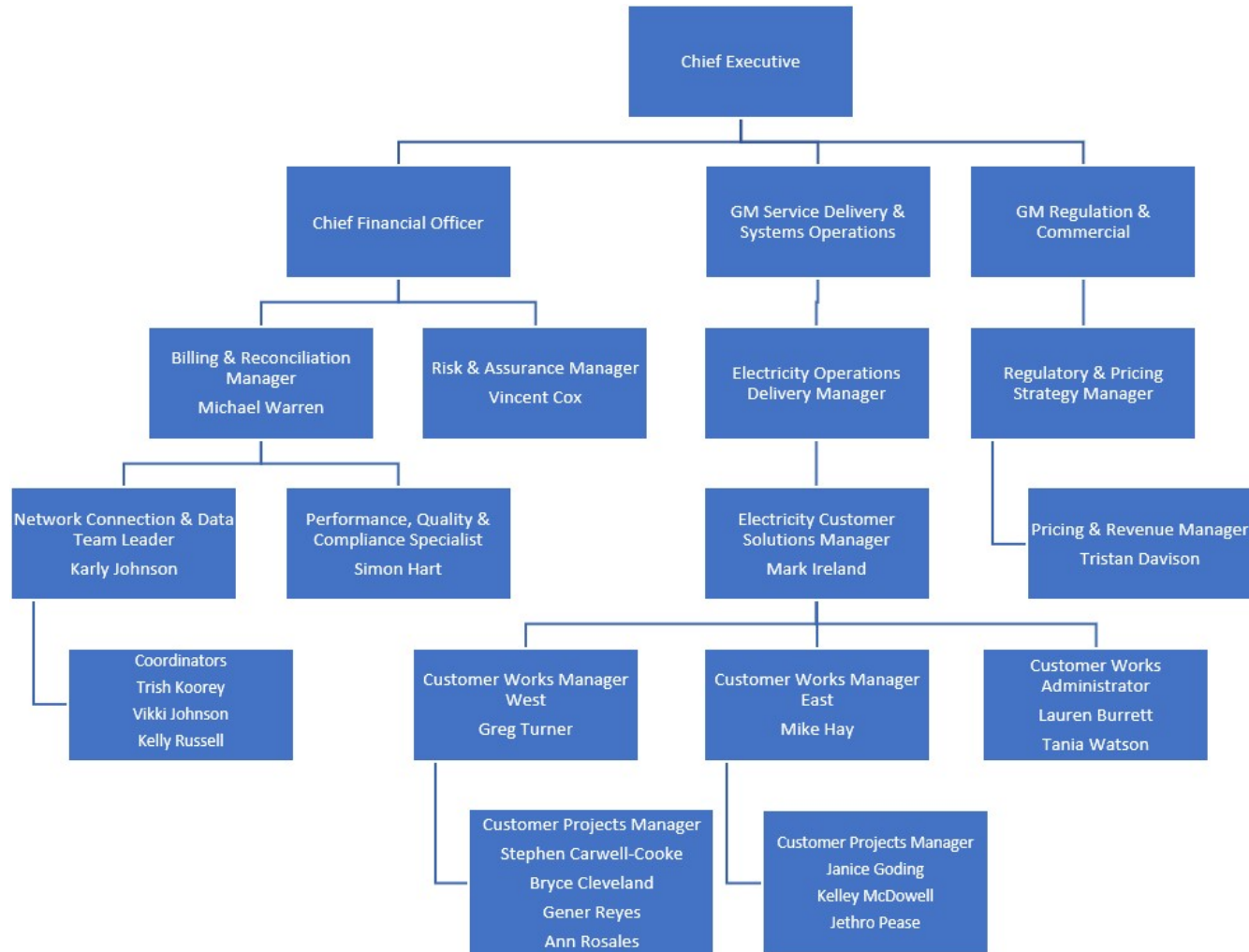
Audit observation

The Electricity Authority website was checked to determine whether Powerco has any Code exemptions in place.

Audit commentary

Review of exemptions on the Electricity Authority website confirmed that there are no exemptions in place for Powerco.

1.2. Structure of Organisation



1.3. Persons involved in this audit

Auditor:

Tara Gannon

Veritek Limited

Electricity Authority Approved Auditor

Personnel assisting in this audit were:

Name	Title
Greg Turner	Customer Works Manager Western Region
Janice Goding	Customer Projects Manager
Gener Reyes	Customer Projects Manager
Karly Johnson	Network Connections and Data Team Leader
Kelly Russell	Network Connections and Billing Analyst
Mark Ireland	Customer Solution Manager
Michael Warren	Billing and Reconciliation manager
Mike Hay	Customer Works Manager Eastern Region
Simon Hart	Performance, Quality and Compliance Coordinator
Trish Koorey	Networks Connections and Data Coordinator
Vicky Johnson	Networks Connections and Data Coordinator

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

Powerco provided the list below of sub-contractors authorised to perform electrical connection activities on their networks.

Audit commentary

Taranaki

- A J Greaves Electrical Limited
- Electrix
- Obertech Limited
- Downer Taranaki/Manawatu
- NPE-Tech Ltd Taranaki
- Wells Instruments Ltd
- ElectroNet Services

Whanganui

- Electrix
- Strong Electrical
- Alf Downs Ltd
- Downer Whanganui
- Scanpower Limited
- C&J Contracting (2011) Ltd
- ElectroNet Services

Manawatu

- Electrix
- Alf Downs Limited
- Scanpower Limited
- Downer Taranaki/Manawatu
- NPE-Ltd Taranaki
- C&J Contracting (2011) Ltd
- Max Tarr Ltd
- Couchmans Electrical
- ElectroNet Services

Wairarapa

- Power Related Services
- Poltech Power Works Ltd
- Downer Masterton
- Scanpower Power Limited
- C&J Contracting Ltd (2011)
- ElectroNet Services

Tauranga

- Northpower Papamoa
- McKay Limited
- Downer Tauranga
- NPE-Tech Ltd Tauranga
- Electrical Inspection Limited
- Elite Electrical Inspections

- Horizon Services Limited
- Switch Electrical
- Kaimai Electrical Inspections Limited
- Double D Electrical & Inspections
- Guild & Spence Electrical Limited
- Energy Services Tauranga Ltd

Waikato and Coromandel

- Northpower Hamilton
- Northpower Matamata
- Downer Thames
- NPE-Tech Ltd Tauranga
- Metering Solutions
- Ross Walker
- McKay Ltd
- Kaimai Electrical Inspections Limited
- Double D Electrical & Inspections
- Sefton Electrical Limited

1.5. Supplier list

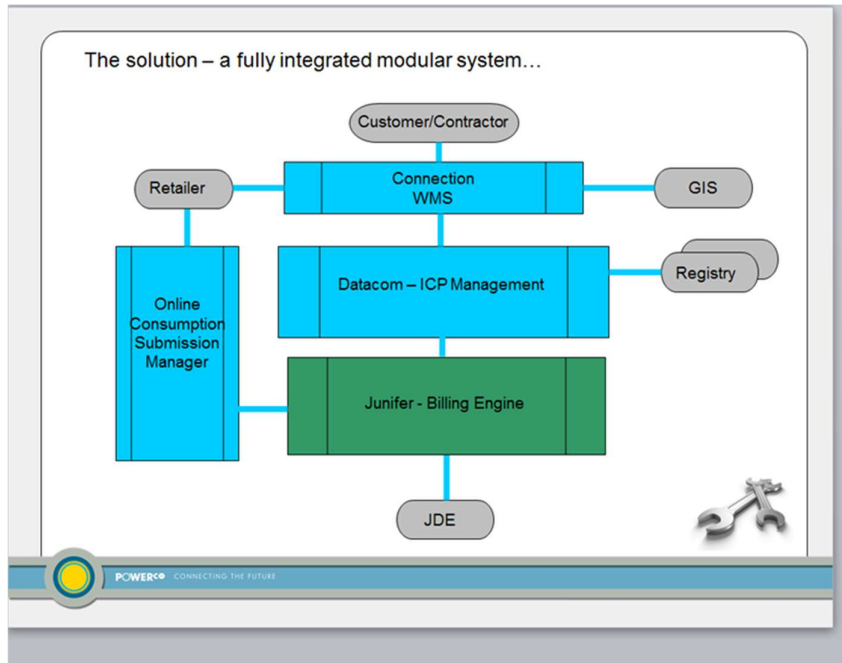
Powerco has provided the list of sub-contractors authorised to perform livening activities on their network in **section 1.4**.

1.6. Hardware and Software

Powerco uses the following systems to meet its code obligations:

- **Customer Initiated Works (CIW)** which is an online submission portal which customers and contractors can access directly.
- **Customer Workflow Management System (CWMS)** is used to manage workflows; and send and receive registry data.

This is set out in the diagram below:



Back-ups are carried out on a daily, weekly and monthly basis for all systems, and access is restricted using logins and passwords.

Powerco intends to replace its financial and asset management systems with SAP. Phase two of the SAP project is expected to encompass other processes including registry management; and is likely to be implemented in mid-late 2021. A material change audit will be required prior to implementation of phase two.

1.7. Breaches or Breach Allegations

Powerco has not had any breach allegations related to the scope of this audit recorded by the Electricity Authority during the audit period.

1.8. ICP and NSP Data

Powerco owns and manages electricity networks in the following regions: Coromandel, Western Bay of Plenty, Hauraki Plains, North East Waikato, South Waikato, Taranaki, Wanganui, Rangitikei, Manawatu and Wairarapa.

Powerco NSPs

The table below lists the relevant NSPs and their associated balancing areas.

Dist.	NSP POC	Description	Parent POC	Parent Ntwk	Balancing Area	Network type	Start date	No of ICPs
POCO	BPE0331	BUNNYTHORPE			BA4WESTPOCOG	G	1/05/2008	33,787
POCO	BRK0331	BRUNSWICK			BA3WESTPOCOG	G	1/08/2016	12,396
POCO	CST0331	CARRINGTON ST			BA1WESTPOCOG	G	1/05/2008	28,440
POCO	GYT0331	GREYTOWN			BA6WESTPOCOG	G	1/05/2008	7,201

POCO	HIN0331	HINUERA			BA5EASTPOCOG	G	1/05/2008	11,319
POCO	HUI0331	HUIRANGI			BA1WESTPOCOG	G	1/12/2008	10,077
POCO	HWA0331	HAWERA			BA2WESTPOCOG	G	1/05/2008	9,265
POCO	KIN0112	KINLEITH			KIN0112POCOG	G	20/05/2013	1
POCO	KIN0331	KINLEITH			BA2EASTPOCOG	G	1/05/2008	6,682
POCO	KMO0331	Kaitemako			BA1EASTPOCOG	G	1/04/2009	8,863
POCO	KPU0661	KOPU			BA3EASTPOCOG	G	1/05/2008	25,251
POCO	LTN0331	LINTON			BA4WESTPOCOG	G	1/05/2008	18,104
POCO	MGM0331	MANGAMAIRE			BA5WESTPOCOG	G	1/05/2008	4,330
POCO	MST0331	MASTERTON			BA6WESTPOCOG	G	1/05/2008	18,421
POCO	MTM0331	MT. MAUNGANUI			BA1EASTPOCOG	G	1/05/2008	16,197
POCO	MTN0331	MARTON			BA3WESTPOCOG	G	1/05/2008	6,217
POCO	MTR0331	MATAROA			BA3WESTPOCOG	G	1/05/2008	2,775
POCO	OKN0111	OHAKUNE			BA3WESTPOCOG	G	1/05/2008	1,197
POCO	OPK0331	OPUNAKE			BA2WESTPOCOG	G	1/05/2008	3,044
POCO	PAO1101	PIAKO 110KV			BA5EASTPOCOG	G	24/07/2012	7,731
POCO	SFD0331	STRATFORD			BA1WESTPOCOG	G	1/01/2015	8,333
POCO	TGA0111	TAURANGA			BA1EASTPOCOG	G	1/05/2008	9,836
POCO	TGA0331	TAURANGA			BA1EASTPOCOG	G	1/05/2008	34,168
POCO	TMI0331	TE MATAI			BA1EASTPOCOG	G	1/05/2008	18,676
POCO	WGN0331	WANGANUI			BA3WESTPOCOG	G	1/08/2016	9,896
POCO	WHU0331	WAIHOU			BA5EASTPOCOG	G	1/05/2008	5,145
POCO	WKO0331	WAIKINO			BA4EASTPOCOG	G	1/05/2008	16,556
POCO	WVY0111	WAVERLEY			BA3WESTPOCOG	G	1/05/2008	1,346

NPL0331 was decommissioned during the audit period, and no new NSPs were created.

