ELECTRICITY INDUSTRY PARTICIPATION CODE DISTRIBUTOR AUDIT REPORT



For

POWERCO LIMITED NZBN: 9429037332174

Prepared by: Tara Gannon

Date audit commenced: 22 August 2024

Date audit report completed: 13 September 2024

Audit report due date: 10 October 2024

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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 have a high level of compliance. Historic data accuracy issues continue to be a focus, with improvements made to the volumes of ICPs with incorrect or incomplete addresses, progress investigating and creating ICPs for genuinely unmetered private streetlights not reconciled under distributed unmetered load ICPs, and ICPs which have been at "inactive - ready for decommissioning" status for extended periods. Previous audit recommendations have been adopted.

This audit found ten non-compliances and makes no recommendations. The majority of the non-compliances were caused by late updates, the provision of trader acceptance, and data inaccuracies.

I found the late updates were mainly corrections where incorrect data was found, and some were caused by late notification of historic connections which required ICPs, or late receipt of paperwork to confirm ICP attributes. Correction of data will often create non-compliance for not being able to meet the timeliness requirements, but more importantly it ensures that where possible Powerco is providing complete and accurate information.

There was one data accuracy error with a high impact; ICP 1000579462PC871 was decommissioned in error effective 30 June 2022, based on work completion paperwork from a contractor who advised the meter was removed and the ICP was to be decommissioned. In 2024, the decommission was investigated with one of NZTA Waka Kotahi's consultants and Powerco found that the meter which was allegedly removed was installed in a cabinet on the other side of the roundabout and was recording consumption (165,804 kWh between its alleged decommissioning and August 2024). Powerco reversed their decommission event in February 2024 and the ICP is now at "active" status with Manawa Energy for the period that the ICP was thought to decommissioned. The error occurred because the contractor's paperwork which Powerco relied upon was not complete and accurate. The matter is complicated by the NZTA Waka Kotahi ICPs changing trader during the period of the error, and that the correction was backdated more than 14 months. There has been a high impact on the trader and customer due to the backdated consumption.

The other inaccuracies were mostly event date errors. As noted in previous audits, the inability of CWMS to set accurate network event dates for network updates apart from initial electrical connection dates continues to cause some registry data accuracy issues. Powerco has workarounds in place to ensure that they record correct event dates most of the time, but isolated exceptions still occur where manual updates are missed or backdated updates are not handled correctly. Where current ICP attributes differ from the registry they are likely to be identified and corrected through Powerco's validation processes, but where an older event is affected, it may not be identified though Powerco's validation.

Allowing correct date ranging and selection of event dates within Powerco's system will increase both the accuracy and timeliness of registry updates, because fewer backdated corrections will be required.

The audit frequency table indicates that the next audit is due in 12 months. I recommend that the next audit is due in 18 months, after considering:

- that the level of compliance is high and robust validation processes are in place, and
- that eight of the ten non-compliances have a strong control rating indicating that the noncompliances found are exceptions and processes in place are robust and mitigate risk where possible.

The matters raised are set out in the table below.

AUDIT SUMMARY

NON-COMPLIANCES

	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
2.1	Clauses 11.2(1) and 10.6(1)	190 "active" ICPs have duplicate addresses, and 442 "active" ICPs have addresses which do not have a street number or property name. Three ICPs had a fuel type of other and were corrected to solar + battery following investigation during the audit. ICPs 0000905540TU390 and 0000056812UN277 had incorrect event dates, and were corrected during the audit. 24 ICPs had unmetered load details removed on the registry on 3 April 2024 in	Strong	High	3	Identified
		the audit, and the cause of the error is being investigated by Powerco. Unmetered ICP 1000615008PCC7D had incorrect on hours recorded and was				
		Shared unmetered load parent ICP 1000548564PC076 and child ICPs (0000049402CP1C4, 0000049403CPD81, 0000049404CP04B, 0000067578CPE01 and 0900087477PC9E1) had their unmetered load details updated to include child ICP 1000613185PCAA8 from 7 June 2023 but should have been updated effective from 8 April 2024; the event dates for the child ICPs have been corrected and all the affected traders have been notified. The parent ICP's records remain incorrect.				
		Some private lights in the Manawatu District Council, Matamata Piako District Council, New Plymouth District Council, Palmerston North City Council and Western Bay of Plenty regions do not have their load recorded against an ICP.				
		ICP 1000615987PCFE0 had an initial electrical connection date of 28 September 2023 populated but should have had 29 September 2023. The date was corrected during the audit.				
		electrical connection date of 2 May 2023 populated but should have had 3 May 2023. The date was corrected during the audit. ICP 1000579462PC871 was				
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ICP 1000612074PCFE0 had an initial electrical connection date of 2 May 2023 populated but should have had 3 May 2023. The date was corrected during the audit. ICP 100061986PCFE0 had an initial electrical connection date of 2 May 2023 populated but should have had 3 May 2023. The date was corrected during the audit. ICP 1000610946PCFE0 had an initial electrical connection date of 2 May 2023 populated but should have had 3 May 2023. The date was correc

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			paperwork from a contractor who advised the meter was removed and the ICP was to be decommissioned. The decommissioning event was later reversed, and 165,804 kWh was under reported during the period the ICP was thought to be decommissioned.				
Requirement to correct errors	2.2	11.2(2) and 10.6(2)	190 "active" ICPs have duplicate addresses. 442 "active" ICPs have addresses which do not have a street number or property name.	Strong	Low	1	Identified
Distributor must create ICPs	3.1	11.4	Some private lights in the Manawatu District Council, Matamata Piako District Council, New Plymouth District Council, Palmerston North City Council and Western Bay of Plenty regions do not have their load recorded against an ICP.	Strong	Low	1	Identified
Timeliness of Provision of ICP Information to the registry manager	3.4	7(2) of schedule 11.1	16 ICPs did not have "ready" status populated prior to being electrically connected. 14 ICPs did not have a proposed trader, network information (excluding the proposed trader), and address information populated prior to being electrically connected.	Strong	Low	1	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of schedule 11.1	103 ICPs did not have initial electrical connection dates populated within ten business days of being electrically connected.	Moderate	Low	2	Identified
Connection of ICP that is not an NSP	3.6	11.17	A proposed trader was not recorded on the registry prior to commencement of trading for 16 ICPs created and electrically connected during the audit period.	Strong	Low	1	Identified
Connection of ICP that is not an NSP	3.7	10.31	For six ICPs the proposed trader had not provided acceptance prior to initial electrical connection, but retrospectively agreed to the connection date.	Strong	Low	1	Identified
Changes to registry information	4.1	8 of schedule 11.1	61 late address updates. 2,515 late distributed generation updates. 5,920 late network updates (excluding the 2,515 late distributed generation updates). Up to 44 late NSP changes. 228 late updates to decommissioned status.	Moderate	Low	2	Identified
ICP location address	4.4	2 of schedule 11.1	190 "active" ICPs have duplicate addresses. 442 "active" ICPs have addresses which do not have a street number or property name.	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Distributors to	4.6	7(1) of	190 "active" ICPs have duplicate addresses.	Strong	High	3	Identified
Provide ICP Information to the Registry manager		schedule 11.1	442 "active" ICPs have addresses which do not have a street number or property name. Three ICPs had a fuel type of other and	J	J		
			were corrected to solar + battery following investigation during the audit.				
			ICPs 0000905540TU390 and 0000056812UN277 had incorrect event dates, and were corrected during the audit.				
			24 ICPs had unmetered load details removed on the registry on 3 April 2024 in error. The records were reinstated during the audit, and the cause of the error is being investigated by Powerco.				
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			ICP 1000612234PC6FC had an initial electrical connection date of 2 May 2023 populated but should have had 3 May 2023. The date was corrected during the audit.				
			ICP 1000579462PC871 was decommissioned in error effective 30 June 2022, based on work completion paperwork from a contractor who advised the meter was removed and the ICP was to be decommissioned. The decommissioning event was later reversed, and 165,804 kWh				

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			was under reported during the period the ICP was thought to be decommissioned.				
Future Risk Rating							

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
		Nil

ISSUES

Subject	Section	Issue	Description
		Nil	

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

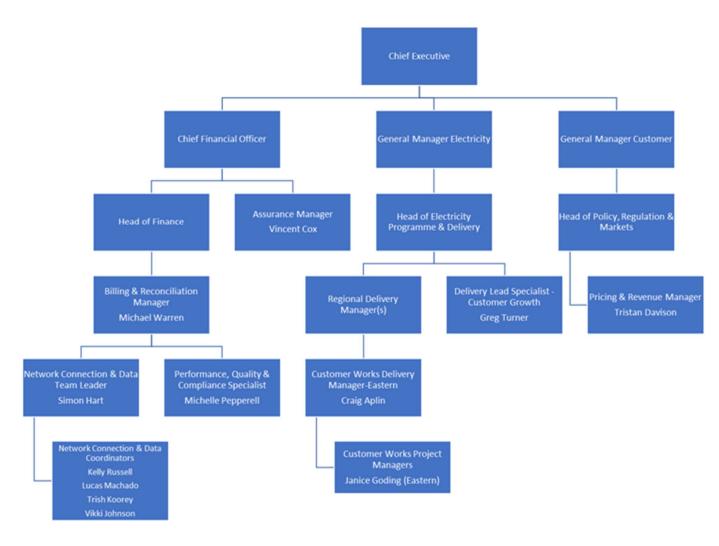
Audit observation

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

Auditors:

Name	Company	Role
Tara Gannon	Provera	Auditor

Powerco personnel assisting in this audit were:

Name	Title
Brendon Jull	Internal Audit Specialist
Craig Aplin	Eastern Delivery Works Delivery Team Lead
Greg Turner	Delivery Lead Specialist – Customer Growth
Janice Goding	Customer Works Project Manager
Lucas Machado	Network Connections Analyst
Michael Warren	Billing and Reconciliation Manager
Michelle Pepperell	Performance, Quality and Compliance Coordinator
Simon Hart	Network Connections Team Lead
Trish Koorey	Network Connections Analyst
Vikki Johnson	Network Connections Analyst

1.4. Use of contractors (Clause 11.2A)

Code reference

Clause 11.2A

Code related audit information

A participant who uses a contractor

- remains responsible for the contractor's fulfilment of the participants Code obligations,
- cannot assert that it is not responsible or liable for the obligation due to the action of a contractor,
- must ensure that the contractor has at least the specified level of skill, expertise, experience, or qualification that the participant would be required to have if it were performing the obligation itself.

Audit observation

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

Audit commentary

Taranaki

- Linepower (formerly a division of A J Greaves Electrical Limited, now owned by Northpower)
- Omexom
- Obertech Limited
- Downer Taranaki/Manawatu
- NPE-Tech Ltd Taranaki
- Wells Instruments Ltd
- ElectroNet Services
- PRSL Taranaki

Whanganui

- Omexom
- Strong Electrical
- Alf Downs Ltd
- Downer Whanganui
- Scanpower Limited
- Nexus Energy Limited
- ElectroNet Services

Manawatu

- Omexom
- Alf Downs Limited
- Scanpower Limited
- Downer Taranaki/Manawatu
- NPE-Ltd Taranaki
- Nexus Energy Limited
- Max Tarr Ltd
- Couchmans Electrical
- ElectroNet Services

Wairarapa

- Power Related Services
- Poltech Power Works Ltd
- Downer Masterton
- Scanpower Power Limited
- Nexus Energy Limited
- ElectroNet Services

Tauranga/Western Bay of Plenty

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

- Elite Electrical Inspections
- Horizon Services Limited
- Kaimai Electrical Inspections Limited
- Double D Electrical & Inspections
- Guild & Spence Electrical Limited
- Energy Services Tauranga Ltd
- Smart Sparx Electrical Ltd
- Horizon Services (CCTV installations)
- CSL

Waikato and Coromandel

- Northpower Hamilton
- Northpower Matamata
- Downer Thames
- NPE-Tech Ltd Tauranga
- Metering Solutions (until they stop trading at the end of August 2024)
- Coromandel Inspections
- McKay Ltd
- Kaimai Electrical Inspections Limited
- Double D Electrical & Inspections
- Sefton Electrical Limited
- Thames Valley Inspection Services
- Cummings Construction
- CSL

1.5. Supplier list

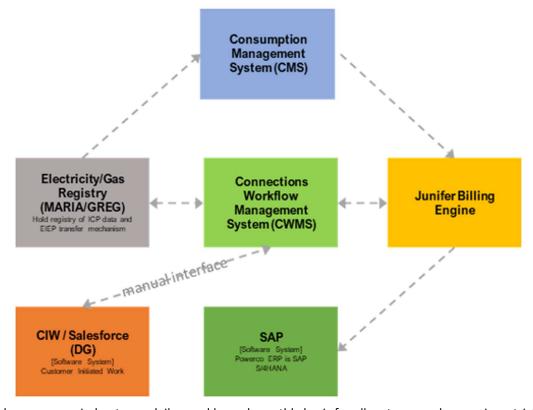
Powerco has provided the list of sub-contractors authorised to perform livening activities on their network in **section 1.4**.

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 retailers and contractors can access directly.
- **Customer Workflow Management System (CWMS)** is used to manage ICP information; 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.

During the audit period Salesforce was implemented to manage distributed generation correspondence with customer and traders. CWMS is still used to manage registry information relating to distributed generation and this was not considered to be a material change.

Powerco is currently assessing proposed providers for a system change for registry management and is aware that a material change audit will be required if the systems used to meet their code obligations undergo significant changes.

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 Coromandel, Tauranga/Western Bay of Plenty, Hauraki Plains, North-East Waikato, South Waikato, Taranaki, Whanganui, Rangitikei, Manawatu and Wairarapa regions.

Powerco NSPs

The table below lists the relevant NSPs and their associated balancing areas. No new NSPs were created and no NSPs were decommissioned.

Dist.	NSP POC	Description	Parent POC	Parent Netwk	Balancing Area	Net wk type	Start date	No of active ICPs
РОСО	ARI1102	ARAPUNI			ARI1101POCOG	G	20 March 2023	4,860
РОСО	BPE0331	BUNNYTHORPE			BA4WESTPOCOG	G	1 May 2008	31,387
РОСО	BRK0331	BRUNSWICK			BA3WESTPOCOG	G	1 August 2016	12,874
РОСО	CST0331	CARRINGTON ST			BA1WESTPOCOG	G	1 May 2008	29,508
РОСО	GYT0331	GREYTOWN			BA6WESTPOCOG	G	1 May 2008	7,767
РОСО	HIN0331	HINUERA			BA5EASTPOCOG	G	1 May 2008	7,034
РОСО	HUI0331	HUIRANGI			BA1WESTPOCOG	G	1 December 2008	10,444
РОСО	HWA0331	HAWERA			BA2WESTPOCOG	G	1 May 2008	9,428
РОСО	KIN0112	KINLEITH			KIN0112POCOG	G	20 May 2013	1
РОСО	KIN0331	KINLEITH			BA2EASTPOCOG	G	1 May 2008	6,748
РОСО	KMO0331	KAITEMAKO			BA1EASTPOCOG	G	1 April 2009	13,651
РОСО	KPU0661	КОРИ			BA3EASTPOCOG	G	1 May 2008	26,292
РОСО	LTN0331	LINTON			BA4WESTPOCOG	G	1 May 2008	23,477
РОСО	MGM0331	MANGAMAIRE			BA5WESTPOCOG	G	1 May 2008	4,378
РОСО	MST0331	MASTERTON			BA6WESTPOCOG	G	1 May 2008	19,539
РОСО	MTM0331	MT. MAUNGANUI			BA1EASTPOCOG	G	1 May 2008	22,950
РОСО	MTN0331	MARTON			BA3WESTPOCOG	G	1 May 2008	5,229
РОСО	MTR0331	MATAROA			BA3WESTPOCOG	G	1 May 2008	2,781
РОСО	OKN0111	OHAKUNE			BA3WESTPOCOG	G	1 May 2008	1,231
РОСО	ОРК0331	OPUNAKE			BA2WESTPOCOG	G	1 May 2008	3,120
РОСО	PAO1101	PIAKO 110KV			BA5EASTPOCOG	G	24 July 2012	7,188
РОСО	SFD0331	STRATFORD			BA1WESTPOCOG	G	1 January 2015	8,549
РОСО	TGA0111	TAURANGA			BA1EASTPOCOG	G	1 May 2008	10,124
РОСО	TGA0331	TAURANGA			BA1EASTPOCOG	G	1 May 2008	32,270
РОСО	TMI0331	TE MATAI			BA1EASTPOCOG	G	1 May 2008	13,766
РОСО	WGN0331	WANGANUI			BA3WESTPOCOG	G	1 August 2016	10,027
РОСО	WHU0331	WAIHOU			BA5EASTPOCOG	G	1 May 2008	6,386

Dist.	NSP POC	Description	Parent POC	Parent Netwk	Balancing Area	Net wk type	Start date	No of active ICPs
РОСО	WKO0331	WAIKINO			BA4EASTPOCOG	G	1 May 2008	17,086
РОСО	WVY0111	WAVERLEY			BA3WESTPOCOG	G	1 May 2008	1,367

Powerco GD NSPs

Powerco has two GD NSPs - KIN0111POCOGD and KIN0113POCOGD.

Networks embedded under Powerco NSPs

There are 14 networks embedded into the Powerco Network. One network was created during this audit period, and no networks were decommissioned. Powerco is not the distributor for any of the embedded networks.

Dist.	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date
AMPC	BSC0011	BAYFAIR SHOPPING CENTRE	MTM0331	РОСО	BSC0011AMPCE	Е	1 April 2017
TUIH	GRE0111	TUIHANA	MTM0331	РОСО	PAPAMOATUIHE	Е	1 December 2008
KIPT	KPP0011	KIWI PLAZA	BPE0331	РОСО	KPP0011KIPTE	E	1 May 2008
TENC	TCM0011	306 CAMERON RD	TGA0111	РОСО	TCM0011TENCE	E	1 September 2022
TENC	TCT0011	TAURANGA CROSSING TAURIKURA DR	TGA0111	РОСО	TCT0011TENCE	E	20 July 2016
SMRT	TFQ0011	100 TAUPO QUAY WANGANUI	WGN0331	РОСО	TFQ0011SMRTE	E	1 July 2017
TENC	TGD0011	GODDARDS SHOPPING CENTRE	TGA0331	РОСО	TGD0011TENCE	Е	1 June 2019
TENC	TMM0111	80b BURWOOD RD MATAMATA	HIN0331	РОСО	TMM0111TENCE	Е	8 July 2019
TENC	TNP0011	CENTRE CITY GILL ST NEW PLYMOUTH	CST0331	РОСО	TNP0011TENCE	Е	1 February 2022
TENC	TPP0011	7 GRAVATT ROAD PAPAMOA	MTM0331	РОСО	TPP0011TENCE	Е	1 September 2021
TENC	TSB0011	66 THE SQUARE PALMERSTON NTH	BPE0331	РОСО	TSB0011TENCE	Е	1 March 2019
TENC	TTF0011	FARMERS-TGA RETAIL	TGA0331	РОСО	TTF0011TENCE	E	20 July 2021
TENC	TTF0012	38 ELIZABETH ST TGA	TGA0331	РОСО	TTF0012TENCE	Е	1 October 2021

New embedded networks created during the audit period								
Dist.	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	
TENC	TMB0011	Metlifecare Somervale	MTM0331	РОСО	TMB0011TENCE	EN	1 August 2024	

Powerco ICP status

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

Status	2024	2022	2021	2020	2019	2018	2017	2016
Distributor (888)	66	68	66	66	67	64	64	65
New (999)	-	6	9	23	66	104	95	87
Ready (000)	120	139	210	146	124	131	170	109
Active (2,0)	349,462	345,438	339,759	335,254	330,881	327,617	324,102	319,558
Inactive - new connection in progress (1,12)	398	752	699	464	287	350	389	316
Inactive – electrically disconnected vacant property (1,4)	7,631	7,345	7,433	7,360	7,284	7,306	7,454	7,755
Inactive – electrically disconnected remotely by AMI meter (1,7)	1636	1,280	1,129	871	953	818	752	2
Inactive – electrically disconnected at pole fuse (1,8)	115	95	91	68	76	55	47	11
Inactive – electrically disconnected due to meter disconnected (1,9)	134	128	124	113	104	93	39	14
Inactive – electrically disconnected at meter box fuse (1,10)	36	47	47	46	51	36	8	0
Inactive – electrically disconnected at meter box switch (1,11)	21	24	17	22	18	18	9	0
Inactive – electrically disconnected ready for decommissioning (1,6)	2,256	2,284	2,335	2,357	2,709	2,718	3,211	4,724
Inactive – reconciled elsewhere (1,5)	6	10	2	8	4	3	0	0

Status	2024	2022	2021	2020	2019	2018	2017	2016
Decommissioned (3)	31,526	29,731	27,759	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

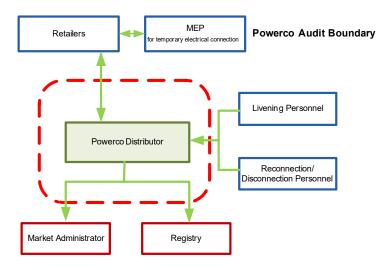
This distributor audit was conducted at the request of Powerco to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11. The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the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

Registry reports for the following date ranges were reviewed for the audit: a registry list snapshot and meter installation details report for 5 July 2024, and a registry list, event detail report, and audit compliance (AC020) reports for 1 February 2023 to 5 July 2024

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.	
The provision of ICP information to the registry and the maintenance of that information.	Nil
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's previous audit was conducted in March 2023 by Tara Gannon of Veritek Limited. The audit recorded 11 non-compliances and made two recommendations. The current status of the non-compliances and recommendations are listed below.

Table of Non-compliance

Subject	Section	Clause	Non-compliance	Status
Requirement to correct errors	2.2	11.2(2) and 10.6(2)	629 "active" ICPs have duplicate addresses. 727 "active" ICPs have addresses which do not have a street number or property name.	Still existing but numbers have decreased.
Distributor must create ICPs	3.1	11.4	Some private lights in the Manawatu District Council, Matamata Piako District Council, New Plymouth District Council and Palmerston North City Council regions do not have their load recorded against an ICP.	Still existing but investigation is underway and some new ICPs have been created.
Participants may request distributors to create ICPs	3.2	11.5(3)	Powerco received a request to create a new standard unmetered load ICP on 13 October 2021, but the ICP was not created until 22 November 2021 and Powerco did not advise the trader why the ICP could not be created within three business days.	Cleared.
Provision of ICP Information to the registry manager	3.3	11.17	Five ICPs had missing initial electrical connection dates and were corrected during the audit.	Still existing.
Timeliness of Provision of ICP Information to the registry manager	3.4	7(2) of schedule 11.1	13 ICPs did not have the "ready" status populated prior to being electrically connected. Two ICPs did not have a proposed trader, network information (excluding the proposed trader), and address information populated prior to being electrically connected. Four ICPs did not have pricing populated prior to being electrically connected.	Still existing.
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of schedule 11.1	223 ICPs did not have initial electrical connection dates populated within ten business days of being electrically connected.	Still existing, but the number of late updates has decreased.
Connection of ICP that is not an NSP	3.6	11.17	A proposed trader was not recorded on the registry prior to commencement of trading for one ICP created and electrically connected during the audit period, and one ICP created prior to the audit period.	Still existing.
Changes to registry information	4.1	8 of schedule 11.1	68 late address updates. 1,620 late distributed generation updates. 3,422 late network updates (excluding the 1,620 late distributed generation updates). Two late NSP changes. 247 late updates to "decommissioned" status.	Still existing.

Subject	Section	Clause	Non-compliance	Status
Notice of NSP for each ICP	4.2	7(1),(4) and (5) of schedule 11.1	Two ICPs had incorrect NSPs and were corrected during the audit.	Cleared.
ICP location address	4.4	2 of schedule 11.1	629 "active" ICPs have duplicate addresses. 727 "active" ICPs have addresses which do not have a street number or property name. Three ICPs with incorrect address information were identified and corrected during the audit.	Still existing but numbers have decreased.
Distributors to Provide ICP Information to the Registry manager	4.6	7(1) of schedule 11.1	One ICP had incorrect distributed generation information and was corrected during the audit. Two ICPs had some incorrect unmetered load details and were corrected during the audit. Two ICPs had incorrect NSPs and were corrected during the audit. At least two ICPs had incorrect initial electrical connection dates and were corrected during the audit. Five ICPs had missing initial electrical connection dates and were corrected during the audit. One ICP had an incorrect network event date and was corrected during the audit.	Still existing.