Decommissioned NSP							
Dist.	NSP POC	Description	Balancing Area	Network type	Start date	End date	No of ICPs
POCO	NPL0331	New Plymouth	BA1WESTPOCOG	G	1/07/2010	18/12/2019	0

Networks embedded under Powerco NSPs

There are eight embedded networks connected to the Powerco network, shown in the table below. The TENC TMM0111 embedded network was created during the audit period, and no embedded networks were decommissioned.

Dist.	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date
AMPC	BSC0011	BAYFAIR SHOPPING CENTRE	MTM0331	POCO	BSC0011AMPCE	E	1/04/2017
KIPT	KPP0011	KIWI PLAZA	BPE0331	POCO	KPP0011KIPTE	E	1/05/2008
SMRT	TFQ0011	100 TAUPU QUAY WANGANUI	WGN0331	POCO	TFQ0011SMRTE	E	1/07/2017
TENC	TCT0011	TAURANGA CROSSING TAURIKURA DR	TGA0111	POCO	TCT0011TENCE	E	20/07/2016
TENC	TGD0011	Goddards Shopping Centre	TGA0331	POCO	TGD0011TENCE	E	1/06/2019
TENC	TSB0011	66 THE SQUARE PALMERSTON NORTH	BPE0331	POCO	TSB0011TENCE	E	1/03/2019
TUIH	GRE0111	TUIHANA	MTM0331	POCO	PAPAMOATUIHE	E	1/12/2008
TENC	TMM0111	80b BURWOOD RD MATAMATA	HIN0331	POCO	TMM0111TENCE	E	08/07/2019

Powerco ICP status

A summary of Powerco's ICPs by status is shown in the table below:

Status	Number of ICPs 2020	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017	Number of ICPs 2016
Distributor (888)	66	67	64	64	65
New (999)	23	66	104	95	87
Ready (000)	146	124	131	170	109
Active (2,0)	335,254	330,881	327,617	324,102	319,558
Inactive - new connection in progress (1,12)	464	287	350	389	316
Inactive – electrically disconnected vacant property (1,4)	7,360	7,284	7,306	7,454	7,755
Inactive – electrically disconnected remotely by AMI meter (1,7)	871	953	818	752	2
Inactive – electrically disconnected at pole fuse (1,8)	68	76	55	47	11
Inactive – electrically disconnected due to meter disconnected (1,9)	113	104	93	39	14

Status	Number of ICPs 2020	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017	Number of ICPs 2016
Inactive – electrically disconnected at meter box fuse (1,10)	46	51	36	8	0
Inactive – electrically disconnected at meter box switch (1,11)	22	18	18	9	0
Inactive – electrically disconnected ready for decommissioning (1,6)	2,357	2,709	2,718	3,211	4,724
Inactive – reconciled elsewhere (1,5)	8	4	3	0	0
Decommissioned (3)	26,960	25,470	24,454	23,107	20,482

1.9. Authorisation Received

A letter of authorisation was provided.

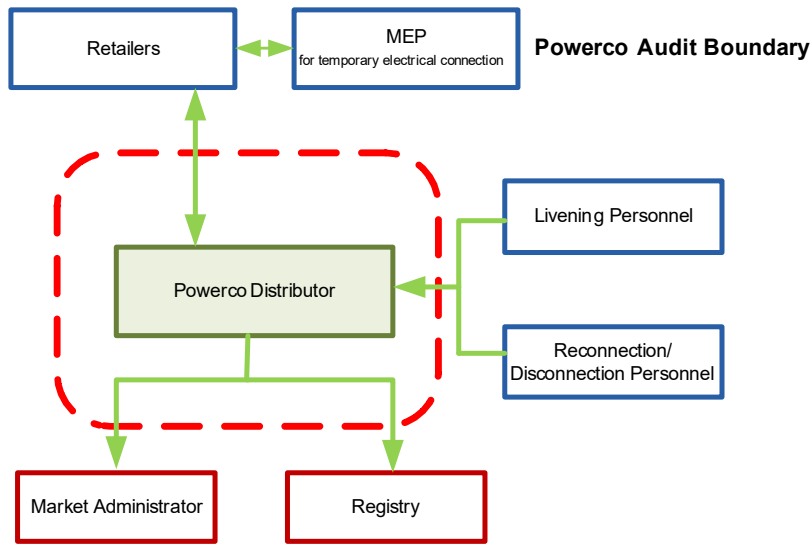
1.10. Scope of Audit

This Distributor audit was conducted at the request of Powerco to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11. The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the Electricity Authority.

The table below shows the tasks under clause 11.10(4) of Part 11, which Powerco is responsible for. There are no other agents who assist with these tasks:

Functions Requiring Audit Under Clause 11.10(4) of Part 11	Contractors Involved in Performance of Tasks
The creation of ICP identifiers for ICPs.	Nil
The provision of ICP information to the registry and the maintenance of that information.	
The creation and maintenance of loss factors.	

The scope of the audit is shown in the diagram below, with the Powerco audit boundary shown for clarity.



1.11. Summary of previous audit

Powerco provided a copy of their previous audit conducted in August 2019 by Tara Gannon of Veritek Limited. The audit recorded eleven non-compliances and made three recommendations. The current status of the non-compliances and recommendations are listed below.

Subject	Section	Clause	Non-compliance	Status
Requirement to provide complete and accurate information	2.1	Clause 11.2(1) and 10.6(1)	117 network events did not have a correct effective date recorded.	Still existing, but improved
Requirement to correct errors	2.2	11.2(2) and 10.6(2)	117 network events did not have a correct effective date recorded.	Still existing, but improved
Timeliness of Provision of ICP Information to the registry manager	3.4	7(2) of Schedule 11.1	Registry not updated prior to commencement of trading for 76 ICPs (1.97%).	Still existing
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late population of initial electrical connection date for 109 ICPs (2.8%).	Still existing
Connection of ICP that is not an NSP	3.6	Clause 11.17	ICP 1000576622PC9B3 was electrically connected prior to having a trader nominated on the registry.	Still existing

Subject	Section	Clause	Non-compliance	Status
Connection of ICP that is not an NSP	3.7	Clause 10.31	ICP 1000576622PC9B3 was electrically connected prior to the trader accepting responsibility.	Still existing
Changes to registry information	4.1	Clause 8 of Schedule 11.1	79 late address updates. 7524 late network updates. 1,258 late pricing updates. 443 late status updates.	Still existing
Notice of NSP for each ICP	4.2	7(1),(4) and (5) Schedule 11.1	Three ICPs with incorrect NSPs assigned, and one ICP likely to have an incorrect NSP assigned.	Still existing
ICP location address	4.4	Clause 2 of Schedule 11.1	5.771 ICPs with addresses that are either duplicated or not readily locatable.	Still existing
Distributors to Provide ICP Information to the Registry manager	4.6	Clause 7(1) of Schedule 11.1	Eleven ICPs had incorrect addresses recorded, which have now been corrected. Five ICPs had redundant distributor unmetered load details recorded, which have now been removed. ICP 1000547492PC18A had an incorrect installation type recorded, which has now been corrected. 38 ICPs did not have an initial electrical connection date recorded, which have now been corrected.	Still existing
Creation of loss factors	8.1	Clause 11.2	Loss factors are not accurate for balancing area BA1EASTPOCOG as indicated by the reconciliation losses.	Cleared

Subject	Section	Recommendation	Status
Electrical connection of a point of connection	3.16	Arrange blanket approvals from DUML traders for new streetlight circuits created without ICPs. Or establish a clear trader responsibility acceptance process for new streetlight circuits created without ICPs.	Cleared

Subject	Section	Recommendation	Status
Distributors to Provide ICP Information to the Registry manager	4.6	Update unmetered load details to “DUML” for those ICPs reconciled by a DUML database by the trader.	Cleared during the audit
Notification of shared unmetered load ICP list	7.1	Liaise with councils to identify shared unmetered load and create relevant ICPs. Notify traders of created shared load in accordance with clause 11.14 of part 11.	Underway

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

I walked through the process to ensure that registry information is complete, accurate and not misleading or deceptive, including viewing reports used to resolve discrepancies.

The registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were examined to determine compliance.

Audit commentary

Registry synchronisation

Registry population is automated from CWMS and the file includes all relevant fields. The registry synchronisation process imports data from the registry into CWMS at 7am each day, and exports data from CWMS to the registry at 7pm each day.

Information sent to and received from the registry is monitored, and automated emails are generated and reviewed each morning including:

- **Rejects from outgoing files** which shows all rejected outgoing files and the error reason codes. Exceptions are worked through and resolved either by updating CWMS so that the update can be processed again; or updating the registry directly where CWMS is already correct. Direct access to update the registry is restricted to a small number of experienced users.
- **Contents of registry synch** which contains a link to all the files sent to and received from the registry. It is reviewed to check that no files have been missed.
- **Unacknowledged outgoing events** which identifies any files sent to the registry which have not received an acknowledgement. This normally only occurs for files sent to the gas registry; but will identify missing acknowledgements if they occurred for electricity.

Registry and data validation

Powerco completes a weekly reconciliation between CWMS and the registry, and weekly data discrepancy checks.

Weekly report	Description
Reconciliation between CWMS and the registry	This report identifies differences between registry and CWMS for retailer, status, address, distributor unmetered load, and pricing. Discrepancies are checked to determine whether they are timing differences; or require investigation and/or correction. Discrepancies are resolved weekly, with the exception of some address and unmetered load differences which require further investigation.

Weekly report	Description
Validation report	<p>The validation report identifies potential data discrepancies, which are investigated and resolved each week:</p> <ul style="list-style-type: none"> • Duplicates: more than one registry event on the same day for one event type • Pricing: inconsistencies between the pricing category and region • Chargeable capacity: inconsistencies between the pricing category and chargeable capacity • Other charges: inconsistencies between the pricing category and other charges • Dedicated NSP: Y on a non-dedicated NSP or N on a dedicated NSP • UNM with E1C: unmetered load with a controlled price category • SUML: shared unmetered child ICPs without parent ICPs, and vice versa • Retailer: the retailer is not set up in CWMS and/or does not have a UoSA in place • GXP billing: a GXP billing account is not set up for the retailer • KIN0112 and Massey University: unexpected ICPs are assigned, and/or the affected ICPs have different retailers.
Monitoring report	<p>The monitoring report is used to monitor the total number of ICPs at certain statuses:</p> <ul style="list-style-type: none"> • Inactive pending (1,12 status): if total numbers exceed expectations they will be followed up with the affected retailers. • Inactive ready for decommissioning (1,6 status): total numbers are monitored, and ICPs are managed through the decommissioning process once requests for decommissioning are received. • Ready > 18 months: the affected ICPs are followed up with the trader to confirm whether they are still required. • New > 18 months: the affected ICPs are followed up with the trader to confirm whether they are still required. • Active ICPs without an MEP: these ICPs are followed up with the trader if no metering details are added 10 business days after initial electrical connection. The report indicates whether the ICP is expected to be unmetered.
Cleanup report	<p>Powerco devotes at least eight hours per week to investigating and resolving data discrepancies on the cleanup report, including:</p> <ul style="list-style-type: none"> • Controlled volume check: ICPs where no volume is reported for a controlled register. • Low user ANZSIC: ICPs on a low user pricing category with a non-residential ANZSIC code. • Unmetered daily kWh comparison: ICPs where the trader's daily unmetered kWh to the does not match the value calculated from Powerco's unmetered load details. The report also lists ICPs where Powerco's value cannot be recalculated because information is insufficient or not in the required format. • Missing address data: ICPs with incomplete addresses. • Invalid address data: ICPs with special characters in unexpected places in address fields. • Region check: ICP level and street level discrepancies between regions and other address fields.