Table of Recommendations

Subject	Section	Clause	Recommendation	Status
Confirmation of unmetered load details	4.6	Clause 7(1) of schedule 11.1	Confirm the unmetered load details for these ICPs where the trader daily unmetered kWh and distributor unmetered load details are inconsistent, and update the registry as necessary for:	Adopted.
			1000544328PCC4B,	
			0000557920UN07D,	
			0000557952UN5A5,	
			0000634792UN84D,	
			1000595713PC497, and	
			1000597535PC10A.	
Confirmation of IECDs	4.6	Clause 7(1) of schedule 11.1	Confirm the IECDs for 1000598960PC121 (IECD and "active" date 18 July 2022, meter certification 5 August 2022) and 1000600957PCD63 (IECD and "active" date 14 October 2021, meter certification 10 November 2021) and update CWMS and the registry as necessary.	Adopted.

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 and AC020 report 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 checked to determine whether they are genuine; CWMS links losses and GXPs, so
 a pricing and network event is sent to the registry each time either of the fields is updated
 although there may be no change, and genuine 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,
- Contents of registry synch which contains a link to all the files sent to and received from the registry; it is reviewed to check if the total number of files appears reasonable, and
- Unacknowledged outgoing events which will identify 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 also 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 each Wednesday. I walked through the validation process and reviewed the reports and exceptions.

Weekly report	Description
Reconciliation between CWMS and the registry	This report identifies differences between registry and CWMS for: • retailer, which normally only shows "distributor" status ICPs which have a retailer recorded in CWMS for billing, but no retailer recorded on the registry, • status, which normally shows "distributor" status ICPs which are "active" in CWMS to enable billing,

Weekly report	Description
	 address, which shows address differences, network, which shows differences in network fields, UML, which shows differences between the distributor unmetered load details in CWMS and the registry, and pricing, which normally shows differences where an ICP is at "new" status on the registry, but pricing is available in CWMS. 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.
Validation report	The validation report identifies potential data discrepancies, which are investigated and resolved each week: • 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, and • KIN0112 and Massey University: unexpected ICPs have been added to the list, and/or the affected ICPs have different retailers.
Monitoring report	 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 (only 12 of the 2261 ICPs on the list moved to "inactive - ready for decommissioning" in the last year); Powerco has been working through old ICPs at "inactive - ready for decommissioning" status with Genesis, to confirm the correct status of the ICP and have offered contributions to assist with the cost of site inspections to resolve these issues, Ready > 18 months: the affected ICPs are followed up with the trader after 18 months to confirm whether they are still required, New > 18 months: the affected ICPs are followed up with the trader after 18 months to confirm whether they are still required; ICPs are not normally created at "new" and exceptions are rare, Active ICPs without an MEP: these ICPs are followed up with the trader if no metering details are added ten business days after initial electrical connection; the report indicates whether the ICP is expected to be unmetered, and IECD not active: shows ICPs at "new", "ready" or "inactive - new connection in progress" status which are followed up with the proposed trader by email.

Weekly report	Description			
Clean-up report	Low user ANZSIC: ICPs on a low user pricing category with a non-residential ANZSIC code; Powerco checks the report for reasonableness to identify any ICPs which are likely to have incorrect pricing codes and checks them with the trader, and 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, and ICPs where Powerco's value cannot be recalculated because information is insufficient or not in the required format; the report is worked on as part of ongoing data cleansing.			
Address validation report	 The address validation report is run weekly, and includes checks for duplicate addresses (including "inactive" ICPs), invalid ICP addresses which include characters not allowed on the registry, missing or incomplete address data (including "inactive" ICPs), no street number but has property name, and streets with more than one region. Powerco is continuing to work through its incomplete and duplicate address information using this report.			
Distributed generation report	The distributed generation report identifies ICPs with an I flow meter register and installation type L. It is compared to approved service orders in CIW, and any I flow volumes reported by traders on EIEP reports to identify instances where generation may have commenced. The ICPs are queried with the trader and/or customer 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. If a certificate of compliance is received later and confirms a different date to what was advised, the event date will be updated.			
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. Tableau reporting is also used to support these checks.			

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

Daily report	Description
Initial electrical connection dates	 IECDs to populate: ICPs with an "active" status date or meter certification date but no initial electrical connection date populated are identified and investigated since the requirement came into effect, and IECDs to verify: ICPs with a difference between the "active" date, meter certification date and livening date 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); the spreadsheet also contains a list of known exceptions where the initial electrical connection date differs from the trader or MEP's date, but Powerco's date is confirmed to be correct.

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. For initial electrical connection date updates, the event date is set to the initial electrical connection date. For all other network updates and address updates the event date is set to the date that the change is made. Powerco is aware of this issue, and has processes in place to ensure correct dates are recorded on the registry:

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 necessary. CWMS workflows are used to ensure that this process occurs when generation is added.
	When unmetered load changes occur, Powerco manually checks the registry and updates the event date if necessary.
Address events	Any address changes are recorded with the current date.

I checked a sample of 4,559 network updates where the initial electrical connection date was populated, and found the correct event dates were applied. Review of a sample of 60 other network updates found all were processed from the correct date except:

- ICPs 0000905540TU390 and 0000056812UN277 had incorrect event dates for generation events, and were corrected during the audit, and
- shared unmetered load parent ICP 1000548564PC076 and child ICPs (0000049402CP1C4, 0000049403CPD81, 0000049404CP04B, 0000067578CPE01 and 0900087477PC9E1) had their unmetered load details updated to include child ICP 1000613185PCAA8 from 7 June 2023 but should have been updated effective from 8 April 2024; the event dates for the child ICPs have been corrected and all the affected traders have been notified. The parent ICP's records remain incorrect.

Data accuracy

I saw evidence of incorrect information being corrected during the audit and most corrections were conducted as soon as practicable after discovery of the error. The following accuracies were not identified and corrected through Powerco's own validation processes prior to the audit:

- three ICPs had a fuel type of other and were corrected to solar + battery following investigation during the audit,
- ICPs 0000905540TU390 and 0000056812UN277 had incorrect event dates for generation events, and were corrected during the audit,
- 24 ICPs had unmetered load details removed on the registry on 3 April 2024 in error; the records were reinstated during the audit, and the cause of the error is being investigated by Powerco,
- unmetered ICP 1000615008PCC7D had incorrect on hours recorded and was corrected during the audit,
- shared unmetered load parent ICP 1000548564PC076 and child ICPs (0000049402CP1C4, 0000049403CPD81, 0000049404CP04B, 0000067578CPE01 and 0900087477PC9E1) had their unmetered load details updated to include child ICP 1000613185PCAA8 from 7 June 2023 but

should have been updated effective from 8 April 2024; the event dates for the child ICPs have been corrected and all the affected traders have been notified. The parent ICP's records remain incorrect,

- some private lights in the Manawatu District Council, Matamata Piako District Council, New Plymouth District Council, Palmerston North City Council and Western Bay of Plenty regions do not have their load recorded against an ICP,
- ICP 1000615987PCFE0 had an initial electrical connection date of 28 September 2023 populated but should have had 29 September 2023; the date was corrected during the audit, and
- ICP 1000612234PC6FC had an initial electrical connection date of 2 May 2023 populated but should have had 3 May 2023; the date was corrected during the audit.

Some data discrepancies which require further investigation to resolve are not always corrected as soon as practicable, such as incomplete and duplicate addresses. 190 "active" ICPs have duplicate addresses, and 442 "active" ICPs have addresses which do not have a street number or property name.

One data accuracy issue which has been resolved had a high impact; ICP 1000579462PC871 was decommissioned in error effective 30 June 2022, based on work completion paperwork from a contractor who advised the meter was removed and the ICP was to be decommissioned. The decommissioning event was later reversed, and 165,804 kWh was under reported during the period the ICP was thought to be decommissioned.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11.2(1) and	190 "active" ICPs have duplicate addresses, and 442 "active" ICPs have addresses which do not have a street number or property name.
10.6(1)	Three ICPs had a fuel type of other and were corrected to solar + battery following investigation during the audit.
	ICPs 0000905540TU390 and 0000056812UN277 had incorrect event dates, and were corrected during the audit.
	24 ICPs had unmetered load details removed on the registry on 3 April 2024 in error. The records were reinstated during the audit, and the cause of the error is being investigated by Powerco.
	Unmetered ICP 1000615008PCC7D had incorrect on hours recorded and was corrected during the audit.
	Shared unmetered load parent ICP 1000548564PC076 and child ICPs (0000049402CP1C4, 0000049403CPD81, 0000049404CP04B, 0000067578CPE01 and 0900087477PC9E1) had their unmetered load details updated to include child ICP 1000613185PCAA8 from 7 June 2023 but should have been updated effective from 8 April 2024; the event dates for the child ICPs have been corrected and all the affected traders have been notified. The parent ICP's records remain incorrect.
	Some private lights in the Manawatu District Council, Matamata Piako District Council, New Plymouth District Council, Palmerston North City Council and Western Bay of Plenty regions do not have their load recorded against an ICP.
	ICP 1000615987PCFE0 had an initial electrical connection date of 28 September 2023 populated but should have had 29 September 2023. The date was corrected during the audit.

	ICP 1000612234PC6FC had an initial electrical connection date of 2 May 2023 populated but should have had 3 May 2023. The date was corrected during the audit.
	ICP 1000579462PC871 was decommissioned in error effective 30 June 2022, based on work completion paperwork from a contractor who advised the meter was removed and the ICP was to be decommissioned. The decommissioning event was later reversed, and 165,804 kWh was under reported during the period the ICP was thought to be decommissioned.
From: 01-Aug-21	Potential impact: High
To: 26-Aug-24	Actual impact: High
	Audit history: Multiple times
	Controls: Strong
	Breach risk rating: 3
Audit risk rating	Rationale for audit risk rating
High	I have rated the controls as strong overall, as there are strong controls over validation and accuracy:
	 the decommissioning in error occurred because the paperwork was incorrect, although it did appear reasonable based on the work Powerco expected to be completed,
	 the incorrect event dates for distributed generation changes occurred because CWMS does not allow the user to select an event date for these updates, but in most cases Powerco's manual controls ensure the correct event dates are applied,
	 no new ICPs had incomplete or inaccurate addresses, and Powerco is working through resolving historic discrepancies,
	 Powerco is working through investigating and resolving potentially unmetered private lights with no ICP numbers, and
	 a very small number of incorrect initial electrical connection dates were identified.
	The impact is high overall because 165,804 kWh was under submitted for the ICP which was decommissioned in error. The impact of the other exceptions is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Powerco continues to dedicate resources to resolve these historic data issues, utilising information from multiple sources across the business.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	

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

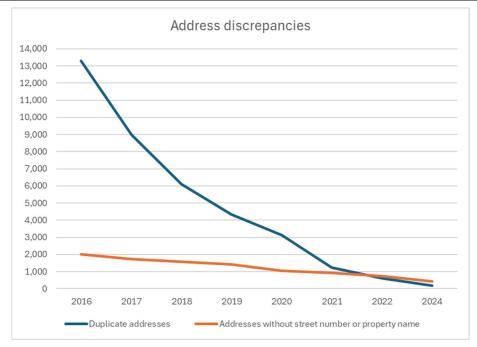
Powerco's data management processes were examined. The registry list and AC020 report were examined to determine compliance.

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 after discovery of the error.

Some data discrepancies which require further investigation to resolve are not always corrected as soon as practicable, such as incomplete and duplicate addresses. Powerco has made significant process in resolving addressing issues over recent years. 565 ICPs in total have duplicate and/or incomplete addresses a reduction from 1,279 in total during the last audit. Some ICPs are affected by both issues.

Address issue	2024	2022	2021	2020	2019	2018	2017	2016	Difference this year
Duplicate addresses	190	629	1,238	3,132	4,348	6,091	8,973	13,302	-439
Addresses without street number or property name	442	727	925	1,062	1,423	1,584	1,733	2,013	-285



Powerco has continued to work through the exceptions, including reviewing fault and contractor site visit information to find more addressing details. I checked a sample of 32 of the exceptions that were still remaining and found:

- 18 had several dwellings close together with no street numbers,
- seven were on Rangiwa Island, which has no official street numbers, and
- seven were recently updated to unique complete addresses.

Audit outcome

Non-compliant

Non-compliance	Description			
Audit Ref: 2.2	190 "active" ICPs have duplicate addresses.			
With: 11.2(2) and 10.6(2)	442 "active" ICPs have addresses which do not have a street number or property name.			
	Potential impact: Low			
	Actual impact: Low			
	Audit history: Multiple times			
From: 01-Aug-21	Controls: Strong			
To: 26-Aug-24	Breach risk rating: 1			
Audit risk rating	Rationale	for audit risk rati	ng	
Low	Controls are strong as the processes in place will prevent new ICPs being created with incomplete or duplicate addresses, and historic address issues are being resolved.			
	The audit risk rating is low as the volume of ICPs that are not readily locatable and duplicated has reduced greatly during the audit period. Incorrect addresses can have a direct impact on the retailer's ability to read, disconnect and reconnect these sites.			
Actions tak	en to resolve the issue	Completion date	Remedial action status	
Powerco is continuing to dedicate resources to resolve historic data issues, utilising information from multiple sources across the business.		Ongoing	Identified	
Preventative actions taken to ensure no further issues will occur		Completion date		
Powerco's systems and processes are in place to prevent duplicate/incomplete addresses from being created and monitoring is in place to detect these issues if they present from other updates.		In place		

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

Code reference

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

Code related audit information

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

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

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

Audit observation

Processes for removal or breakage of seals were reviewed.

Audit commentary

Powerco does not direct its contractors to break seals. If work requires seals to be removed or broken, it will be referred to the retailer responsible for the ICP. No instances where Powerco or their contractors had removed, or broken seals, were identified during the audit.

Audit outcome

Compliant

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

Code reference

Clause 11.30A

Code related audit information

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

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

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

Audit observation

The process to ensure that information on Utilities Disputes is provided to customers was discussed. Powerco's website and a sample of customer communications were reviewed.

Audit commentary

Information on Utilities Disputes is provided:

- on invoices and outbound communications relating to electricity services and bills,
- in written acknowledgements for and responses to complaints,

- in written responses to customer enquiries,
- as a recorded message for inbound calls, and
- on Powerco's website under https://www.powerco.co.nz/contact/complaints.

Audit outcome

Compliant

3. CREATION OF ICPS

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 25 of the 5,623 new ICPs created since 1 February 2023 were checked from the point of application through to when the ICPs were created. The sample included ICPs with:

- various meter categories (including category 1-5),
- various traders,
- various price categories,
- various loss factors,
- · connected to various NSPs, and
- with and without unmetered load connected.

The creation of LE ICPs for the connection of new embedded network TMB0011 to Powerco's network was examined.

Audit commentary

ICPs for new points of connection

Review of a sample of 29 of the 5,623 new ICPs created since 1 February 2023 confirmed that ICP numbers were created as required by this clause for all ICP types.

ICPs for points of connection between embedded networks and the distributor's network

TENC created a new embedded network was created for TMB0011 Metlifecare Somervale, and Powerco created an LE ICP as required by this clause.

ICPs for private unmetered streetlights which are not recorded against DUML ICPs

Review of the DUML audits for ICPs on the Powerco network found that there are some private lights which are not currently reconciled against DUML ICPs in the Manawatu District Council, Matamata Piako District Council, New Plymouth District Council, Palmerston North City Council and Western Bay of Plenty District Council databases. These private lights may be metered through customer installations. If the load is not metered, it is required to be recorded against an existing ICP as standard or shared unmetered load or have a new standard or shared unmetered load ICP created to account for the unmetered load. An ICP should be considered standard unmetered load if there is one point of connection and the connected load benefits only that point of connection. An ICP should be considered to be shared unmetered load if the benefit of a single point of connection are shared across more than one ICP.

The private lights are investigated by Powerco when they are approached by database owners and/or traders for assistance. In **section 4.6** I reviewed the DUML audits to identify potentially unmetered private lights which are not reconciled under DUML ICPs and found Powerco had undertaken significant

work to resolve these issues. Powerco is willing to work with other affected database owners and has requested that auditors advise them of any private light issues at the time DUML audits are completed, so that they can engage with the database owners.

Audit outcome

Non-compliant

Non-compliance	Description			
Audit Ref: 3.1 With: 11.4	Some private lights in the Manawatu District Council, Matamata Piako District Council, New Plymouth District Council, Palmerston North City Council and Western Bay of Plenty regions do not have their load recorded against an ICP.			
	Potential impact: Low			
	Actual impact: Low			
	Audit history: Twice			
From: 19-Jun-20	Controls: Strong			
To: 26-Aug-24	Breach risk rating: 1			
Audit risk rating	Rationale	Rationale for audit risk rating		
Low	I have rated the controls as strong as Powerco has a robust ICP creation process, these lights are an historic issue, and no other such instances have been identified have rated the audit risk rating as low as the kWh volume associated with these lights will be small, and some of the private lights may be metered.			
Actions tak	Actions taken to resolve the issue		Remedial action status	
Powerco is following up with the respective councils and their retailers to ensure all lights are being reconciled and new ICPs are created where necessary.		Ongoing	Identified	
Preventative actions taken to ensure no further issues will occur		Completion date		
Powerco is continuing to work closely with councils to ensure better understanding of the requirements and obligations for streetlight connections.		Ongoing		

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 25 of the 5,623 new ICPs created since 1 February 2023 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

Creation of ICPs within three business days of a trader's request

I checked 25 new ICPs and found they were requested by a Powerco approved contractor or the customer's agent and clause 11.5(3) did not apply.

New connections process

The new connection process is as follows:

Process step	Process step description
Application	In most cases, requests for connection are made by a Powerco approved contractor on the customer's behalf. Prior to December 2023, Trustpower requested new connections for their customers directly, but new connections for Trustpower ICPs are now requested by a Powerco approved contractor. A CIR is created in CIW and directed to a queue of unapproved new connections.
Application approval	The application is checked for completeness. If further information is needed a request for the missing information is sent to the Powerco approved contractor.
	Complete applications are validated, and the application is accepted or rejected. An automated email is generated if the application is rejected.
ICP requested	Once an application is approved it moves to the ICP requested bucket.
	The network connections team loads the application information for the ICP into CWMS, and requests approval from the trader (unless the trader is Contact Energy who provides blanket approval). Once approval is received, the ICP is created at "ready" status and the ICP number if provided to the trader. The requirement to have trader approval before creating the ICP number has reduced the likelihood that an ICP will be connected before trader approval, because connection jobs require an ICP number.
	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.
Notification of approval	A notification is sent to the Powerco approved contractor from CIW containing the ICP details and confirming that the trader has approved it to be connected.
Completion of connection	The Powerco approved contractor completes the initial electrical connection and provides a work completion notice (WCN) through CIW, which marks the job as complete. The connections team review the paperwork received and update CWMS, and the update is sent to the registry.
	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, and the connection date will be confirmed through the initial electrical connection date validation process.

Audit outcome

Compliant

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

Code reference

Clause 11.7

Code related audit information

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

Audit observation

The 5,623 new ICPs created since 1 February 2023 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. The required fields were populated on the registry for all new connections.

Some information was provided late for new ICPs:

- 16 ICPs had late updates to "ready" status,
- 14 ICPs had late updates to network, address and proposed trader information, and
- 103 ICPs had initial electrical connection dates populated more than ten business days after initial electrical connection.

The late updates to ready status and network, address and proposed trader information are discussed in **section 3.4**, and the late updates to initial electrical connection dates are discussed in **section 3.5**.

The ACO20 report identified 89 "active" ICPs commissioned after 29 August 2013 with no IECD populated. I checked a sample of 15 with "active" status dates in 2015 or later and confirmed that the ACO20 report contained some incorrect information and all the ICPs had initial electrical connection dates consistent with the "active" status date currently populated on the registry.

Audit outcome

Compliant

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

Code reference

Clause 7(2) of schedule 11.1

Code related audit information

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

Audit observation

The registry list, event detail report and ACO20 reports were examined to determine the timeliness of the provision of ICP information for new connections. All late updates for ICPs created during the audit period, and a sample of late updates for ICPs created before the audit period were checked.

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.

5,160 of the 5,623 new ICPs created since 1 February 2023 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.

99.6% of ICPs created during the audit period had on time status, network, pricing and address initial information updates, and:

- 16 ICPs had late updates to ready status,
- 14 ICPs had late updates to network, address and proposed trader information, and
- no ICPs had late pricing updates recorded on the AC020 report.

I reviewed all ICPs which had required information populated after initial electrical connection, and my findings are set out in the table below.

Reason for late update	Late ready status	Late network, address and proposed trader	Late trader acceptance
Late paperwork	2	1	1
ICP 1000615517PCC0B had late receipt of paperwork confirming the ICP attributes and a change of proposed trader.			
ICP 1000615495PCOCO was created at "new" due to a network update being required and a delay in notification of work completion resulted in the ICP being moved to "ready" late. The trader accepted responsibility before initial electrical connection.			
Backdated DUML and streetlight connections Four new ICPs were created to replace an existing ICP when Powerco discovered that the unmetered load was spread over a large geographical area and there were multiple points of connection. The trader had accepted responsibility prior to the initial electrical connection date. DUML ICPs 1000613829PC8A0 and 1000613268PCC4A were connected to NSP ARI1101 and had their "ready" status backdated in agreement with the trader and NZTA.	9	9	5

Reason for late update	Late ready status	Late network, address and proposed trader	Late trader acceptance
DUML ICPs 1000614016PC4EB and 1000614912PCCE8 had backdated "ready" status updates in agreement with the trader and NZTA.			
ICP 1000615008PCC70 for historic private streetlights was given a backdated connection date in agreement with the trader. There was a change of trader, and the new trader accepted responsibility after the initial electrical connection date.			
Early connection by contractor ICPs 1000615456PCBEF, 1000615987PCFE0 and 1000618639PCBE6 were connected before the ICP was created due to miscommunications between the trader and the contractor leading to the ICPs being connected early. For all three ICPs the trader had accepted responsibility prior to the initial electrical connection date.	3	3	-
Re-created ICPs ICPs 1000614957PC302 and 1000614871PC6DC had to be recreated due to system issues preventing the ICP details from being updated for the original ICP. The trader accepted responsibility prior to initial electrical connection.	2	1	-
Total late updates	16	14	6

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.4	16 ICPs did not have "ready" status populated prior to being electrically connected.
With: 7(2) of schedule 11.1	14 ICPs did not have a proposed trader, network information (excluding the proposed trader), and address information populated prior to being electrically connected.
	Potential impact: Low
	Actual impact: Low
	Audit history: Multiple times
From: 01-Mar-23	Controls: Strong
To: 30-Apr-24	Breach risk rating: 1
Audit risk rating	Rationale for audit risk rating
Low	The controls are rated as strong, and the audit risk rating is low. The overall level of compliance is high, and the number of ICPs affected is very small and will only have a minor impact on settlement.

Actions taken to resolve the issue	Completion date	Remedial action status
Powerco continues to work with contractors communicating the importance of correct and timely information for new connections. We will continue to backdate and correct where appropriate to provide the most accurate information to registry.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
As above, Powerco is continuing to work with its approved contractors to get accurate and timely information for new connections.	Ongoing	

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 sub-clause (1)(p) to the registry manager no later than ten business days after the date on which the ICP is initially electrically connected.

Audit observation

The ACO20 reports were examined to determine the timeliness of the provision of initial electrical connection dates for new connections. A sample of 61 late updates were checked to determine why they were late.

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. These contractors provide works completion notices (WCNs) 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 rely on the "active" dates where other information is 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, and

• **IECDs to verify:** ICPs with a difference between the "active" date, meter certification date and livening date 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).

Powerco does not use unmetered builder's temporary supplies.

Previous audits found there had been some issues with CWMS removing IECDs and other network attributes when processing updates. For initial electrical connection date updates, the event date is set to the initial electrical connection date. For all other network updates, the event date is set to the date that the change is made. Powerco is aware of this issue and has processes in place to check and update event dates recorded on the registry as discussed in **section 2.1**. Unfortunately, where network events are backdated, it can create errors if the events are not all carefully reviewed to make sure changes carry through the updates as intended. Errors should be identified through Powerco's validation processes if the difference affects the current attributes. If the update is backdated, discrepancies may be difficult to identify if the current values match.

Late initial electrical connection date updates

The ACO20 report recorded 111 IECDs which were populated more than ten business days after initial electrical connection.

37 of the 111 late updates were for new ICPs created since 1 February 2023, making up 0.7% of the 5,160 ICPs created and electrically connected during the audit period. The late updates were between 11 and 63 business days after the IECD, with 33 within 30 business days of the IECD. I checked all 16 late updates more than 15 business days after the IECD and found:

- six ICPs were not livened by the Powerco approved contractor who completed the network connection and Powerco discovered the ICP had been livened through their initial electrical connection date validation process,
- six ICPs had late work completion notices provided.,
- there was confusion about the initial electrical connection date for one large multiple stage new connection where there was a discrepancy between Powerco's date and the trader's date; the initial electrical connection date was confirmed and updated after investigation, and
- two were not genuine late initial electrical connection date updates, and invalidly appeared on the report because the network record had been replaced.