Weekly report	Description
	Each discrepancy on this report needs to be individually investigated, which can be time consuming. In some cases investigation confirms that Powerco's values are correct.
Duplicate addresses report	This report shows all ICPs with duplicate addresses and includes inactive ICPs. Powerco is working through the exceptions to try to obtain more information and make the addresses unique.
Distributed generation report	This report identifies ICPs with an I flow meter register with settlement indicator = Y and installation type L. The report also shows the profile used and whether volumes have been reported against the I flow register on the EIEP1 report. The ICPs are queried with the retailer to confirm whether generation is present. If generation is present, Powerco confirms the generation details and updates the registry. If no generation is present, Powerco asks the retailer to query whether the register should have settlement indicator N with the MEP.
NSP check	This report shows the count of NSPs and balancing areas per street. Network connectivity data is used to prioritise streets which have NSPs assigned which are not physically close or do not have an open connection to each other and are more likely to be incorrect. Any NSPs or addresses which are found to be incorrect are updated.

In addition to this, Powerco validates initial electrical connection dates daily:

- **IECDs to populate:** ICPs with an active status date or meter certification date in the past year but no initial electrical connection date populated are identified and investigated. To improve compliance, Powerco's daily exception reporting has now been updated to identify any ICPs without an initial electrical connection date where an update to active status has occurred in the past year, instead of only considering ICPs where the active status event date is within the past year. Most of the ICPs on this exception report are Chorus cabinets which Powerco is trying to confirm the correct active date for.
- **IECDs to verify:** ICPs with a difference between the active date, meter certification date and livening date which was created in the previous day are reviewed and queried with the retailer and/or MEP as required to confirm the correct date. Issues from previous days which are under investigation are retained in the report so that they can be followed up.

Event dates

Event dates should reflect the date from which the attribute values for the event apply. For pricing events, CWMS allows users to select an effective date for the event, which is used to update the registry.

For address and network events, the user is unable to select an effective date because the field is not accessible through the CWMS front end. The event is processed on the registry with the event date recorded as the update date, although the attributes associated with the event may apply from a different date. Powerco is aware of this issue, and has processes in place to manage it:

Event type	Event date setting processes
Network events	Where NSP changes occur, Powerco processes the registry event on the date that the change occurs. When bulk NSP changes are processed, scripts are used to create files with the correct dates to update the registry. Where distributed generation changes occur, Powerco checks the registry manually the following morning, and processes a manual update to the event date on the registry if

Event type	Event date setting processes
	<p>necessary. CWMS workflows are used to ensure that this process occurs when generation is added.</p> <p>When unmetered load changes occur, Powerco manually checks the registry and updates the event date if necessary.</p> <p>The 2019 audit found that following implementation of process changes in May 2019, initial electrical connection dates were recorded with the update date as the event date, which did not consistently reflect the date that the initial electrical connection was applied from. The application of initial electrical connection date event dates has now been corrected:</p> <ul style="list-style-type: none"> • where the IECD is updated for the first time, the IECD will be recorded as the event date, • where the IECD is changed, the IECD will be recorded as the event date and the previous record will be reversed, and • where the IECD is removed, a new record with a blank IECD will be entered, replacing the previous record. <p>I reviewed the first initial electrical connection date update where the initial electrical connection date was after 01/05/20 on the event detail report. I found that for two (0.04%) of the 5,178 updates the initial electrical connection date did not match the event date. Both were isolated errors; one because the contractor provided an incorrect date and one because of a data entry error. Both were corrected during the audit.</p>
Address events	Any address changes are recorded with the current date.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 2.1 With: 11.2(1)</p> <p>From: 12-Feb-20 To: 14-Apr-20</p>	<p>Two network events did not have a correct effective date recorded; and were corrected during the audit.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>
Audit risk rating	Rationale for audit risk rating
Low	<p>The controls are strong and ensure that correct event dates are normally applied. The two exceptions were isolated errors.</p> <p>I have rated the audit risk rating as low as the initial electrical connection date has no direct impact on settlement.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
Powerco has focused on improving processes and exception reporting to ensure correct information is provided to the registry, which is reflected in the low number of errors in the audit.	In place	Cleared
Preventative actions taken to ensure no further issues will occur	Completion date	
Powerco is confident in its reporting and controls for registry data and will continue to monitor and adjust processes where appropriate.	On-going	

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

Powerco's data management processes were examined. The registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were examined to determine compliance.

Audit commentary

Powerco have processes in place to identify and resolve registry discrepancies as described in **section 2.1**. I saw evidence of incorrect information being corrected during the audit and most corrections were conducted as soon as practicable.

Some data discrepancies which require further investigation to resolve are not always corrected as soon as practicable, such as incomplete and duplicate addresses. Significant progress is being made with these discrepancies over time.

	2020	2019	2018	2017	2016	Difference this year
Duplicate addresses	3,132	4,348	6,091	8,973	13,302	-1,216
Addresses without street number or property name	1,062	1,423	1,584	1,733	2,013	-361

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 2.2</p> <p>With: 11.2(2) and 10.6(2)</p> <p>From: 19-Jun-19</p> <p>To: 19-Jun-20</p>	<p>3,132 active ICPs have duplicate addresses.</p> <p>1,062 active ICPs have addresses which do not have a street number or property name.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The current process controls are rated as moderate. Powerco deals with any new exceptions in a timely manner, and generally processes corrections as soon as practicable. Some historic addressing issues which require investigation to resolve have been outstanding for several years, but good progress is being made.</p> <p>The audit risk rating is low as the volume of ICPs that are not readily locatable and duplicated is reducing. Incorrect addresses can have a direct impact on the retailer's ability to read, disconnect and reconnect these sites.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>As mentioned in 2.1 Powerco has improved its reporting so errors are found and therefore resolved more quickly.</p> <p>It has made bulk corrections where practical, such as IECD event dates.</p> <p>Also, since the last audit Powerco has scheduled dedicated resource to resolve historic data issues, steadily reducing errors in areas such as address duplicates.</p>		In place/complete	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Powerco will continue to monitor its reporting and make corrections when required. Powerco is also investigating alternative methods of verifying addresses as residual exceptions become more difficult to resolve.</p>		On-going	

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 new connection process was examined in detail and is described in **section 3.2**.

A diverse characteristics sample of 35 new connection applications of the 5,646 created since 01/05/2019 were checked from the point of application through to when the ICPs were created. The sample included ICPs with:

- various meter categories (including category 1, 2, 3 and 4),
- various traders,
- various price categories,
- various loss factors,
- connected to various NSPs, and
- with and without standard or distributed unmetered load connected (no ICPs with shared unmetered load were created).

The creation of LE ICPs for the connection of embedded networks to Powerco's network was also examined.

Audit commentary

Powerco creates ICPs as required by clause 1 of schedule 11.1. No examples of points of connection without ICPs were found.

The TENC TMM0111 embedded network was created during the audit period, and Powerco created a LE ICP as required by this clause.

Powerco does not have an ICP recorded for 36 private lights in the Palmerston North City Council region. This is discussed further in **section 4.6**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: 11.14 From: 19-Jun-20 To: 28-Aug-20	36 private lights in the Palmerston North City Council region do not have shared unmetered load created. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1

Audit risk rating	Rationale for audit risk rating		
Low	<p>I have rated the controls as strong as Powerco have a robust ICP creation process and these lights are an historic issue and no other such instances have been identified.</p> <p>I have rated the audit risk rating as low as the kWh volume associated with these lights will be small.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Powerco is current investigating issues with lights in the Palmerston North City Council footprint to ensure all unmetered load is correctly reconciled.		1/4/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Powerco will continue to work with DUML owners and traders to ensure all unmetered load is correctly reconciled and will create ICPs when appropriate.		On-going	

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 three 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 new connection process was examined in detail. A diverse characteristics sample of 35 new connection applications of the 5,646 created since 01/05/2019 were checked to determine whether the ICPs had been created within three business days of a request by a trader. The sample included various traders.

Audit commentary

In most cases, requests for connection are made by the customer or customer's agent. The main exception to this is Trustpower, who request ICPs as the trader where they are also the contractor.

Applications for new connections are made online using CIW. Once an application for connection is received, workflows within the system create an email to the trader requesting acceptance of responsibility unless it meets the requirements of a blanket acceptance arrangement. Contact Energy and Trustpower (where Trustpower is also the contractor) have blanket arrangements to accept responsibility, and ICPs that meet their requirements are moved to "ready" without an email being required.

ICPs are only created at "new" status if a network extension is required, or for new unmetered load which is not yet ready to be connected. Other ICPs are created at "ready" once the retailer has accepted responsibility for the ICP and a works completion notice (WCN) has been received from the contractor to confirm the ICP attributes.

I checked 35 new ICPs. 20 were requested by the trader, 19 by Trustpower and one by Meridian. For the Meridian ICP, a change of metering at an existing ICP required a new ICP to be created and the existing ICP to be decommissioned. All of the ICPs were created within three business days of the trader's request. The remaining ICPs were all requested by the customer or a Powerco approved contractor.

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

35 new connection applications of the 5,646 ICPs created since 01/04/19 were checked from the point of application through to when the ICP was created, to confirm the process and controls worked in practice.

Data populated on the registry was checked for all new connections during the audit period, to confirm that required fields were populated.

Audit commentary

Processes to send, receive, and validate registry information are discussed in detail in **section 2.1**. Information sent to and received from the registry is monitored, and automated emails are generated and reviewed each morning to identify and correct any issues.

ICP information provided to the registry was correct for the sample of ICPs checked against application and connection details. The required fields were populated on the registry for all new connections.

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 registry list for 19/06/20, event detail report for 01/05/19 to 19/06/20, and AC020 report for 19/06/19 to 19/06/20 for were examined to determine the timeliness of the provision of ICP information for new connections. A sample of 35 late updates were checked to determine why they were late.

Audit commentary

The distributor must provide to the registry the information listed in clause 7(1) of schedule 11.1 as soon as practicable, and before electricity is traded at the ICP.

ICPs are only created at “new” status if a network extension is required, or a new unmetered load ICP is not ready for activation. Other ICPs are created at “ready” once the retailer has accepted responsibility for the ICP, and the WCN is received from the contractor to confirm other ICP attributes.

4,864 of the 5,646 ICPs created since 01/05/2019 had an initial electrical connection date recorded, indicating that they were electrically connected during the period. I assessed the timeliness of pricing and ready status updates using the AC020 report, and the timeliness of address, proposed trader, and network updates using the registry list and event detail reports.

The proportion of ICPs with all updates not made on time is similar to the 2019 audit, at 2.1%. The majority of late updates were caused by new ICPs being created for existing unmetered load with backdated start dates, and delays in confirming the ICP attributes required to perform the registry updates. To ensure that WCN information is complete, timely and accurate, Powerco provides training on systems and network requirements for all new contractors, conducts annual roadshows and has quarterly to six monthly catch ups with all contractors. Powerco’s administrators complete training with service provider administrators in an effort to improve communication, timeliness, and accuracy of information.

I reviewed all ICPs which had required information populated after initial electrical connection:

Late update type	Reasons for late update
Ready status	<p>97 ICPs did not have ready status recorded prior to being initially electrically connected. 29 late updates were checked:</p> <ul style="list-style-type: none">• 20 were new ICPs created for existing unmetered load which did not have an ICP and were backdated in agreement with the trader,• five were delayed by late receipt of WCN paperwork from the contractor,• two were delayed by late retailer acceptance,• two were date corrections processed once correct information was obtained, and• one ICP underwent a metering upgrade but was later required to be decommissioned and have a new ICP created.
Address and proposed trader	<p>21 ICPs did not have address or proposed trader information recorded prior being initially electrically connected. All late updates were checked:</p> <ul style="list-style-type: none">• 19 were new ICPs created for existing unmetered load which did not have an ICP and were backdated in agreement with the trader,• one ICP underwent a metering upgrade, but was later required to be decommissioned and have a new ICP created, and• one late update was caused by a registry synchronisation failure because the server was turned off for maintenance and not restarted in time for the scheduled process to run, the issue was identified through Powerco’s monitoring processes described in section 2.1, and resent the following day.
Network information (excluding proposed trader)	<p>20 ICPs which did not have initial network information recorded prior to being initially electrically connected. All late updates were checked:</p> <ul style="list-style-type: none">• 19 were new ICPs created for existing unmetered load which did not have an ICP and were backdated in agreement with the trader, and• one ICP underwent a metering upgrade but was later required to be decommissioned and have a new ICP created.

Late update type	Reasons for late update
Pricing	<p>11 ICPs which did not have pricing information entered prior to being initially electrically connected. All late updates were checked:</p> <ul style="list-style-type: none"> one was a new ICP created for existing unmetered load which did not have an ICP and were backdated in agreement with the trader, four were delayed by late receipt of WCN paperwork from the contractor, two were delayed by late retailer acceptance, and four were corrections processed once correct information was obtained.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.4</p> <p>With: 7(2) of Schedule 11.1</p> <p>From: 01-May-19</p> <p>To: 19-Jun-20</p>	<p>Registry not updated prior to commencement of trading for 102 ICPs (2.1%).</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>Late requests and information from external parties including traders and contractors are causing the delays, therefore I have rated the controls as moderate.</p> <p>The audit risk rating is low. The overall level of compliance is high, and the number of ICPs affected will only have a minor impact on settlement.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Cases where backdating events is necessary are unfortunate, but Powerco will continue to work with traders to ensure the registry is correct when new information becomes available.		On-going	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Powerco will continue to meet with its contractors to ensure all parties have the understanding and support to meet its timeliness requirements. Statutory timeframes form part of the training along with ongoing communications Powerco makes available for contractors and their staff. Regular reporting provides Powerco with visibility of timeframes and any issues are raised with contractors as required.		On-going	

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 process for populating initial electrical connection dates was examined.

The AC020 report for 19/06/19 to 19/06/20 was examined to determine the timeliness of initial electrical connection dates. A sample of late updates were checked.

Audit commentary

Initial electrical connection date process

Powerco does not physically carry out electrical connection on their network. Powerco approved contractors complete all electrical connection on behalf of traders.

Powerco's contractors provide a works completion notice (WCN) through CIW. Receipt of the WCN triggers a manual process to update the initial electrical connection date based on the information provided.

If Powerco's contractor is also acting for the MEP they will complete the date that the network cable was connected (mandatory), and the date that the customer connection was livened (optional) in the WCN. The date that the customer connection was livened will be applied as the initial electrical connection date.

If Powerco's contractor is not also acting for the MEP, they will only provide the date that the network cable was connected (mandatory) in the WCN. If the MEP's contractor is not present at the same time, the Powerco contractor will ensure that electricity cannot flow into the installation and initial electrical connection will be completed by the trader or MEP's contractor. In these cases, Powerco does not receive confirmation of the initial electrical connection date directly from the trader or MEP's contractor. Powerco has investigated whether connection information could be provided by the retailers, but found some retailers were reluctant to provide this paperwork. Powerco's analysis showed a strong correlation between the earliest active dates recorded by retailers on the registry and the confirmed initial electrical connection dates where their approved contractors had connected the meters. It was decided to rely on the active dates where other information was not available and monitor and investigate any discrepancies.

A daily report is reviewed to identify:

- **IECDs to populate:** ICPs with an active status date or meter certification date in the past year but no initial electrical connection date populated are identified and investigated.
- **IECDs to verify:** ICPs with a difference between the active date, meter certification date and livening date which was created in the previous day are reviewed and queried with the retailer and/or MEP as required to confirm the correct date. Issues from previous days which are under investigation are retained in the report so that they can be followed up.

In other distributor audits where either the distributor carries out the electrical connection or the approved contractor's provides the date of the initial electrical connection directly to the distributor, I have found instances where the BTS supply is not recorded on the registry and the permanent supply is the first meter to be recorded. As Powerco receives the initial electrical connection date from the

trader, effective validation cannot occur between the trader's first active date and the initial electrical connection date, and unrecorded BTS supplies may not be identified.

Late initial electrical connection date updates

The AC020 report recorded 4,275 initial electrical connection dates which were populated more than ten business days after initial electrical connection.

- 4,237 of these had their initial electrical connection date populated on 16/04/20 or 17/04/20 as part of data cleansing to populate initial electrical connection dates.
- 38 appear to be isolated late updates made between four and 1,105 business days after the event date. I checked the 15 latest updates (made between 104 and 1,105 business days after the event date) and found 13 were corrections to populate missing initial electrical connection dates identified through Powerco's validation process, and two related to new ICPs created for existing unmetered load which did not have an ICP, and were backdated in agreement with the trader.

The AC020 report identified 153 ICPs commissioned after 29/08/13 with no initial electrical connection date populated.

- 39 were timing differences, and initial electrical connection dates were correctly populated prior to the audit.
- 40 ICPs had very backdated status updates to active and were not detected through the process to identify missing initial electrical connection dates which only considered ICPs where the status event date occurred within the past year. To improve compliance, Powerco's daily exception reporting has now been updated to identify any ICPs without an initial electrical connection date where an update to active status has occurred in the past year, instead of only considering ICPs where the active status event date is within the past year. The affected ICPs have now had their initial electrical connection dates updated.
- 74 ICPs are believed to be connected but were not detected through the missing initial electrical connection date process because they were either made active before the process was implemented or had a backdated status update to active. Powerco intends to check the ICPs to confirm the correct initial electrical connection date and complete updates.

The late 4,275 late updates recorded on the AC020 report and the 40 late updates processed between the AC020 report being run and audit being completed are recorded as non-compliance below. The 74 ICPs which are believed to be connected but have missing initial electrical connection dates are recorded as non-compliance in **section 4.6**.

All ICPs checked had the correct initial electrical connection date, or the date agreed with the trader for new ICPs created for existing unmetered load.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 3.5</p> <p>With: 7(2A) of Schedule 11.1</p> <p>From: 19-Jun-19</p> <p>To: 19-Jun-20</p>	<p>Late population of initial electrical connection date for 4,315 ICPs.</p> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: Twice</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>

Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls are strong, with initial electrical connection dates based on the best information available and daily monitoring and resolution of missing and potentially incorrect dates. Most of the late updates were corrections to historic data identified through Powerco's validation processes.</p> <p>The audit risk rating is low because there is no direct impact on submission. Retailers may use this information to check their active dates.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Powerco has updated its reporting to include backdated ICPs to ensure all new connections have their IECD updated and verified. Historic exceptions are being reviewed and updated where appropriate.		In place	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As discussed in 3.4, Powerco will continue to work with its contractors to maintain and improve timeframes for providing information about the initial electrical connection of ICPs.		On-going	

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 new connection process was examined in **section 3.2**. The registry list for 19/06/20 and event detail report for 01/05/19 to 19/06/20 were examined to determine compliance.

No new shared unmetered load was created during the audit period.

Audit commentary

As described in **section 3.2**, workflows within CIW create an email to the trader requesting acceptance of responsibility for the new ICP, unless it meets the requirements of a blanket acceptance arrangement. Once a response is received, there is a manual process to review the response, create the ICP, and move it to "ready" status. All ICPs at the "ready" status in the list file have a nominated trader recorded.

Powerco does not electrically connect ICPs. All these activities are performed at the request of traders by contractors authorised by both parties.

As discussed in **section 3.4**, 21 ICPs did not have a trader recorded on the registry on the date they were electrically connected. I checked these ICPs along with a further 14 to confirm whether acceptance was received from the trader prior to initial electrical connection. For 34 ICPs trader acceptance was obtained prior to initial electrical connection, or the initial electrical connection date was backdated at the request of the trader confirming that they accepted responsibility for that date. ICP 1000585445PC6F2 underwent a metering upgrade but was later required to be decommissioned and have a new ICP created. Trader acceptance was not provided prior to the initial electrical connection date.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.6 With: 11.17 From: 22-Jul-19 To: 20-Aug-19	Trader acceptance was not confirmed for ICP1000585445PC6F2 prior to initial electrical connection. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The process to record proposed traders and obtain trader approval has strong controls. The delay was caused by an upgrade work order being changed to a decommission and new ICP creation following the work being completed. The impact is low because the overall level of compliance is high. Only one genuine exception was identified, and the proposed trader nomination was 21 business days late.		
Actions taken to resolve the issue		Completion date	Remedial action status
Powerco has controls in place and resolved the non-compliance with the trader as soon as it was identified.		Complete	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Powerco will continue to communicate its processes and requirements to contractors as well as traders to ensure new connections are compliant.		On-going	

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 new connection process was examined in **section 3.2**.

A diverse characteristics sample of 35 new connection applications of the 5,646 created since 01/05/2019 were checked to determine whether ICPs were connected at the request of the trader.

The registry list as at 19/06/20 was reviewed to confirm that all active ICPs had a trader recorded.

Audit commentary

The new connections process is designed to include a “retailer responsibility” step. The registry list showed that all active ICPs had a trader recorded on the registry.

As discussed in **section 3.4**, 21 ICPs did not have a trader recorded on the registry on the date they were electrically connected. I checked these ICPs along with a further 14 to confirm whether acceptance was received from the trader prior to initial electrical connection. For 34 ICPs trader acceptance was obtained prior to initial electrical connection, or the initial electrical connection date was backdated at the request of the trader confirming that they accepted responsibility for that date. ICP 1000585445PC6F2 underwent a metering upgrade but was later required to be decommissioned and have a new ICP created. Trader acceptance was not provided prior to the initial electrical connection date.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.7 With: 10.31 From: 22-Jul-19 To: 20-Aug-19	Trader acceptance was not confirmed for ICP1000585445PC6F2 prior to initial electrical connection. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The process to record proposed traders has strong controls. The delay was caused by an upgrade work order being changed to a decommission and new ICP creation following the work being completed. The impact is low because the overall level of compliance is high. Only one genuine exception was identified, and the proposed trader nomination was 21 business days late.		
Actions taken to resolve the issue		Completion date	Remedial action status
As above in 3.6, Powerco has controls in place and resolved the non-compliance with the trader as soon as it was identified.		Complete	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Powerco will continue to communicate its processes and requirements to contractors as well as traders to ensure new connections are compliant.	Ongoing	

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 was examined in **section 3.2**. The registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were examined to determine compliance.

Audit commentary

An ICP will not be electrically connected without the agreement from the trader, who in turn has agreement with an MEP for the ICP.

Any ICPs that are temporarily electrically connected follow the same process as all other new connections. No temporarily connected ICPs were identified.

Audit outcome

Compliant

3.9. Connection of NSP that is not point of connection to grid (Clause 10.30)

Code reference

Clause 10.30

Code related audit information

A distributor must not connect an NSP on its network that is not a point of connection to the grid unless requested to do so by the reconciliation participant responsible for ensuring there is a metering installation for the point of connection.

The distributor must, within 5 business days of connecting the NSP that is not a point of connection to the grid, advise the reconciliation manager of the following in the prescribed form:

- *the NSP that has been connected*

- *the date of the connection*
- *the participant identifier of the MEP for each metering installation for the NSP*
- *the certification expiry date of each metering installation for the NSP.*

Audit observation

The NSP table was reviewed.

Audit commentary

No new NSPs were created by Powerco during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 10.30(A)

Code related audit information

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

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

Audit observation

The NSP table was reviewed.

Audit commentary

No new NSPs were created by Powerco during the audit period.

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:

xxxxxxxxxxccc where:

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

Audit observation

The process for the creation of ICPs was examined. A diverse sample of 35 new connections were checked to confirm that ICP numbers were valid.

Audit commentary

All ICPs are created in CWMS in the appropriate format, with a check sum. The sample checked confirmed compliance.

Audit outcome

Compliant

3.12. Loss category (Clause 6 Schedule 11.1)

Code reference

Clause 6 Schedule 11.1

Code related audit information

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

Audit observation

The process of allocation of the loss category was examined. The list file as at 19/06/20 was examined to confirm all active ICPs have a single loss category code.