The other 74 of the 111 late updates were for ICPs created prior to 1 February 2023 and were made 11 to 2,354 business days after the event date. I checked all 43 late updates made more than 80 business days after the IECD:

- the eight latest updates (2,210 to 2,354 business days after the event date) were corrections to add IECDs found to be missing during the previous audit,
- six late updates (including the next five latest updates) were not genuinely late and replaced a previous network event with the same IECD; the updates were 94 to 642 business days after the event date.
- 29 unmetered telecommunications cabinet ICPs had initial electrical connection dates
 populated 175 business days after the event because the ICPs were connected without
 Powerco's knowledge; the connection date was agreed between Powerco and the trader,
- four updates (82 to 158 business days after the event date) were delayed by late receipt of work completion paperwork, and
- one late update related to reinstatement of an ICP which was decommissioned in error, by creating a new ICP; the update was made 163 business days after the event date.

The ACO20 report identified 89 "active" ICPs commissioned after 29 August 2013 with no IECD populated. I checked a sample of 15 with "active" status dates in 2015 or later and confirmed that the

ACO20 report contained some incorrect information and all the ICPs had initial electrical connection dates consistent with the "active" status date currently populated on the registry.

The ACO20 report identified 257 ICPs commissioned after 29 August 2013 with an initial electrical connection date which differed from the trader's "active" status date. All of the ICPs became "active" between 2013 and 2017. I checked the 15 most recently connected ICPs and confirmed that the ACO20 report contained incorrect information and all the ICPs had initial electrical connection dates consistent with the "active" status date currently populated on the registry.

Audit outcome

Non-compliant

Non-compliance	Description						
Audit Ref: 3.5 With: 7(2A) of schedule	103 ICPs did not have initial electrical business days of being electrically cor		s populated within ten				
11.1	Potential impact: None						
	Actual impact: None						
	Audit history: Multiple times						
From: 01-Aug-21	Controls: Moderate						
To: 30-Apr-24	Breach risk rating: 2						
Audit risk rating	Rationale	for audit risk rati	ng				
Low		Controls are moderate. Initial electrical connection dates are based on the best information available with daily monitoring and resolution of missing and potentially incorrect dates.					
	The audit risk rating is low because the Retailers may use this information to		•				
Actions take	en to resolve the issue	Completion date	Remedial action status				
Powerco has corrected IEC	CDs where identified in reporting.	Ongoing	Identified				
Preventative actions tak	cen to ensure no further issues will occur	Completion date					
Powerco monitors IECD ac well as in its weekly registr	curacy through daily reporting as y reconciliation	In Place					

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 and event detail reports were examined to determine compliance. No new shared unmetered load was created during the audit period.

Audit commentary

As discussed in section 3.2, once an application is approved it moves to the ICP requested bucket. The network connections team loads the application information for the ICP into CWMS, and requests approval from the trader (unless the trader is Contact Energy who provides blanket approval). Once approval is received, the ICP is created at "ready" status and the ICP number if provided to the trader. The requirement to have trader approval before creating the ICP number has reduced the likelihood that an ICP will be connected before trader approval, because connection jobs require an ICP number.

All ICPs at the "ready" status in the list file have a nominated trader recorded.

I checked the 16 ICPs which had late updates to "ready" status listed in **section 3.4**, preventing the trader from being able to claim the ICP on the registry prior to initial electrical connection. I found that six of those ICPs had genuinely late trader acceptance, although the trader did agree to the backdated connection date.

ICPs with late trader acceptance	Late ready status	Late trader acceptance
Late paperwork	2	1
ICP 1000615517PCC0B had late receipt of paperwork confirming the ICP attributes and a change of proposed trader.		
Backdated DUML and streetlight connections	9	5
DUML ICPs 1000613829PC8A0 and 1000613268PCC4A were connected to NSP ARI1101 and had their "ready" status backdated in agreement with the trader and NZTA.		
DUML ICPs 1000614016PC4EB and 1000614912PCCE8 had backdated "ready" status updates in agreement with the trader and NZTA.		
ICP 1000615008PCC70 for historic private streetlights was given a backdated connection data in agreement with the trader. There was a change of trader, and the new trader accepted responsibility after the initial electrical connection date.		
Early connection by contractor	3	-
Nil		
Re-created ICPs	2	-
Nil		

ICPs with late trader acceptance	Late ready status	Late trader acceptance
Total late updates	16	6

I checked a further sample of 25 ICPs and confirmed responsibility was accepted by the trader prior to initial electrical connection.

New connections for shared unmetered load

There was one new connection for shared unmetered load for child ICP 1000613185PCAA8, and the trader accepted responsibility on the registry prior to the initial electrical connection date. There were no new connections for shared unmetered load parent ICPs.

Audit outcome

Non-compliant

Non-compliance	Description						
Audit Ref: 3.6 With: 11.17	A proposed trader was not recorded on the registry prior to commencement of trading for 16 ICPs created and electrically connected during the audit period.						
***************************************	Potential impact: Low						
	Actual impact: Low						
	Audit history: Multiple times						
From: 01-Mar-23	Controls: Strong						
To: 30-Apr-24	Breach risk rating: 1						
Audit risk rating	Rationale	for audit risk rati	ng				
Low	The controls are rated as strong, and the audit risk rating is low. For ten of the ICPs the trader had accepted responsibility for the ICP prior to initial electrical connection, and for the other six ICPs the trader had retrospectively agreed to the connection date.						
Actions take	en to resolve the issue	Completion date	Remedial action status				
· · · · · · · · · · · · · · · · · · ·	d the ICPs as soon as they were rrect information was supplied to	Complete	Identified				
Preventative actions tak	cen to ensure no further issues will occur	Completion date					
_	vork with contractors to ensure ormation is supplied to avoid these	Ongoing					

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

Code reference

Clause 10.31

Code related audit information

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

Audit observation

The new connection process was examined in **section 3.2**. The registry list, event detail report and audit compliance report were reviewed.

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.

I reviewed the 16 ICPs with late updates to "ready" status, which prevented the trader from being able to claim the ICP on the registry before initial electrical connection. For ten of the ICPs the trader had accepted responsibility for the ICP prior to initial electrical connection, and for the other six ICPs the trader had retrospectively agreed to the connection date. One consent was delayed by a change of proposed trader, and the other five were backdated connections for DUML or private streetlights.

I checked a diverse sample of 25 ICPs and confirmed trader approval was obtained prior to the initial electrical connection date.

New connections for shared unmetered load

There was one new connection for shared unmetered load for child ICP 1000613185PCAA8, and the trader accepted responsibility on the registry prior to the initial electrical connection date. There were no new connections for shared unmetered load parent ICPs.

Audit outcome

Non-compliant

Non-compliance	Description						
Audit Ref: 3.7 With: 10.31 From: 01-Mar-23 To: 30-Apr-24	For six ICPs the proposed trader had not provided acceptance prior to initial electrical connection, but retrospectively agreed to the connection date. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1						
Audit risk rating	Rationale	for audit risk rati	ing				
Low	The controls are rated as strong, and retrospectively agreed to the connect change of proposed trader, and the o DUML or private streetlights.	tion date. One co	nsent was delayed by a				
Actions tak	en to resolve the issue	Completion date	Remedial action status				
	as soon as they were identified to tion was supplied to registry.	Complete	Identified				

Preventative actions taken to ensure no further issues will occur	Completion date
Powerco is continuing to work with contractors to ensure complete and accurate information is supplied to avoid these errors.	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.

Audit commentary

An ICP will not normally be electrically connected without the agreement from the trader, who in turn has agreement with an MEP for the ICP. This audit identified some instances of backdated creation of ICPs for historic DUML and private streetlight load, and ICPs connected early by the contractor where trader approval was not formally provided before connection. Non-compliance is recorded in **sections 3.6** and **3.7**.

Any ICPs that are temporarily electrically connected follow the same process as all other new connections. The date of temporarily electrical connection should be recorded as the initial electrical connection date on the registry.

No genuine temporary electrical connections were identified during the audit period. The only ICPs which appeared to be temporarily electrical connected were confirmed to have been supplied from another ICP before the initial electrical connection date.

Audit outcome

Compliant

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

Code reference

Clause 10.30

Code related audit information

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

The distributor that initiates the connection under Part 11 and connects the NSP must, within 5 business days of connecting the NSP that is not a point of connection to the grid, advise the reconciliation manager of the following in the prescribed form:

- the NSP that has been connected,
- the date of the connection,
- the participant identifier of the MEP for each metering installation for the NSP,
- the certification expiry date of each metering installation for the NSP.

Audit observation

The NSP table was reviewed.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clauses 10.30A and 10.30B

Code related audit information

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

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

A distributor may only electrically connect an NSP if:

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

Audit observation

The NSP table was reviewed.

Audit commentary

No new NSPs were connected 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) of 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:

yyyyyyyyyxxccc where:

- yyyyyyyyy 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 145 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 of 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 registry list was examined to confirm all "active" ICPs have a single loss category code, and that it is consistent with the NSP region and pricing category.

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. For large ICPs the asset management group will advise the correct loss factor to be applied.

I checked the loss factors against the NSP region and pricing category for "active" ICPs on the registry list and did not identify any inconsistencies.

Audit outcome

Compliant

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

Code reference

Clause 13 of 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, event detail report and AC020 reports 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. This process is discussed in **section 3.4**.

The registry list did not record any ICPs at "new" status, which is very rarely used.

Audit outcome

Compliant

3.14. Monitoring of "new" & "ready" statuses (Clause 15 Schedule 11.1)

Code reference

Clause 15 of 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 calendar 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 and AC020 reports 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 are at "new" status. Six ICPs had been at "ready" status for more than 24 months and have been followed up with the trader withing the last ten months. Two of the ICPs are expected to be decommissioned, and Powerco is working with its approved contractors to arrange this.

Status	Number of ICPs at status as of 5 July 2024	Number of ICPs at status for more than 12 months	Number of ICPs at status for more than 24 months
New (999,0)	-	-	-
Ready (0,0)	120	36	6

Audit outcome

Compliant

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

Code reference

Clause 7(6) of schedule 11.1

Code related audit information

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

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

Audit observation

The EMI wholesale data set and registry list were reviewed to identify any generation stations with capacity of 10 MW or more and determine compliance.

Audit commentary

All generation stations with capacity of 10 MW or more 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

The new connection process was examined in relation to the electrical connection process.

Audit commentary

Powerco do not undertake electrical connections, this is the trader's responsibility as detailed in **section 3.2**.

New DUML ICPs also follow the new connection process set out in **section 3.2.** Additions of load to existing DUML ICPs follow the new connection process, except no ICP number is created. This helps to ensure that trader approval is provided prior to initial electrical connection.

Four new DUML ICPs had backdated updates to "ready" status in agreement with the trader and NZTA as discussed in **section 3.4**.

Audit outcome

Compliant

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

Code reference

Clauses 10.30C and 10.31C

Code related audit information

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

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

Audit observation

The disconnection process was examined.

Audit commentary

Powerco will only undertake an electrical disconnection when a request is received from a trader via the CIWR, or for safety. Disconnections are made at the pole fuse or pillar box. The disconnection is recorded in Powerco's safety tag register on Sharepoint, and the trader is emailed to advise them that the site is disconnected and the reason for disconnection. I reviewed examples of safety disconnections which confirmed the process.

Audit outcome

Compliant

3.18. Meter bridging (Clause 10.33C)

Code reference

Clause 10.33C

Code related audit information

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

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

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

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

Audit observation

Processes for meter bridging were reviewed.

Audit commentary

In rare circumstances Powerco may direct a contractor to bridge a meter to resolve a fault where the fault cannot be resolved due to safety concerns, the meter cannot be connected by other means and leaving the electricity supply disconnected would cause significant disadvantage or hardship to the customer.

If a meter is bridged by a Powerco contractor, Powerco notifies the responsible MEP and retailer via email within one business day as part of closing the work completion notice in CIWR.

No instances where Powerco or their contractors had bridged meters were identified during the audit.

Audit outcome

Compliant

4. MAINTENANCE OF REGISTRY INFORMATION

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

Code reference

Clause 8 of 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 ten 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.

In the case of a change to price category codes, where the change is backdated, no later than three business days after the distributor and the trader responsible for the ICP agree on the change.

Audit observation

The management of registry updates and NSP changes was reviewed. The AC020 report was reviewed to determine compliance.