A diverse sample of 35 new connections were checked to confirm that loss factors were correctly assigned.

Audit commentary

Each active ICP has a single loss category, which clearly identifies the relevant loss factor.

Loss factors are determined based on region and pricing code information, which is confirmed as part of the ICP creation process. The sample checked confirmed compliance.

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 ICP creation process was reviewed. The registry list for 19/06/20, event detail report for 01/05/19 to 19/06/20, and AC020 report for 19/06/19 to 19/06/20 were examined to determine compliance.

Audit commentary

ICPs are only created at “new” status if a network extension is required, or for new unmetered load which is not yet ready to be connected. Other ICPs are created at “ready” once the retailer has accepted responsibility for the ICP.

23 ICPs are currently at “new” status and no ICPs have been at this status for more than 24 months. I checked a sample of five ICPs which moved to “new” status during the audit period and remained at that status. Four require new network equipment to be installed before the connection can be completed, and one is a new DUMI ICP which is being created as part of a data cleansing process and is not yet ready to be connected.

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 process to monitor ICPs at “new” and “ready” status was reviewed. The registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were examined to determine compliance.

Audit commentary

ICPs which have been at “new” or “ready” status for more than 18 months are reviewed and followed up with the trader as part of the registry validation process described in **section 2.1**.

Examination of the registry list found no ICPs have been at “new” status for more than 24 months. Three ICPs had been at “ready” status for more than 24 months and were followed up with the trader between November 2019 and June 2020. One has since become active.

Status	Number of ICPs at status as at 19/06/20	Number of ICPs at status for more than 12 months	Number of ICPs at status for more than 24 months
New (999,0)	23	8	-
Ready (0,0)	146	13	3

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 EMI wholesale data set as at 18/05/20 and registry list as at 19/06/20 were reviewed to identify any generation stations with capacity of 10 MW or more and determine compliance.

Audit commentary

Seven generation stations with capacity of 10 MW or more were identified in the EMI wholesale data and/or registry list report. All have individual loss factors.

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

Sub-clause (4) states that no participant may electrically connect a point of connection without the permission of the Reconciliation Participant. The electrical connection of streetlight circuits which are a point of connection was examined.

Audit commentary

Powerco are aware of their obligation to ensure that the trader has provided approval before streetlights are connected.

Where a new ICP is created, Powerco's new connection process described in **section 3.2** applies. Connection of new streetlight circuits for existing ICPs is requested through Powerco's CIW system by the customer or their agent. Powerco provides approval for the lights to be connected, and connection is completed by the contractor. The trader receives notifications through CIW in the form of load group changes, and the contractor advises their customer when the connection is complete. Because the connection process is managed by the customer's contractor, Powerco does not always have visibility of the connection date.

Currently, reliance is placed on logging and acceptance of the work in CIW by the customer or their agent, rather than explicitly gaining the trader's acceptance for each new streetlight circuit connected without a new ICP being created. The relationship between the customer and trader is relied upon to confirm that responsibility for new streetlights is accepted. No instances of circuits being livened without approval were identified.

Powerco have been consulting with traders on improvements to their new connection process for unmetered streetlights. Powerco have created a new approval form which will be trialled for Tauranga

City Council and Western Bay of Plenty by November 2020; and depending on the outcome of the trial will be rolled out to other areas in late 2020 to early 2021.

The approval form includes the following steps, and will be initiated and completed as part of the CIW process:

1. the developer provides the details of the streetlights to be installed,
2. the district or city council approves the streetlights to be installed,
3. the retailer confirms that they accept the unmetered load, and
4. instruction is issued to the district or city council to update RAMM.

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 three 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 eight 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 three business days after the registry manager has advised the distributor that the ICP is ready to be decommissioned, or three business days after the distributor has decommissioned the ICP.

Audit observation

The management of registry updates and NSP changes was reviewed. The AC020 audit compliance report for AC020 report for 19/06/19 to 19/06/20 was reviewed to determine compliance.

A diverse sample of 61 backdated events were reviewed to determine the reasons for the late updates, including address, network, pricing, and status events.

Audit commentary

When information that is held by the registry changes, the distributor responsible for that ICP must provide notice to the registry of that change within three business days of that change taking effect. Compliance for initial population of address, network, pricing, and status information is assessed in **sections 3.4 and 3.5**.

The process for updating ICPs has not changed during the audit period. Registry population is automated from CWMS and the file includes all relevant fields. The registry synchronisation process imports data from the registry into CWMS at 7am each day, and exports data from CWMS to the registry at 7pm each day. Information sent to and received from the registry is monitored, and automated emails are generated and reviewed each morning to confirm updates are successful.

Address events

The AC020 report recorded 107 ICPs where addresses were updated more than three business days after the event date. 97.98% of updates were on time, and the average business days between the event date and update date was 25.95.

Late updates	Within 10 bus days	Within 20 bus days	Within 60 bus days	Within 350 bus days	Within 1,500 bus days	Within 3,000 bus days	Within 3,210 bus days
107	17	23	27	29	90	106	107

The five latest updates and five updates between 25 and 350 business days late were examined. Five were backdated updates to remove customer name information from the registry for privacy reasons at the request of the Authority, and five were backdated updates made as part of the decommissioning process. All the updates checked contained the correct event attributes.

Network events – distributed generation

The AC020 report recorded 690 ICPs where distributed generation details were updated more than three business days after the event date. 13.86% of updates were on time, and the average business days between the event date and update date was 22.62.

Late updates	Within 10 bus days	Within 20 bus days	Within 30 bus days	Within 60 bus days	Within 150 bus days	Within 300 bus days	Within 500 bus days	Within 698 bus days
690	358	519	561	627	675	684	687	690

The five latest updates and five updates between 25 and 150 business days late were examined. All were delayed by late receipt of paperwork confirming that the ICP was generating and the generation attributes. All the updates checked contained the correct event attributes.

Network events – other

The AC020 report recorded 5,407 ICPs where network fields other than distributed generation details were updated more than three business days after the event date. 51.88% of updates were on time, and the average business days between the event date and update date was 53.01.

Late updates	Within 10 bus days	Within 20 bus days	Within 30 bus days	Within 60 bus days	Within 150 bus days	Within 300 bus days	Within 500 bus days	Within 5,407 bus days
5,407	761	1,081	1,373	1,995	3,676	5,336	5,390	5,407

I checked a sample of the ten latest network updates and a diverse sample of a further 15 late updates. All were updates as part of the decommissioning process, or were corrections to initial electrical connection dates, NSPs, or unmetered load details.

All the updates checked were applied from the correct event date and with the correct event attributes, apart from ICP 1000517552PCC15 which initially had an incorrect NSP assigned and was identified and corrected prior to the audit, and ICP 0000969270TU2B2 which initially had an incorrect NSP assigned and was identified and corrected during the audit. The incorrect NSP for ICP 0000969270TU2B2 is recorded as non-compliance in **sections 4.2** and **4.6**.

NSP changes

When NSP changes occur, they can be for an individual ICP or a group of ICPs, or all ICPs connected to a transformer, feeder, or NSP.

The Network Operations Centre manages physical NSP changes. If a change will be for more than 14 days, they will advise the Network Information Team and create a network change notice. The network change notice can be provided as a form, or as a service request if a new hierarchy needs to be established as part of the change, such as adding a new substation.

The Network Information Team manage information for transformers changing between feeders and update the GIS, all other information is managed by the Data Team. Wherever possible, Powerco updates the system on the date of the change, either manually or using scripts, to ensure that the correct date is applied for the network event. In **section 7.2**, I found that where an NSP update was

generated using a script for 32 ICPs with shared unmetered load, the shared unmetered ICP was omitted from the file. This led to the shared unmetered load being temporarily removed from the registry, and the unmetered load details have now correctly been reinstated.

Recommendation	Description	Audited party comment	Remedial action
NSP changes for ICPs with shared unmetered load	Ensure that shared unmetered load details are retained when processing NSP changes for ICPs with shared unmetered load.	Powerco will incorporate additional validation checks relating to shared unmetered load into its current NSP change process.	Identified

The AC020 report recorded 15 ICPs where NSP changes were updated more than three business days after the event date. Nine were not genuine changes to NSP details, the previous record (which had updated the NSP) had been replaced making it appear that the NSP was different to the previous active record.

I checked the six genuine late updates, and found they were corrections where an incorrect transformer had been assigned or part of the NPL0331 decommissioning.

Pricing events

Powerco's approach to pricing changes and corrections remains unchanged. Pricing updates are usually only backdated at the retailer's request. Some retailers prefer changes to take effect from the first day of the month because it can be difficult for them to manage more than one network price code per month in their systems.

The AC020 report recorded 2,170 ICPs where pricing details were updated more than three business days after the event date.

Late updates	Within 10 bus days	Within 20 bus days	Within 30 bus days	Within 90 bus days	Within 350 bus days	Within 633 bus days
2,170	1,645	2,072	2,135	2,158	2,168	2,170

The five latest updates and six updates between 30 and 100 business days late were examined.

- Four were delayed while Powerco confirmed the ICP attributes required to determine the correct pricing information.
- Three changes were updated at the request of the trader.
- Three had backdated address and/or GXP corrections, which were identified through Powerco's validation processes and resulted in a change of pricing zone.
- One was a correction to the format of the pricing information identified through validation.

Two updates were initially made with an incorrect date and/or attributes based on the information provided at the time of the update and were later corrected through Powerco's validation processes. All the other updates checked contained the correct attributes.

Status events

The AC020 report recorded that 84.33% of updates to decommissioned status were on time, and the average business days between the event date and update date was 13.32.

The AC020 report recorded 139 ICPs where the status was updated to decommissioned more than three business days after the event date, and more than three business days after the trader's update to ready for decommissioning status.

The five latest updates and five updates between 30 and 400 business days late were examined. Nine late updates were caused by late receipt of decommissioning paperwork, or late notice of ICP

amalgamations. One late update was caused by an incorrect job type being selected in CIW (“alteration” instead of “decommission”).

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.1</p> <p>With: 8 Schedule 11.1</p> <p>From: 01-Jun-19</p> <p>To: 19-Jun-20</p>	<p>107 late address updates.</p> <p>690 late distributed generation updates.</p> <p>5,407 late network updates.</p> <p>Six late NSP changes.</p> <p>2,170 late pricing updates.</p> <p>139 late updates to decommissioned status.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>I have rated the controls as moderate as the controls in place will mitigate the risk most of the time, and many of the late updates related to corrections.</p> <p>There is a potential minor impact on settlement, hence the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Powerco is committed to correcting data inaccuracies to the appropriate effective date as soon as they are identified. Improvements to processes and reporting will lead to less errors to be corrected and the timeliness of any updates.</p>		On-going	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>As discussed in 3.4, Powerco will continue to work with its contractors to maintain and improve timeframes for providing information. Regular reporting provides Powerco with visibility of timeframes and any issues are raised with contractors as required.</p> <p>Powerco has improved reporting to identify errors quickly for correction and identify areas where processes and/or controls should be reviewed.</p>		On-going	

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 process to determine the correct NSP was examined. The registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were examined to determine compliance. I reviewed Powerco's weekly NSP mapping checks.

Audit commentary

NPL0331 decommissioning

NPL0331 was decommissioned on 18/12/2019. All active ICPs were transferred to CST0331 by 11/12/2019, and only decommissioned ICPs remain on NPL0331.

NSP assignment

Powerco confirms the NSP as part of the new connection process. Maps from the ICP to the transformer are provided by the contractor, and this information is used to confirm the feeder and NSP.

Relationships between transformers, feeders, and NSPs are hard coded into CWMS. Transformer information is validated first by the CIW team (who confirm that the address location and transformer are within 500 metres), then by the connections team (who confirm that the address and transformer, feeder, and NSP information is consistent). CWMS is linked to the GIS system so the likelihood of incorrect NSP assignment is greatly reduced.

NSP accuracy

Powerco completes a weekly check of NSP mapping, using a report which shows the count of NSPs and balancing areas per street. Network connectivity data is used to prioritise streets which have NSPs assigned which are not physically close or do not have an open connection to each other and are more likely to be incorrect. Any NSPs or addresses which are found to be incorrect are updated.