A diverse sample of 82 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

Year	Total late	Percentage on time	Average business days	Within 10 business days	Within 20 business days	Within 60 business days	Within 350 business days	Within 4,903 business days
2020	107	97.98%	25.95	17	23	27	29	107
2021	51	98.94%	1.92	25	32	44	47	52

Year	Total late	Percentage on time	Average business days	Within 10 business days	Within 20 business days	Within 60 business days	Within 350 business days	Within 4,903 business days
2022	68	99.09%	1.45	38	45	57	64	68
2024	61	99.24%	0.4	28	39	48	58	61

The latest update was 412 business days after the event date. The ten latest updates, including all over 71 business days after the event date were made as part of the decommissioning process.

Network events - distributed generation

Year	Total late	Percentage on time	Average business days	Within 10 business days	Within 20 business days	Within 30 business days	Within 60 business days	Within 300 business days	Within 500 business days	Within 5,002 business days
2020	690	13.86%	22.62	358	519	561	627	684	687	690
2021	891	14.82%	44.66	458	640	709	772	836	882	891
2022	1,620	27.42%	32.95	868	1,151	1,277	1,425	1,547	1,591	1,620
2024	2,515	21.87%	43.58	1,277	1,725	1,917	2,095	2,378	2,465	2,515

The 20 latest updates were examined, to determine why they were late and whether the content was correct:

- 16 were delayed by late receipt of paperwork confirming that the ICP was generating,
- two had generation identified through Powerco's distributed generation validation process, and corrections were processed as soon as practicable,
- ICP 0080012208PC365 had a fuel type correction made as soon as practicable after paperwork was received, and
- one had an incorrect event date applied and was corrected during the audit.

ICPs 0000905540TU390 and 0000056812UN277 had incorrect event dates, and were corrected during the audit. The incorrect event dates are recorded as non-compliance in **sections 2.1** and **4.6**.

Network events - other

Year Total Within Within Within Within Within Within Within Percentage Average on time* busines 20 30 60 300 500 5,407 late 10 s days* busines busines busines busines busines busines busines s days 5,407 2020 5.407 51.88% 53.01 761 1.081 1.373 1.995 5.336 5.390 2021 2,879 68.71% 9.41 2,664 2,751 2,773 2,786 2,804 2,868 2,879 2022 5,042 66.49% 10.31 3,983 4,365 4,514 4,709 4,902 4,986 5,042

^{*} Value for all network updates, including distributed generation

Year	Total late	Percentage on time*	Average busines s days*	Within 10 busines s days	Within 20 busines s days	Within 30 busines s days	Within 60 busines s days	Within 300 busines s days	Within 500 busines s days	Within 5,407 busines s days
2024	8,435	57.69%	12.37	6,898	7,465	7,690	7,908	8,278	8,371	8,435

2,515 of the late updates were to distributed generation fields, which are discussed above. Excluding these there were 5,920 late updates to other network fields. I checked a sample of the 20 latest updates to non-generation fields (including all over 200 days after the event date), to determine why they were late and whether the content was correct:

- one record was replaced in error and immediately corrected,
- ten late updates were for corrections after attributes had been confirmed to be incorrect, and
- two late updates were changes to the proposed trader, after late advice from the proposed trader.

All of the late updates checked contained the correct event dates and attributes apart from 1000522354PCD90's 16 June 2024 update which was immediately corrected. This is not recorded as non-compliance because the information was corrected as soon as practicable.

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.

The ACO20 report recorded 69 ICPs where NSP changes were updated more than three business days after the event date. I checked a diverse sample of 25 late updates including each combination of NSP and date and confirmed that they were not genuine NSP changes and appeared on the report because the previous network update had been replaced with another with the same NSP.

Pricing events

Year	Total late	Within 10 business days	Within 20 business days	Within 30 business days	Within 90 business days	Within 350 business days	Within 1,000 business days	Within 1,526 business days
2020	2,170	1,645	2,072	2,135	2,158	2,168	2,170	2,170
2021	312	192	211	245	261	266	307	312
2022	3,586	1,729	3,013	3,533	3,569	3,584	3,586	3,586
2024	44,680	34,848	39,431	44,535	44,672	44,677	44,678	44,680

Powerco's approach to pricing changes and corrections remains unchanged. Pricing updates are usually only backdated at the retailer's request or where errors are identified. 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.

When work is completed which is likely to result in a price change, a load group change job is raised, and where the work is unlikely to result in a price change, a change to the existing supply job is raised. If the wrong job type is raised, pricing changes may sometimes be missed when processing the returned paperwork. Powerco staff are aware that incorrect job types can occasionally be applied and corrects the job type where errors are identified.

The AC020 report recorded 44,680 ICPs where pricing details were updated more than three business days after the event date. All 22 updates more than 50 business days late were examined and found to be corrections, either following late receipt of paperwork or a change of proposed trader, as part of the decommissioning reversal process, or upon Powerco or the trader identifying that a price change was required.

All of the updates were processed with the correct pricing attributes and event date, and either at the trader's request or with the trader's agreement where the change occurred due to late receipt of paperwork or a decommissioning reversal. For the sample checked, Powerco are compliant with clause 8 of schedule 11.1 which requires Powerco to update the registry within three business days of the Powerco and the trader agreeing to the backdated pricing change.

Status events

Year	Total late	Percentage on time	Average business days
2020	139	84.33%	13.32
2021	116	86.71%	15.37
2022	247	83.32%	11.11
2024	228	85.18%	8.98

The five largest differences between the event date and Powerco's update date, and five largest differences between the trader "inactive" update date and Powerco's update date were examined:

- two late updates were delayed because contractor information was unclear or logged against the wrong ICP,
- one update was late because a decommissioning event was reversed to allow the trader to correct their status pre decommissioning, and then needed to be re-decommissioned, and
- seven late updates were missed when a group of ICPs relating to RSA housing were demolished, but the contractor only provided decommissioning jobs for some of the houses; Powerco investigated and confirmed that all the houses were demolished and decommissioned and worked with the traders to decommission the ICPs.

The late updates were processed correctly.

Audit outcome

Non-compliant

Non-compliance		Description				
Audit Ref: 4.1	61 late address updates.	61 late address updates.				
With: 8 of schedule 11.1	·	2,515 late distributed generation updates.				
	5,920 late network updates (excluding the 2,515 late distributed generation updates).					
	Up to 44 late NSP changes.					
	228 late updates to decommissioned	status.				
	Potential impact: Low					
	Actual impact: Low					
	Audit history: Multiple times					
From: 01-Feb-23	Controls: Moderate					
To: 05-Jul-24	Breach risk rating: 2					
Audit risk rating	Rationale	Rationale for audit risk rating				
Low	I have rated the controls as moderate and many of the late updates related		gate the risk most of the time,			
	Depending on the type of late update customers and traders and the audit		ninor impact on settlement,			
Actions tak	en to resolve the issue	Completion date	Remedial action status			
appropriate effective date	correcting data inaccuracies to the as soon as they are identified. es and reporting will lead to less errors meliness of any updates	Ongoing	Identified			
Preventative actions tal	ken to ensure no further issues will occur	Completion date				
	vork with its contractors to maintain or providing information. Regular	Ongoing				

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

reporting provides Powerco with visibility of timeframes and

Powerco is continuing to improve reporting to identify errors quickly for correction and identify areas where processes

any issues are raised with contractors as required.

Code reference

Clauses 7(1), 7(4) and 7(5) of schedule 11.1

Code related audit information

and/or controls should be reviewed.

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 and AC020 reports were examined to determine compliance. I reviewed Powerco's weekly NSP mapping checks.

Audit commentary

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 reasonable), 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. Tableau reporting is also used to support these checks.

When NSP changes occur, the CWMS GIS transformer hierarchy is checked using a dashboard to ensure that transformer, feeder and NSP relationships are correct.

Review of the ACO20 reports identified 64 streets where 10% or fewer ICPs on the street have a different NSP to the other ICPs, and where the number of ICPs with a different NSP is less than three. 77 ICPs were affected, and for 69 the balancing area for both NSPs was the same. Two of the affected ICPs were created during the audit period.

The eight ICPs where the NSP assigned had a different balancing area to most of the ICPs on the street had the correct NSP recorded. Ten ICPs where the balancing area was the same for the NSP assigned and the NSP for most ICPs on the street were checked including the two created during the audit period, and I confirmed that the NSPs were correctly assigned.

There are 18 LE ICPs with "distributor" status on Powerco's network. All are connected to NSPs which are part of balancing areas containing more than one NSP and have the dedicated NSP flag set to yes. Powerco confirmed that the dedicated NSP status is correct because it is impractical to supply the ICPs from another NSP.

Audit outcome

Compliant

4.3. Customer queries about ICP (Clause 11.31)

Code reference

Clause 11.31

Code related audit information

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

Audit observation

The management of customer queries was examined.

Audit commentary

Powerco receives very few direct requests for ICP identifiers, and these are provided immediately once the customer confirms their address. Powerco also offers an online ICP checker at https://www.powerco.co.nz/fags/whats-my-icp-number.

Audit outcome

Compliant

4.4. ICP location address (Clause 2 Schedule 11.1)

Code reference

Clause 2 of 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 ensure ICP addresses are unique and readily locatable was examined. The registry list and AC020 reports 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 or contractor for further information if needed.

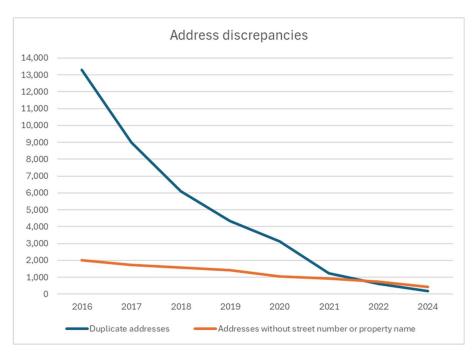
CWMS will not allow users to enter a duplicate address, or an address without either a street number or property name. Where street address information is unavailable, I saw evidence that Powerco will use lot numbers, pole and/or pillar numbers to aid address location. Lot numbers are replaced with street numbers when the supply moves from a metered builder's temporary supply to a permanent supply.

No ICPs with incomplete or duplicate addresses were created during the audit period.

Prior to the CWMS controls described above being implemented, some duplicate and incomplete ICP addresses were created. Powerco has made significant process in resolving addressing issues over recent years. 565 ICPs in total have duplicate and/or incomplete addresses a reduction from 1,279 in total during the last audit. Some ICPs are affected by both issues.

Address issue	2024	2022	2021	2020	2019	2018	2017	2016	Difference this year
Duplicate addresses	190	629	1,238	3,132	4,348	6,091	8,973	13,302	-439

Address issue	2024	2022	2021	2020	2019	2018	2017	2016	Difference this year
Addresses without street number or property name	442	727	925	1,062	1,423	1,584	1,733	2,013	-285



Powerco has continued to work through the exceptions, including reviewing fault and contractor site visit information to find more addressing details. I checked a sample of 32 of the exceptions that were still remaining and found:

- 18 had several dwellings close together with no street numbers,
- seven were on Rangiwa Island, which has no official street numbers, and
- seven were recently updated to unique complete addresses.

I validated NSP information against address information and did not identify any incorrect addresses.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.4	190 "active" ICPs have duplicate addresses.
With: 2 of schedule 11.1	442 "active" ICPs have addresses which do not have a street number or property name.
	Potential impact: Low
	Actual impact: Low
	Audit history: Multiple times
From: 01-Aug-21	Controls: Strong

To: 26-Aug-24	Breach risk rating: 1
Audit risk rating	Rationale for audit risk rating
Low	The controls are rated as strong as the new connection process is robust and the historic addresses are being resolved using as many tools as are available to Powerco.
	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.

Actions taken to resolve the issue	Completion date	Remedial action status
As noted in 2.2, Powerco is continuing to dedicate resources to resolve historic data issues, utilising information from multiple sources across the business.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	

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

Code reference

Clause 3 of 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. The "Guide to Powerco connection requirements" was reviewed.

Audit commentary

Powerco's "Guide to Powerco connection requirements" provides clear instruction in relation to this clause.

Powerco provides training on systems and network requirements for all new contractors and catch ups with contractors which include the connection and isolation requirements. Project managers are completing these catch ups as part of their performance goals.

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) of 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)(q) 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 one 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 and ACO20 report 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 and AC020 report 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 was not identified and corrected through Powerco's processes.

The majority of data accuracy issues identified were caused by CWMS' inability to record event dates for network events apart from changes to initial electrical connection dates. Network events contain NSP, dedicated NSP, unmetered load, distributed generation, and initial electrical connection dates as well as direct billed information which is not normally used by Powerco. The values in these fields can change independently, a common example would be an ICP is created at "ready" status with no initial electrical connection date and installation type L in 2020, it is connected and has an initial electrical connection date added in 2021, and then has distributed generation capacity, installation type B and fuel type updated in 2022.

Powerco has work arounds in place to correct dates for other 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

- necessary; CWMS workflows are used to ensure that this process occurs when generation is added, and
- when unmetered load changes occur, Powerco manually checks the registry and updates the event date if necessary.

Address information

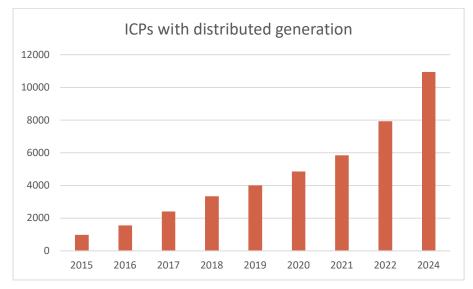
As discussed in **sections 2.2** and **4.2,** 565 ICPs in total have duplicate and/or incomplete addresses, a reduction from 1,279 in total during the last audit. Powerco is working through resolving these.

NSP information

Assignment of NSPs was reviewed in section 4.2 and no issues were identified.

Installation type and generation details

The list file recorded 10,944 "active" ICPs with a non-zero generation capacity. The table below tracks the number of ICPs with distributed generation by audit period end:



Distributed generation processes

In May 2024, Salesforce was implemented to manage distributed generation correspondence with customer and traders. CWMS is still used to manage registry information relating to distributed generation and this was not considered to be a material change. The process for distributed generation additions and removals is:

Process step	Process step description
Application	An application is made through Powerco's website. If the application is from Harrisons, they use the partner portal to create the application.
Application receipt	The application is received directly into CIW. This triggers creation of a Salesforce case, and the requestor is automatically sent an acknowledgement email and case number.
Application approval	An engineer approves any applications over 10 kW, and business rules are applied for applications under 10 kW. Any applications under 10 kW which don't meet the business rule requirements are referred to the generation engineer for manual approval.

Notification of approval	The result of the approval process is entered into Salesforce which generates an email to the Powerco approved contractor and customer stating whether the application is approved or declined, and the reasons it was declined if applicable.
Confirmation	The Powerco approved contractor confirms whether the quote is accepted, and the installation will go ahead and when.
Confirmed but not actioned	Salesforce generates an automated email if no paperwork has been received after the expected connection date, requesting a revised connection date or paperwork be provided. If there is no response to the email, the distributed generation team will follow up each week. The team monitors late paperwork and identifies trends and issues so that they can be followed up with the installer.
Actioned	The Powerco approved contractor completes the installation. Any paperwork including a work completion notice (WCN), certificate of compliance (CoC) and record of inspection (RoI) is added to Salesforce under the actioned tab, and new items are reviewed each morning.
	Distributed generation paperwork is reviewed by the connections team. Details are updated in CWMS and transferred to the registry through the synchronisation process. Powerco checks the registry manually the following morning and processes a manual update to the event date on the registry if necessary. CWMS workflows are used to ensure that this process occurs when generation is added.
Documents reviewed	Once the registry update has been completed the status is moved to documents reviewed.
Closure	Once the Powerco approved contractor has checked and labelled the fuses they are instructed to close the job. The job is closed in CWMS once the registry has been updated and event dates have been checked.

There are sometimes delays in receiving distributed generation paperwork, so Powerco uses the distributed generation report to identify ICPs with an I flow meter register and installation type L. It is compared to approved service orders in CIW, and any I flow volumes reported by traders on EIEP reports to identify instances where generation may have commenced. The ICPs are queried with the trader and/or customer 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.

If a certificate of compliance is received later and confirms a different date to what was advised, the event date will be updated.

Generation information completeness

The list file recorded 10,944 "active" ICPs with a non-zero generation capacity. All have installation type B or G, and a fuel type recorded.

The ACO20 report recorded 32 ICPs where the trader's profile indicated generation was present but no distributed generation details were recorded by Powerco:

- 18 were confirmed to have their distributed generation removed and Powerco's details were correct,
- five were timing differences and generation details were added or the generation profile was removed by the trader after the report was run,
- eight were confirmed not to have generation through review of Google satellite images showing no solar panels, review of the high-risk database, and checks for generation application information, and

• ICP 0000042634CP254 has an incomplete application for distributed generation in progress, and Powerco has requested the missing information.

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, the code of best fit is applied.

I checked the accuracy of fuel types by comparing them to the trader's profile:

- three ICPs had a solar fuel type with a profile that did not indicate solar, and review of high-risk database information confirmed that Powerco's fuel type was correct, and
- 14 ICPs had a fuel type of other or wind with a profile that indicated solar; Powerco's fuel type
 was confirmed to be correct for ten ICPs, and three ICPs were adjusted from other to solar +
 battery following investigation while ICP 1000570959PC8F5 is being checked to confirm if the
 fuel type is correct, a diary note from the engineer indicates that solar + battery may be present.

I checked the accuracy of generation details recorded on the registry for a sample of 20 ICPs. ICPs 0000905540TU390 and 0000056812UN277 had incorrect event dates, and were corrected during the audit.

Price and loss categories

Analysis of the list file found all "active" ICPs had a valid 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 108 "active" ICPs where trader unmetered load is recorded, but there are no distributor unmetered load details.

Two of the ICPs were created during the audit period, and both had DUML indicated by the trader. No other ICPs created during the audit period had trader unmetered load but no distributor unmetered load.

24 ICPs had distributor unmetered load recorded, but it was removed by a system error on 3 April 2024. Powerco is investigating why this occurred, and in the meantime has reinstated the records. Previous audits found there had been some issues with CWMS removing unmetered load details and other network attributes when processing networks updates. This most commonly occurs when a network attribute changes effective from a date earlier than other existing network updates.

Distributor unmetered load is recorded without trader unmetered load

All ICPs with unmetered load recorded by Powerco had the trader unmetered load flag set to Y.

Distributor unmetered load details differ from the trader unmetered load details

1,824 "active" ICPs have a value recorded in the distributor unmetered load details field.

For the 1,283 ICPs this information was in the format recommended in the Authority's Guidelines on Unmetered Load Management Version 2.1 and the ICPs were not DUML, and I compared the information to the trader's daily unmetered kWh. For 1,262 ICPs (98.3%) Powerco's value matched the trader's value within ±0.1 kWh. The other 21 ICPs were checked:

- for 20 ICPs Powerco's unmetered load details were confirmed to be correct, and
- for ICP 1000615008PCC7D the hours were incorrectly recorded due to a data entry issue and have been corrected; a comma was entered instead of a decimal point when adding 12.0 hours in CWMS and the comma was omitted when the update was sent by CWMS to the registry, updating to 120 hours.

The previous audit recommended that unmetered load be checked and confirmed for six ICPs and this has been completed. ICP 1000597535PC10A has confirmed to be DUML, but Powerco has retained their unmetered load details as they have checked them in the field and believes they are correct.

Shared unmetered load

The shared unmetered load field is only visible in the front end for parent shared unmetered load ICPs. The shared unmetered load details for child ICPs cannot be accessed in CWMS; this information needs to be maintained on the registry.

One new shared unmetered load child ICP 1000613185PCAA8 was connected on 8 April 2024, taking a share of the load of parent ICP 1000548564PC076. Shared unmetered load parent ICP 1000548564PC076 and child ICPs (0000049402CP1C4, 0000049403CPD81, 0000049404CP04B, 0000067578CPE01 and 0900087477PC9E1) had their unmetered load details updated to include child ICP 1000613185PCAA8 from 7 June 2023 but should have been updated effective from 8 April 2024; the event dates for the child ICPs have been corrected and all the affected traders have been notified. The parent ICP's records remain incorrect.

DUML

Powerco have been working with traders to cleanse DUML ICP information. This is complete for the western network and in progress for the eastern network. The process has involved checking ICPs to confirm that they have the correct feeder, transformer, substation and NSP assigned and that the ICP address information is clear and consistent. This process has identified some potentially redundant ICPs where there is more than one DUML ICP per feeder, and Powerco is consulting with the affected traders and database owners to confirm whether the ICPs should be made "inactive" or "decommissioned". Powerco is progressing the investigations as time and workloads allow.

DUML audits for streetlight databases on Powerco's network were reviewed to determine whether there were any issues relating to distributor unmetered load records. Where the DUML database owner contacts Powerco to resolve historic issues with private lights, Powerco will assist. Without notification from the database owner Powerco is not aware of private streetlights that require investigation, and they have requested that auditors notify them if they discover private lights which are not allocated to a DUML ICP that require investigation and action, so that they can liaise with the database owners to resolve the issues.

Database	Last audit date	Comment
Carterton District Council	22 May 2024	No issues noted.
Hauraki District Council	21 September 2023	No issues noted.
Manawatu District Council	20 February 2024	There are 76 lights (6,238 W) with an ICP number of private recorded in the database. It is expected that private lights will be metered through the customer's installation, or the network should create standard or shared unmetered load as appropriate. Powerco have contacted MDC regarding their private lights and is in the process of contacting consumers with private lights to

Database	Last audit date	Comment
		determine whether they are still required. If not required they will be decommissioned, and if required they will be allocated to a metered or unmetered load ICP. Powerco is hoping to resolve this by the end of the calendar year.
Masterton District Council	9 May 2023	No issues noted.
Matamata Piako District Council	12 December 2022	Five private lights recorded in the database and confirmed as not being reconciled elsewhere resulting in an estimated minor under submission of 1,657 kWh per annum.
		Powerco is working with Matamata Piako District Council to determine whether the lights are private and if the customer will take responsibility.
New Plymouth District Council	14 November 2023	There are 76 private streetlights (4,784 W) with an ICP number of private recorded in the database.
		New Plymouth District Council and Powerco have investigated and confirmed that most of the lights are metered. Powerco is working with New Plymouth District Council on the six remaining unmetered private lights at Govett Ave, Wallath Road and Vivian Street to determine whether the customer wishes to take responsibility for the lights, or they will be disconnected.
NZTA Greytown Wairarapa	26 May 2021	No issues noted.
Palmerston North City Council	18 March 2024	There are 90 lights with the ICP group recorded as "private" totalling 7,440 W.
		Powerco intends to work with the Palmerston North City Council to determine the locations of the affected lights and resolve the issues.
South Taranaki District Council	5 April 2024	No issues noted.
South Waikato District Council	19 May 2023	No issues noted.
South Wairarapa District Council	14 September 2023	No issues noted.
Stratford District Council	9 April 2024	No issues noted.
Tauranga City Council	3 November 2023	No issues noted.
Tauranga City Council Parks and Reserves	3 November 2023	No issues noted.
NZTA Tauranga	16 August 2022	No issues noted.

Database	Last audit date	Comment
Thames Coromandel District Council	16 May 2024	No issues noted.
Western Bay of Plenty District Council Parks	19 May 2023	No issues noted.
Western Bay of Plenty District Council	17 October 2023	There are 18 items of load where the ICP is recorded as "PRIVATE". They have always been excluded from reconciliation.
		Powerco intends to work with the Western Bay of Plenty District Council to determine the locations of the affected lights and resolve the issues.
Western Bay of Plenty NZTA	13 April 2021	No issues noted.

Event dates

Event dates are expected to be the date that the attributes applied from. I checked a sample of 4,559 network updates where the initial electrical connection date was populated, and found the correct event dates were applied. ICPs 0000905540TU390 and 0000056812UN277 had incorrect event dates for generation events, and were corrected during the audit.

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 ACO20 report recorded 29 ICPs where the initial electrical connection date differed from the meter certification date.

Exception	Qty	Qty incorrect	Comment
IECD = "active" date and IECD ≠ meter cert date	20	-	Powerco's IECDs are correct.
IECD ≠ "active" date and IECD = meter cert date	2	1	ICP 1000615987PCFE0 had an initial electrical connection date of 28 September 2023 populated but should have had 29 September 2023. The date was corrected during the audit.
IECD ≠ "active" date and IECD ≠ meter cert date	4	1	ICP 1000612234PC6FC had an initial electrical connection date of 2 May 2023 populated but should have had 3 May 2023. The date was corrected during the audit.
Total	29	2	

The ACO20 report recorded 13 ICPs at "inactive - new connection in progress" status, and no ICPs at "ready" status with initial electrical connection dates populated. All 13 were timing differences, and the status was updated to "active" after the report was run.

The ACO20 report identified 89 "active" ICPs commissioned after 29 August 2013 with no IECD populated. I checked a sample of 15 with "active" status dates in 2015 or later and confirmed that the ACO20 report contained some incorrect information and all the ICPs had initial electrical connection dates consistent with the "active" status date currently populated on the registry.