Review of the AC020 report identified 69 streets where 10% or fewer ICPs on the street have a different NSP to the other ICPs, where the number of ICPs with a different NSP is less than three. 88 ICPs were affected, and for 68 the balancing area for both NSPs was the same. I checked the 20 ICPs which were connected to a NSP with a different balancing area.

- 14 ICPs had the correct address and balancing area applied. These ICPs were located near boundary points between transformers connected to different NSPs.
- Nine ICPs had incorrect address towns or regions recorded, which made it appear that they may be connected to an incorrect NSP. The town and region information was updated during the audit.
- Three ICPs had incorrect NSPs recorded and were corrected during the audit. The affected ICPs were created on the registry on 01/01/2000 and their transformers were parented to an incorrect NSP before additional controls were added to ensure that transformers were correctly linked to NSPs. The NSPs were located in different balancing areas.

ICP 0000969270TU2B2 initially had an incorrect NSP assigned and was identified and corrected during the audit. The transformer the ICP was connected to was inadvertently changed from MTM0331 to TMI0331 effective 25/6/2018, and the updated NSP was sent to the registry as part of the network record when distributed generation details were added. The ICP later genuinely moved from MTM0331 to TMI0331 effective 5/03/2019, but there was a delay in identifying this because the transformer was not linked to the correct feeder. The period from 8/05/18-4/03/19 has been corrected as being connected to MTM0331. MTM0331 to TMI0331 are connected to the BA1EASTPOCOG balancing area, and the error had no impact on submission information.

Powerco completed an investigation which found that the other 58 ICPs connected to the transformer were affected, and processed corrections. Reports have been developed to check the transformer to NSP hierarchy to ensure that transformer, feeder and NSP relationships are correct.

All exceptions identified during the 2019 audit were re-checked and found to be cleared.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: 7(1),(4) and (5) Schedule 11.1 From: 01-Jun-19 To: 19-Jun-20	62 ICPs had incorrect NSPs assigned and were corrected during the audit. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	I have rated the controls as strong. 59 of the 62 ICPs with incorrect NSPs were caused by an error in one transformer's NSP mapping and have been corrected. The new connection process prevents new ICPs from being mapped to an incorrect NSP, and it appears that many of the streets identified during analysis genuinely have ICPs connected to more than one NSP. Monitoring controls are in place to identify and update incorrect NSPs, and were improved during the audit. I have rated the audit risk rating as low due to the small number of potentially mis mapped ICPs identified, and for 59 of the 62 ICPs both NSPs were within the same balancing area. If NSP assignment is found to be incorrect, it could have a minor impact on reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
Powerco has been monitoring exception reports to identify and correct any NSP discrepancies.		In place	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Powerco is confident in its controls to ensure new connections are assigned to the correct NSP.		In place	

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 management of customer queries was examined.

Audit commentary

Powerco directly receives very few requests for ICP identifiers, and these are provided immediately once the customer confirms their address.

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 process to determine correct and unique addresses was examined. The registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were examined to determine compliance.

Audit commentary

When a new connection is requested, ICP address information is provided in CIW by the requestor. The provided address is validated using the GIS to confirm it is legally issued and correct. Powerco may also refer to the local council's mapping system or ask the customer for further information if needed.

CWMS will not allow users to enter a duplicate address, or an address without either a street number or property name. Where street address information is unavailable, I saw evidence that Powerco will use lot numbers, pole and/or pillar numbers to aid address location.

ICP 1000587406PCBD7 was created during the audit period with a duplicate address. The duplicate was created because a decommissioned ICP's address was re-used. The address was corrected to be unique during the audit. No ICPs were created with incomplete addresses during the audit period.

Prior to the CWMS controls described above being implemented, some duplicate and incomplete ICP addresses were created. Powerco have continued to work on reducing these during the audit period, and have asked for assistance from MEPs, traders, and their meter reading contractors to confirm correct addresses. This has resulted in a reduction of 1,216 active ICPs with duplicate addresses and 361 active ICPs which previously had no street number or property name recorded this year.

	2020	2019	2018	2017	2016	Difference this year
Duplicate addresses	3,132	4,348	6,091	8,973	13,302	-1,216
Addresses without street number or property name	1,062	1,423	1,584	1,733	2,013	-361

As discussed in **sections 4.2** and **4.6**, nine ICPs had incorrect address towns or regions recorded, and were corrected during the audit.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.4</p> <p>With: 2 Schedule 11.1</p> <p>From: 19-Jun-20</p> <p>To: 13-Aug-20</p>	<p>3,132 active ICPs have duplicate addresses.</p> <p>1,062 active ICPs have addresses which do not have a street number or property name.</p> <p>Nine ICPs had incorrect address towns or regions assigned; and were corrected during the audit.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are rated as strong.</p> <ul style="list-style-type: none"> There are controls in place to prevent new duplicate or incomplete addresses being created. One duplicate address was created during the audit period, due to a human error when a decommissioned ICP's address was reused. This occurs rarely. Address information is validated. <p>The audit risk rating is low as the volume of ICPs that are not readily locatable and duplicated is reducing. Incorrect addresses can have a direct impact on the retailer's ability to read, disconnect and reconnect these sites.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>As mentioned in 2.1 and 2.2 Powerco has improved its reporting so errors are found and therefore resolved more quickly.</p> <p>Powerco has scheduled dedicated resources to resolve historic data issues, steadily reducing errors in areas such as address duplicates.</p>		On-going	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Powerco will continue to monitor its reporting and make corrections when required. Powerco is also investigating alternative methods of verifying addresses as residual exceptions become more difficult to resolve.	On-going	

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

Code reference

Clause 3 Schedule 11.1

Code related audit information

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

Audit observation

This was examined as part of the new connection process and proof of process was checked as part of the sample of new connections examined.

Information on isolation in Powerco's Electricity Network Connection Standard was reviewed.

Audit commentary

Powerco's "Electricity Network Connection Standard" provides clear instruction in relation to this clause.

Powerco provides training on systems and network requirements for all new contractors, and annual roadshows and quarterly catch ups with contractors which include the connection and isolation requirements.

All new connection applications require a "concept design" which is reviewed by the customer works team. The customer works team review includes checking where the ICP will be isolated from, and additional information is requested to confirm the isolation point if necessary.

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 management of registry information was reviewed. The registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were examined to determine compliance. A typical sample of data discrepancies were checked.

Registry data validation processes are discussed in **section 2.1**.

Audit commentary

Review of the registry list identified some data discrepancies. I found most of the discrepancies were resolved through Powerco's data validation processes prior to the audit. Non-compliance is recorded where data remained incorrect by the time the audit was completed; or was not identified and corrected through Powerco's processes.

NSP information

Assignment of NSPs was reviewed in **section 4.2**.

All LE ICPs are recorded with dedicated NSP set to yes. Five active ICPs connected to NSPs within balancing areas containing more than one NSP have dedicated NSP set to yes. All the ICPs are generators and Powerco confirmed that the dedicated NSP status is correct because it is impractical to supply the ICPs from another NSP.

62 ICPs had incorrect NSPs recorded and were corrected during the audit.

- Three ICPs were created on the registry on 01/01/2000 and their transformers were parented to an incorrect NSP before additional controls were added to ensure that transformers were correctly linked to NSPs. The NSPs were located in different balancing areas.
- 59 ICPs were connected to a transformer which was inadvertently changed from MTM0331 to TMI0331 effective 25/6/2018, and the error was corrected during the audit. MTM0331 to TMI0331 are connected to the BA1EASTPOCOG balancing area, and the error had no impact on submission information. Reports have been developed to check the transformer to NSP hierarchy to ensure that transformer, feeder and NSP relationships are correct.

Installation type and generation details

Powerco has a dedicated administrator to manage distributed generation.

Powerco's regular distributed generation installers enter applications directly into CIW. An excel template which includes full generation details and confirms compliance with NZS4777 is required to be completed and pasted into the CIW application. Less frequent installers complete paper-based applications for distributed generation, which are entered into CIW by Powerco's administrator as they are received.

Powerco approves or declines the application, and the customer or their agent is advised. A proposed livening date is expected to be provided within ten business days of approval, and a COC is expected to be provided within three business days of the proposed livening date. Contractors can adjust the expected dates as necessary within CIW. CIW is used to track the application and ensure that a COC and WCN are received, and any late information is followed up by the administrator. Where paper based WCNs are received, Powerco's administrator manually creates the WCN in CIW.

Powerco's administrator uses reporting from CIW to identify overdue jobs for follow up.

Powerco's weekly data validation process described in **section 2.1** identifies ICPs which are active with EG meter registers with settlement indicator = Y without installation type B. The report contains a field to show whether I flow data is being submitted by the trader on the EIEP1. The ICPs are queried with the retailer to confirm whether generation is present. If generation is present, Powerco confirms the generation details and updates the registry. If no generation is present, Powerco asks the retailer to query whether the register should have settlement indicator N with the MEP.

The list file recorded 4,853 ICPs with distributed generation. The table below tracks the growth year on year:

Year	ICPs with distributed generation
2015	975
2016	1,554
2017	2,404
2018	3,345
2019	4,009
2020	4,853

Generation information completeness

All ICPs with a non-zero generation capacity had a fuel type and an installation type of "B" or "G" recorded.

The AC020 report recorded 35 ICPs where the trader's profile indicated generation was present but no distributed generation details were recorded by Powerco.

- One was a timing difference and distributed generation details were populated on the registry prior to the audit
- 11 ICPs had generation removed. The ICPs have lease to own solar, which must be removed or relocated if the property is sold and the new owner does not take responsibility.
- 21 ICPs had an EG register with a settlement indicator = N, which were excluded from Powerco's exception reports. No application for distributed generation had been received, and no distributed generation records were listed in the high-risk database. It appears likely that there is no generation, and the trader has recorded an EG1 or PV1 profile because a generation register is present.

Generation information accuracy

Powerco's fuel type is determined from the generation application and installation information. For single fuel types the corresponding fuel type is applied. Where there are multiple sources, such as solar and battery the "other" generation fuel type is usually applied.

I checked the accuracy of fuel types by comparing them to the trader's profile. I found two ICPs with a solar fuel type with a profile indicating not solar, and 14 ICPs with a non solar fuel type with a profile indicating solar. In all cases, Powerco's fuel type was confirmed to be correct.

I checked the accuracy of generation details recorded on the registry for a sample of ten ICPs and confirmed they were correct.

Price and loss categories

Analysis of the list file found all active ICPs had a price category and loss category assigned.

Unmetered load

Part 11 states the distributors must provide unmetered load type and capacity of the unmetered load to the registry "if known". If distributor unmetered load is populated, it is required to be accurate. Powerco is considering how to validate their unmetered load details against the trader unmetered details as part of their review of registry validation processes.

Trader unmetered load is recorded without distributor unmetered load

Review of the registry list identified 470 ICPs where trader unmetered load is recorded, but there are no distributor unmetered load details. 115 of the ICPs were active, and 355 were inactive (including 295 ICPs which were ready for decommissioning).

28 of the active ICPs have DUML load indicated by the trader. During the audit, Powerco updated the distributor unmetered load details to "DUML".

Three ICPs were created during the audit period with trader unmetered load but no distributor unmetered load. All had unmetered load connected which was either missed or entered into the wrong field (distributor installation details instead of distributor unmetered load details) when the ICP was created. All were corrected during the audit.

Distributor unmetered load is recorded without trader unmetered load

Two ICPs invalidly had "unmetered load" recorded in the distributor unmetered load details and were corrected during the audit. The ICPs have always been metered and the invalid information appears to have been transferred from Powerco's old system (Gentrack) to CWMS.

Distributor unmetered load details differ from the trader unmetered load details

1,747 active ICPs have a value recorded in the distributor unmetered load details field.

For the 1,098 ICPs where this information was in the format recommended in the Authority's Guidelines on Unmetered Load Management Version 2.1, and a trader unmetered load value was populated, I compared the figures. For 1,081 ICPs (98.5%) Powerco's value matched the trader's value within ± 1 kWh. The other 17 ICPs were checked:

Finding	Qty	Commentary
Correct	3	<p>For three ICPs Powerco's unmetered load details were correct.</p> <ul style="list-style-type: none"> The trader has updated their unmetered load details for 1000587024PCA06. A small rounding difference exists for 0089352001PC37D (the trader has recorded 8.82 kW and Powerco has recorded 8815 W). Powerco intends to follow up ICP 1000584656PCB38 with the trader, as Powerco's values are provided by the electrician and they believe that the trader records are incorrect.

Incorrect	9	Powerco had incorrect distributor unmetered load details recorded for three ICPs, which were corrected during the audit. Traders had updated the unmetered load details after the initial installation for six ICPs. Because Powerco does not know the correct unmetered load details for these ICPs, the distributor unmetered load has been cleared on the registry.
Inconclusive	5	Five ICPs are NZTA unmetered load, and NZTA and Powerco are working together to confirm the correct unmetered load value. Once the review is complete, the registry will be updated. If the ICPs are DUML, this should be included in the distributor field on the registry.

I followed up exceptions identified in the 2019 audit which did not appear in the current exception list, and found that the trader daily unmetered kWh, trader unmetered load details and distributor unmetered load details were now consistent, or the ICP had been made inactive.

DUML and shared unmetered load

Powerco is working to resolve some issues with DUML databases and assist with LED upgrades and creation of new ICPs where necessary. Powerco creates standard and shared unmetered load, when requested to do so.

DUML audits for streetlight databases on Powerco's network were reviewed to determine whether there were any issues relating to distributor unmetered load records:

Database	Comment
Carterton District Council	No issues noted.
Hauraki District Council	No issues noted.
Manawatu District Council	The 2020 audit is in progress. No issues were noted in the 2019 audit.
Masterton District Council	No issues noted.
Matamata Piako District Council	124 NZTA rural lights are not reconciled, and do not appear to be reconciled elsewhere. Powerco confirmed that the correct ICP is 1000510806PC47F, as recorded in the database.
New Plymouth District Council	The 2020 audit is in progress. 76 private lights which were not reconciled were identified during the 2019 DUML audit. Powerco checked the lights and found 59 were located at the port, railways, McKee gas production station, New Plymouth District Council sites or local parks, camping grounds and gardens. One was associated with a bowling club and the remainder appear to be associated with housing including community housing. Powerco believes that some of the lights may be metered, especially at the port, and plans to investigate this.
NZTA Wairarapa	No issues noted.
Palmerston North Airport	No issues noted.
Palmerston North City Council	Private lights are recorded in the database but excluded from submission. Alf Downs provided a list of 129 private lights totalling 10,623 W.

Database	Comment
	Shared unmetered load appears to have been created for at least 26 of the lights. Shared or standard unmetered load is recorded on the registry on the streets for a further 67 lights, but I was unable to confirm whether the load related to that particular light and/or the wattage differed from the value recorded in RAMM. No unmetered load was recorded on the street for the other 36 lights, which is recorded as non-compliance below and in section 3.1
South Taranaki District Council	No issues noted.
South Waikato District Council	No issues noted.
South Wairarapa District Council	No issues noted.
Stratford District Council	No issues noted.
Tararua District Council	The 2020 audit is in progress. No issues were noted in the 2019 audit.
Tauranga City Council	No issues noted.
Thames Coromandel District Council	No issues noted.
WBOP District Council	No issues noted.

Shared unmetered load details were checked in **sections 7.1** and **7.2**.

Initial Electrical Connection Dates

As discussed in **section 3.5**, initial electrical connection dates are based on the best information available and missing and potentially incorrect dates are monitored and corrected daily.

Initial electrical connection date discrepancies

The AC020 report recorded 24 ICPs where the initial electrical connection date differed from the meter certification date and/or the trader's earliest active status date. I checked all 24 exceptions and found one instance where Powerco's date was incorrect. Powerco had updated the initial electrical connection date to match the trader's earliest active date, but later received a works completion notice confirming a later date. Due to an administrative error, the date was not updated, and the issue was not identified because a value was already populated. The initial electrical connection date was corrected during the audit.

The AC020 report recorded 30 ICPs at "inactive new connection in progress" status and one ICP at "ready" status with initial electrical connection dates populated.

- 24 were timing differences, and the status was updated to active after the report was run.
- Three initial electrical connection dates were incorrectly populated. One related to an unmetered streetlight ICP, and the initial electrical connection date was entered as the date the retailer was anticipated to move the streetlights to the new ICP, but the actual transfer occurred later. The other two were partially completed new connections, which had the initial electrical connection date entered early. All have since been updated on the registry to reflect the correct status and initial electrical connection date.

- Powerco is investigating whether three ICPs have been initially electrically connected. ICPs 1000573227PCFDD and 1000573226PC398 were confirmed to be connected but the trader later reversed the active status event, and the contractor confirmed the connection date for 1000573226PC398, but the retailer has not updated the status to active. Once the investigation is complete the registry and CWMS will be updated.

Missing initial electrical connection dates

The AC020 report identified 153 ICPs commissioned after 29/08/13 with no initial electrical connection date populated. Non-compliance is recorded in **section 3.5** in relation to late status updates for 40 of these ICPs. Non-compliance is recorded in this section for the 74 ICPs which are believed to be connected, but were not detected through the missing initial electrical connection date process because they were made active before the process was implemented, or had a backdated status update to active. Powerco intends to check the ICPs to confirm the correct initial electrical connection date and update CWMS and the registry.

Address information

As discussed in **section 4.4**:

- nine ICPs had incorrect address towns or regions recorded and were corrected during the audit, and
- there are 3,132 active ICPs with duplicate addresses, and 1,062 active ICPs with addresses which do not have a street number or property name and Powerco is working to investigate and correct these.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 4.6</p> <p>With: 7(1) of Schedule 11.1</p>	<p>3,132 active ICPs have duplicate addresses.</p> <p>1,062 active ICPs have addresses which do not have a street number or property name.</p> <p>Nine ICPs had incorrect address towns or regions assigned; and were corrected during the audit.</p> <p>62 ICPs had incorrect NSPs assigned and were corrected during the audit.</p> <p>Four ICPs had incorrect initial electrical connection dates; and were corrected during the audit.</p> <p>74 active ICPs have missing initial electrical connection dates.</p> <p>31 ICPs with known unmetered load (28 distributed unmetered load and three standard unmetered load) did not have distributor unmetered load details recorded on the registry and were corrected during the audit.</p> <p>36 private lights in the Palmerston North City Council region do not have shared unmetered load created.</p> <p>Two ICPs invalidly had "unmetered load" recorded in the distributor unmetered load details; and were corrected during the audit.</p>

From: 19-Jun-20 To: 28-Aug-20	Powerco had incorrect distributor unmetered load details recorded for three ICPs and out of date details recorded for six ICPs, which were corrected during the audit. Potential impact: Low Actual impact: Low Audit history: Three times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as the moderate because most information is correctly recorded, and errors are usually found and corrected as part of Powerco’s validation processes. The number of discrepancies is minor and has no direct impact on reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
As mentioned in 2.1, 2.2 and 4.4 Powerco has improved its reporting so errors are found and therefore resolved more quickly. Powerco has scheduled dedicated resources to resolve historic data issues, steadily reducing errors in areas such as address duplicates.		On-going	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Powerco will continue to monitor its reporting and make corrections when required. Powerco is also investigating alternative methods of verifying addresses as residual exceptions become more difficult to resolve.		On-going	

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

Code reference

Clause 7(3) Schedule 11.1

Code related audit information

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

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

Audit observation

The management of registry information was reviewed. The registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were reviewed to determine compliance.

Audit commentary

The price category and chargeable capacity (if any) are known at the time of the ICP being created therefore these are recorded correctly in the first instance.

11 ICPs created during the audit period did not have pricing information entered within ten business days of initial electrical connection. All late updates were checked:

- one was a new ICP created for existing unmetered load which did not have an ICP and was backdated in agreement with the trader,
- four were delayed by late receipt of WCN paperwork from the contractor,
- two were delayed by late retailer acceptance, and
- four were corrections processed once correct information was obtained.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.7 With: 7(3) Schedule 11.1 From: 01-Jun-19 To: 19-Jun-20	Pricing was not provided within ten business days of initial electrical connection for 11 ICPs. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Late requests and information from external parties including traders and contractors are causing the delays, therefore I have rated the controls as moderate. The audit risk rating is low. The overall level of compliance is high, and there is no impact on settlement.		
Actions taken to resolve the issue		Completion date	Remedial action status
Powerco has worked with traders and contractors to ensure the correct information and effective dates have been sent to registry.		Complete	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Powerco will continue to communicate its processes and requirements to contractors as well as traders to ensure new connections are compliant.		Ongoing	

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 registry list as at 19/06/20 was reviewed to determine compliance.

Audit commentary

Powerco does not populate GPS coordinates on the registry.

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 management of ICPs in relation to the use of the “ready” status was examined. The registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were examined to determine compliance.

Audit commentary

ICPs are only created at “new” status if a network extension is required. ICPs not requiring a network extension are created at “ready” once the retailer has accepted responsibility for the ICP.

The price category field in Powerco’s ICP database contains a “drop down” list, which ensures each ICP can only have a single price category and it is valid for the ICP attributes.

All 146 ICPs at “ready” status had a single price category assigned and proposed trader identified.

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

Processes to manage the distributor status were reviewed. The registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were examined to determine compliance.

Audit commentary

There are 66 ICPs with distributor status.

12 are points of connection between embedded networks and the Powerco network, including the LE ICP created for the TENC TMM0111 embedded network during the audit period.

The remaining 54 are shared unmetered load parent ICPs. No new ICPs have been created for shared unmetered load during the audit period. Shared unmetered load is discussed further in **section 7**.

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 registry list for 19/06/20 and AC020 report for 19/06/19 to 19/06/20 were reviewed to identify ICPs at the “decommissioned” or “ready for decommissioning” status.

A sample of ten “decommissioned” ICPs was examined. I also examined all ICPs at “ready for decommissioning” status.

Audit commentary

Examination of the list file found 2,357 ICPs are at “ready for decommissioning” status. The number of ICPs at this status continues to decrease each year:

Number of ICPs 2020	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017	Number of ICPs 2016
2,357	2,709	2,718	3,211	4,724

I checked the current status of each ICP moved to “ready for decommissioning” status by a trader between 01/05/19 and 19/06/20:

Current status	Percentage	Count
Decommissioned	92.5%	1,136
Ready for decommissioning	4.6%	57
Returned to active or another inactive status	2.9%	35
Total		1,228

A sample of ten ICPs which were moved to “ready for decommissioning” status in the first two months of the period examined (June and July 2018) which remain at ready for “decommissioning status” were checked:

- three decommissions are in progress, and Powerco is awaiting completion paperwork from the contractor before updating the status,
- two decommissions were completed after the registry list was run and were delayed because an incorrect job type was selected in CIW (alteration instead of decommission), or the ICP supplied on the original paperwork was incorrect, and
- five ICPs have not been decommissioned because no request for decommissioning has been received from the trader.

A sample of ten decommissioned ICPs were checked and confirmed to have the correct decommissioning date recorded, or the first available date where previous registry events prevented decommissioning on the physical decommissioning date.

Non-compliance is recorded in **section 4.1** in relation to the timeliness of updates to decommissioned status.

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 code table on the registry was examined.

Audit commentary

Powerco did not create or end date any price categories during the audit period.

Price category codes NLC, NLCT, and NLCV were end dated 31/03/17 on 31/01/17, as part of a data cleansing project to align the registry pricing data with Powerco's pricing book. The codes were end dated because they were not included in the pricing book, have no line charges and are only applied to ICPs with "distributor" status.

During this audit period, the pricing team completed a review to ensure that ICPs were assigned the correct pricing for their region. They identified that 56 distributor ICPs had NLC applied, and 54 distributor ICPs had NLCT applied, and removed the end date to return the price category to active on the pricing category table.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.12 With: 23 Schedule 11.1 From: 31-Mar-17 To: 31-Mar-20	Price category codes NLC, NLCT and NLCV were incorrectly end dated, and were corrected during the audit period. 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. The pricing categories were closed off incorrectly prior to the audit period, and the issue was identified and corrected during the audit period. The audit risk is rated as low because the price categories were only assigned to distributor status ICPs, and there are no associated line charges.		
Actions taken to resolve the issue		Completion date	Remedial action status
Powerco identified the price categories were closed off incorrectly and made the correction. The change had no impact on other participants and only administrative.		Complete	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Powerco has reviewed its price categories in registry and confirmed this as an isolated issue.		Complete	

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 on the registry was examined.

Audit commentary

Powerco has not created any new loss category codes during the 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 on the registry was examined.

Audit commentary

Powerco has not updated any loss factors during the audit period.

Audit outcome

Compliant

6. CREATION AND MAINTENANCE OF NSPS (INCLUDING DECOMMISSIONING OF NSPS AND TRANSFER OF ICPS)

6.1. Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1)

Code reference

Clause 11.8 and Clause 25 Schedule 11.1

Code related audit information

If the distributor is creating or decommissioning an NSP that is an interconnection point between 2 local networks, the distributor must give written notice to the reconciliation manager of the creation or decommissioning.

If the embedded network owner is creating or decommissioning an NSP that is an interconnection point between 2 embedded networks, the embedded network owner must give written notice to the reconciliation manager of the creation or decommissioning.

If the distributor is creating or decommissioning an NSP that is a point of connection between an embedded network and another network, the distributor must give written notice to the reconciliation manager of the creation or decommissioning.

If the distributor wishes to change the record in the registry of an ICP that is not recorded as being usually connected to an NSP in the distributor's network, so that the ICP is recorded as being usually connected to an NSP in the distributor's network (a "transfer"), the distributor must:

- *give written notice to the reconciliation manager*
- *give written notice to the Authority*
- *give written notice to each affected reconciliation participant*
- *comply with Schedule 11.2.*

Audit observation

The NSP table was examined.

Audit commentary

Powerco did not create or decommission any NSPs which were an interconnection point between two local networks, or between an embedded network and another network.

New embedded network TAC0011 was created by TENC.

Dist	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date
TENC	TMM0111	80b BURWOOD RD MATAMATA	HIN0331	POCO	TMM0111TENCE	E	08/07/19

NPL0331 was decommissioned by Powerco but was not an interconnection point between two local networks, or an embedded network and another network.

NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	End date	Number of ICPS
NPL0331	New Plymouth			BA1WESTPOCOG	G	18/12/19	-

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 table was examined.

Audit commentary

No new NSPs were created by Powerco during the audit period.

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 table was reviewed.

Audit commentary

No balancing area changes occurred during the audit period.

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 table was reviewed.

Audit commentary

Powerco has not created any new embedded networks during the audit period.

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 table was reviewed.

Audit commentary

No balancing area changes have occurred during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 27 Schedule 11.1

Code related audit information

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

Audit observation

The NSP table was reviewed.

Audit commentary

No existing ICPs became NSPs during the audit period.

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

The NSP table was reviewed.

Audit commentary

Powerco has not initiated the transfer of any ICPs during the audit period.

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 one 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

Powerco does not have responsibility for any NSP metering.

Audit commentary

Powerco does not have responsibility for any NSP metering.

Audit outcome

Compliant

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

Code reference

Clause 10.25(2)

Code related audit information

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

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

Audit observation

Powerco does not have responsibility for any NSP metering.

Audit commentary

Powerco does not have responsibility for any NSP metering and have not connected any new NSPs.

Audit outcome

Compliant

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

Code reference

Clause 29 Schedule 11.1

Code related audit information

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

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

At least one month's 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

The NSP supply point table was reviewed.

Audit commentary

Powerco have not initiated any changes of network owner.

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

Powerco does not have responsibility for any NSP metering.

Audit commentary

Powerco does not have responsibility for any NSP metering.

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

The NSP supply point table was reviewed.

Audit commentary

Powerco has not initiated the transfer of any ICPs during the audit period.

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

The NSP supply point table was reviewed.

Audit commentary

Powerco has not initiated the transfer of any ICPs during the audit period.

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 list file as at 19/06/20 was examined, and the streetlight audits of the network were assessed.

Audit commentary

There are 54 shared unmetered load parent ICPs. No new “distributor” ICPs have been created for shared unmetered load during the audit period, and shared unmetered load was not added for any new ICPs created during the audit period.

As recorded in **sections 3.1** and **4.6**, shared unmetered load needs to be created for some private streetlights, and Powerco continues to work with the affected councils to arrange this.

Recommendation	Description	Audited party comment	Remedial action
Shared unmetered load	Liaise with councils to identify shared unmetered load and create relevant ICPs. Notify traders of created shared load in accordance with clause 11.14 of part 11.	Powerco will investigate issues with lights in its network to ensure all unmetered load can be reconciled, and create new shared unmetered load ICPs where appropriate.	Identified

Audit outcome

Compliant

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

Code reference

Clause 11.14(5)

Code related audit information

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

Audit observation

The list file contained 411 active and inactive child ICPs across 54 SI ICPs. I checked the accuracy of the daily unmetered kWh.

Audit commentary

Shared unmetered load was shared equally, and in the recommended format. Ballast has been added where the light type can be confirmed.

Review of the registry list and event detail report confirmed that shared unmetered load was updated for 32 ICPs during the period. All had a trader recorded on the registry as being responsible for the shared unmetered load.

The physical shared unmetered load connected to the ICPs did not change. All of the affected ICPs had existing shared unmetered load and an NSP change during the period. The registry update files are created using scripts, and the shared ICP number was omitted from the update in error. The issue was discovered through Powerco's validation processes and another network update was processed to reinstate the shared unmetered ICP. The error was corrected prior to the audit, but the new record was inserted four days after the NSP change, resulting in a gap where no shared unmetered load was recorded. A further update was processed during the audit and all records are now correct.

Compliance is recorded in this section because there were no physical changes to the unmetered load details, and the records were corrected as soon as practicable once the issues were identified.

Audit outcome

Compliant

8. CALCULATION OF LOSS FACTORS

8.1. Creation of loss factors (Clause 11.2)

Code reference

Clause 11.2

Code related audit information

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

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

Audit observation

The “Guidelines on the calculation and the use of loss factors for reconciliation purposes” was published on 26 June 2018. I have assessed Powerco’s process and compliance against the guideline’s recommended thresholds.

I reviewed correspondence and documentation relating to the loss factor review.

Audit commentary

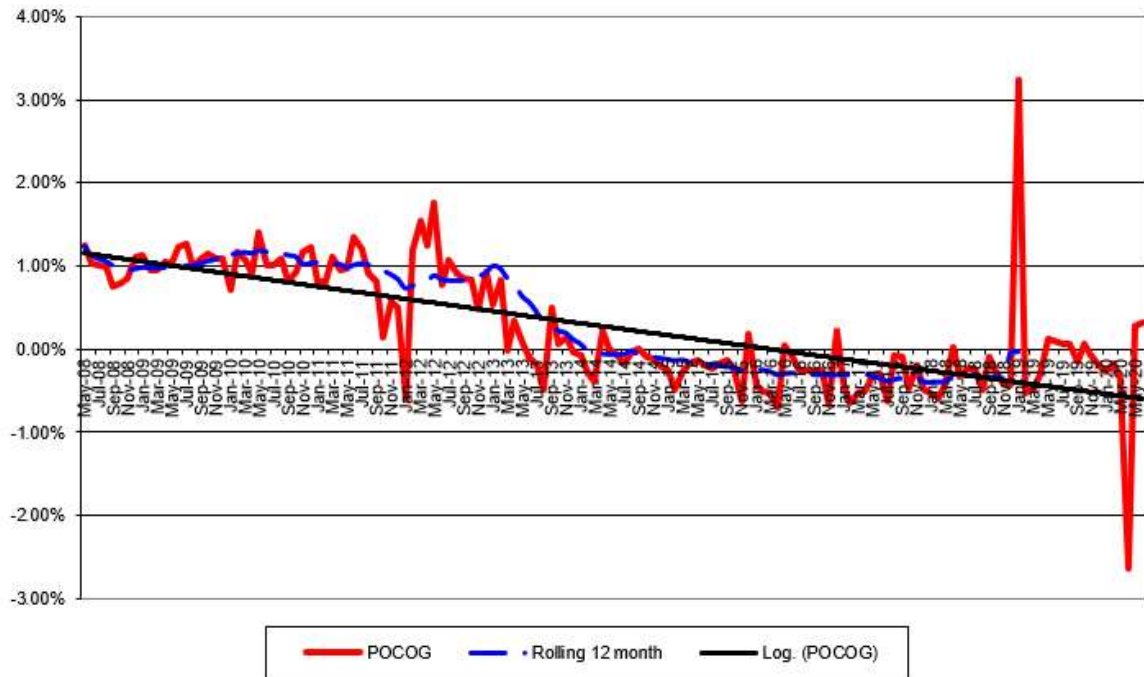
Powerco completed a loss factor review in January 2019. The review was completed by the regulatory and pricing team along with the network team; and considered loss factors and UFE across each network balancing area. Where balancing areas were found to be outside the Authority’s compliance threshold, they were adjusted, with the aim of bringing them within the threshold.

The Authority was provided with a copy of Powerco’s methodology, and the revised loss factors were provided as part of Powerco’s pricing information. Powerco’s loss factor calculation methodology has recently been finalised and will be published on Powerco’s website. The methodology was designed to meet the requirements of the loss factor guidelines.

Powerco reviewed their network losses in January 2020 and found they were within the thresholds. No further adjustments were made.

I was provided by the Electricity Authority the reconciliation losses which indicate losses are tracking within the +/- 1% threshold indicated in the guideline when all balancing areas are considered as a group:

POCOG



Audit outcome

Compliant

CONCLUSION

Powerco continues to prioritise data accuracy, and promptly investigates and resolves new data discrepancies. I saw evidence of processes continually being improved and found some minor process improvements identified during the audit were implemented by the time the audit report was complete. Powerco is devoting resources to resolving historical data accuracy issues, and the number of historic discrepancies is decreasing over time.

Some significant improvements have been made during the audit period:

1. Initial electrical connection date validation and event date selection processes have improved and have increased initial electrical connection date accuracy.
2. The distributed generation application, validation and monitoring processes have been improved to ensure that data is consistently and accurately captured.
3. An improved new connection process for unmetered streetlights is being trialled.

Compliance could be increased by improving the NSP change process, to prevent the unmetered load details for shared unmetered ICPs from being omitted.

This audit found 12 non-compliances and makes two recommendations. The majority of the non-compliances relate to late population of data (many of which were caused by backdated corrections, or backdated creation of ICPs for existing unmetered load at the request of the trader), and some incorrect or incomplete data (which were mainly isolated data entry issues). Several non-compliances are minor and affect small numbers of ICPs or percentages of transactions.

The audit frequency table indicates that the next audit is due in 12 months. I recommend that the next audit is due in 14 months, after considering:

- that all non-compliances had control ratings of moderate or higher, and
- Powerco have continued to improve their validation processes during the audit period and are making progress in resolving historical data inaccuracies.

PARTICIPANT RESPONSE

Powerco continues to improve its processes and systems to ensure that it is as compliant as possible against its code obligations. While we acknowledge that this audit has identified some further improvements are required, we are encouraged that this audit has confirmed that we have appropriate controls in place across the majority of our systems and processes.

It is also encouraging that this audit has supported the actions that we have instigated during the audit period such as:

- regular weekly reporting and validation between our systems and registry
- IECD effective dates are now populated correctly and historic discrepancies have been resolved
- Investigating and correcting 1135 duplicate addresses
- loss factor reporting is now standardised and repeatable.

We are also committed to identifying and resolving historic data discrepancies and leveraging its reporting improvements to steadily bring it up to the high standards required of new updates.

In addition to recent improvements, Powerco is in the process of reviewing and updating its processes relating to distributed unmetered load (street lighting in particular) as well as standard and shared unmetered load. These updates will include and address the points raised in the auditor's recommendations.