The ACO20 report identified 257 ICPs commissioned after 29 August 2013 with an initial electrical connection date which differed from the trader's "active" status date. All of the ICPs became "active" between 2013 and 2017. I checked the 15 most recently connected ICPs and confirmed that the ACO20 report contained incorrect information and all the ICPs had initial electrical connection dates consistent with the "active" status date currently populated on the registry.

Decommissioning of ICP 1000579462PC871 in error on 30 June 2022

ICP 1000579462PC871 was decommissioned in error effective 30 June 2022, based on work completion paperwork from a contractor who advised the meter was removed and the ICP was to be decommissioned.

Work was completed at a roundabout on Matapihi Road and Maunganui Road, Mount Maunganui which had NZTA Waka Kotahi streetlights. The contractor advised in October 2022 that the metering for ICP 1000579462PC871 was removed and the ICP could be decommissioned.

In 2024, the decommission was investigated with one of NZTA Waka Kotahi's consultants and Powerco found that the meter which was allegedly removed was installed in a cabinet on the other side of the roundabout and was recording consumption (165,804 kWh between its alleged decommissioning and August 2024).

It is unclear from paperwork provided by the contractor whether the meter was relocated or was always in this location, and the staff member responsible for the work is no longer employed by the contractor. Powerco reversed their decommission event in February 2024 and the ICP is now at "active" status with Manawa Energy for the period that the ICP was thought to decommissioned. Manawa Energy asked for evidence that the ICP was connected, and further investigation was completed confirming the new meter location and consumption.

The error occurred because the contractor's paperwork which Powerco relied upon was not complete and accurate. The matter is complicated by the NZTA Waka Kotahi ICPs changing trader during the period of the error, and that the correction was backdated more than 14 months. There has been a high impact on the trader and customer due to the backdated consumption.

Powerco changed their processes in late 2022 to require separate job types in CIW for streetlight reticulation changes and livening, which are checked closely to ensure that they are handled correctly.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.6 With: 7(1) of schedule 11.1	190 "active" ICPs have duplicate addresses. 442 "active" ICPs have addresses which do not have a street number or property name.
	Three ICPs had a fuel type of other and were corrected to solar + battery following investigation during the audit. ICPs 0000905540TU390 and 0000056812UN277 had incorrect event dates for generation events, and were corrected during the audit.

24 ICPs had unmetered load details removed on the registry on 3 April 2024 in error. The records were reinstated during the audit, and the cause of the error is being investigated by Powerco.

Unmetered ICP 1000615008PCC7D had incorrect on hours recorded and was corrected during the audit.

Shared unmetered load parent ICP 1000548564PC076 and child ICPs (0000049402CP1C4, 0000049403CPD81, 0000049404CP04B, 0000067578CPE01 and 0900087477PC9E1) had their unmetered load details updated to include child ICP 1000613185PCAA8 from 7 June 2023 but should have been updated effective from 8 April 2024; the event dates for the child ICPs have been corrected and all the affected traders have been notified. The parent ICP's records remain incorrect.

Some private lights in the Manawatu District Council, Matamata Piako District Council, New Plymouth District Council, Palmerston North City Council and Western Bay of Plenty regions do not have their load recorded against an ICP.

ICP 1000615987PCFE0 had an initial electrical connection date of 28 September 2023 populated but should have had 29 September 2023. The date was corrected during the audit.

ICP 1000612234PC6FC had an initial electrical connection date of 2 May 2023 populated but should have had 3 May 2023. The date was corrected during the audit.

ICP 1000579462PC871 was decommissioned in error effective 30 June 2022, based on work completion paperwork from a contractor who advised the meter was removed and the ICP was to be decommissioned. The decommissioning event was later reversed, and 165,804 kWh was under reported during the period the ICP was thought to be decommissioned.

Potential impact: High Actual impact: High

Audit history: Multiple times

Controls: Strong
Breach risk rating: 3

From: 01-Aug-21

To: 26-Aug-24

Audit risk rating	Rationale for audit risk rating		
High	I have rated the controls as strong overall, as there are strong controls over validation and accuracy:		
	 the decommissioning error occurred because the paperwork was incorrect, although it did appear reasonable based on the work Powerco expected to be completed, 		
	 the incorrect event dates for distributed generation changes occurred because CWMS does not allow the user to select an event date for these updates, but in most cases Powerco's manual controls ensure the correct event dates are applied, 		
	 no new ICPs had incomplete or inaccurate addresses, and Powerco is working through resolving historic discrepancies, 		
	 Powerco is working through investigating and resolving potentially unmetered private lights with no ICP numbers, and 		
	a very small number of incorrect initial electrical connection dates were identified.		

The impact is high overall because 165,804 kWh was under submitted for the ICP
which was decommissioned in error. The impact of the other exceptions is low.

Actions taken to resolve the issue	Completion date	Remedial action status			
Powerco actively communicates with traders and contractors to ensure correct information and dates are being sent to registry. Powerco is continuing to dedicate resources to resolve historic data issues, utilising information from multiple sources across the business.	Ongoing	Identified			
Preventative actions taken to ensure no further issues will occur	Completion date				
As noted in 2.2, systems and processes prevent the creation of new exceptions and Powerco will continue to correct errors in its weekly and ad-hoc reporting.	In Place				

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) of schedule 11.1

Code related audit information

The distributor must provide the following information to the registry no later than ten 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 and AC020 reports 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. No late price category updates were recorded on the AC020 report.

Audit outcome

Compliant

4.8. GPS coordinates (Clause 7(8) and (9) Schedule 11.1)

Code reference

Clause 7(8) and (9) of 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 was reviewed to determine compliance.

Audit commentary

One Powerco ICP (0031630929PC7E2) has GPS coordinates recorded on the registry. I mapped the coordinates and confirmed that they are in NZTM2000 format and were consistent with the ICP location.

Audit outcome

Compliant

4.9. Management of "ready" status (Clause 14 Schedule 11.1)

Code reference

Clause 14 of 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 and AC020 report were examined to determine compliance.

Audit commentary

ICPs are only created at "new" status if a network extension is required, or a new unmetered load ICP is not yet ready for connection. Other ICPs 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 120 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 of 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 and AC020 report were examined to determine compliance.

Audit commentary

There are 66 ICPs with "distributor" status.

18 are points of connection between embedded networks and the Powerco network. One new embedded network was created during the audit period and a new LE ICP was created.

The remaining 48 are shared unmetered load parent ICPs, and all were created prior to 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 of 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 and ACO20 report 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

Powerco decommissions ICPs once approval has been received from the customer and trader, and the trader has moved the ICP to "inactive - ready for decommissioning" status.

The previous audit recommended a process be developed to manage ICPs at "ready for decommissioning" status where no request for decommissioning has been received from the trader. Powerco is working through the outstanding ICPs as a project starting with most recent ICPs and work

backwards. Powerco is also working with Genesis who is the trader for many of the oldest ICPs at "ready for decommissioning" status, to investigate and decommission the ICPs.

Examination of the list file found 2,256 ICPs are at "ready for decommissioning" status:

Number of ICPs 2024	Number of ICPs 2022	Number of ICPs 2021	Number of ICPs 2020	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017	Number of ICPs 2016
2,256	2,284	2,335	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 1 February 2023 and 4 July 2024:

Current status	Percentage	Count
Decommissioned	97.48%	1,550
Ready for decommissioning	1.19%	19
Returned to "active" status	1.13%	18
Returned to a different "inactive" status	0.19%	3
Total		1,590

I checked a sample of ten ICPs which have been at "ready for decommissioning" status for the whole audit period (since before 1 February 2023) and found that they had not been decommissioned because no request for decommissioning had been received, and in some cases the address/location also cannot be confirmed. Powerco is working with the trader to confirm that the ICPs can be decommissioned and has offered to make a contribution towards the cost of a site visit.

A sample of ten decommissioned ICPs were checked and confirmed to have the correct decommissioning date recorded.

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 of 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 two months after the date the code is entered in the table.

A price category code takes effect on the specified date.

Audit observation

I examined the price category code table on the registry, and application of price category codes on the registry list.

Audit commentary

Powerco created 16 new price category codes effective from 1 April 2024. The price category codes were added on the registry more than two calendar months before they came into effect.

No price category codes were end dated during the audit period.

Audit outcome

5. CREATION AND MAINTENANCE OF LOSS FACTORS

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

Code reference

Clause 21 of 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 of 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

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

Clauses 11.8 and 25 of schedule 11.1

Code related audit information

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

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

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

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

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

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

Audit observation

The NSP table was examined.

Audit commentary

No NSPs were created or decommissioned by Powerco during the audit period. The TMB0011 embedded network was created by TENC during the audit period.

Audit outcome

Compliant

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

Code reference

Clauses 26(1) and (2) of 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 ten business days before the NSP is electrically connected, in respect of an NSP that is an interconnection point between two local networks. In all other cases, the request must be made at least one month before the NSP is electrically connected or the ICP is transferred.

Audit observation

The NSP table was examined.

Audit commentary

No NSPs were created or transferred 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

Clauses 24(1) and 26(3) of 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 examined.

Audit commentary

No new balancing areas were created by Powerco 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) of 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 one 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

Clauses 24(2) and (3) of 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 three business days after the change takes effect.

Audit observation

The NSP table was reviewed.

Audit commentary

No balancing area changes were made by Powerco 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 of 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

6.7. Notification of transfer of ICPs (Clause 1 to 4 Schedule 11.2)

Code reference

Clauses 1 to 4 of 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 three 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

Clauses 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

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

Code reference

Clause 10.25(2)

Code related audit information

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

- assume responsibility for being the metering equipment provider (clause 10.25(2)(a)(i)); or
- contract with a metering equipment provider to be the MEP (clause 10.25(2)(a)(ii)); and
- no later than 20 business days after identifying the MEP advise the reconciliation manager in the prescribed form of the reconciliation participant for the NSP (clause 10.25(2)(b)); and
- no later than five business days after the date of certification of each metering installation, advise the reconciliation manager of
 - a) the MEP for the NSP (clause 10.25(2)(c)(i)); and
 - b) the NSP of the certification expiry date (clause 10.25(2)(c)(ii)),
 - 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 or NSPs which are not points of connection to the grid.

Audit outcome

Compliant

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

Code reference

Clause 29 of 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 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 of 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

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

Code reference

Clause 6 of 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

7. MAINTENANCE OF SHARED UNMETERED LOAD

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

Code reference

Clauses 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 registry list was examined, and the streetlight audits of the network were assessed.

Audit commentary

There are 48 shared unmetered load parent ICPs.

One new shared unmetered load child ICP 1000613185PCAA8 was connected on 8 April 2024, taking a share of the load of parent ICP 1000548564PC076.

Shared unmetered load parent ICP 1000548564PC076 and child ICPs (0000049402CP1C4, 0000049403CPD81, 0000049404CP04B, 0000067578CPE01 and 0900087477PC9E1) had their unmetered load details updated to include child ICP 1000613185PCAA8 from 7 June 2023 but should have been updated effective from 8 April 2024; the event dates for the child ICPs have been corrected and all the affected traders have been notified. The parent ICP's records remain incorrect.

To prevent recurrence of this issue, Powerco has developed a tableau report to identify missing shared unmetered load.

Compliance is recorded in this section because notice was provided, but non-compliance is recorded in sections 2.1 and 4.6 for the inaccurate event dates.

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 378 "active" and "inactive" child ICPs across 50 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.

As discussed in **section 7.1**, one new shared unmetered load child ICP 1000613185PCAA8 was connected on 8 April 2024, taking a share of the load of parent ICP 1000548564PC076. shared unmetered load parent ICP 1000548564PC076 and child ICPs (0000049402CP1C4, 0000049403CPD81, 0000049404CP04B, 0000067578CPE01 and 0900087477PC9E1) had their unmetered load details updated to include child ICP 1000613185PCAA8 from 7 June 2023 but should have been updated effective from 8 April 2024; the event dates for the child ICPs have been corrected and all the affected traders have been notified. The parent ICP's records remain incorrect.

All child ICPs with shared unmetered load had a trader, the unmetered flag set to yes and a daily unmetered kWh recorded on the registry.

Compliance is recorded in this section because notice was provided, but non-compliance is recorded in sections 2.1 and 4.6 for the inaccurate event dates.

Audit outcome

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 1 April 2024 loss factor review.

Audit commentary

Powerco's last loss factor review was completed 1 April 2024 based on data for the 24 months from November 2021 to October 2023 and considered each balancing area. Powerco's loss factor calculation methodology is published on Powerco's website. The methodology was designed to meet the requirements of the loss factor guidelines.

The review showed that once data for KIN0112POCOG was excluded, loss factors were within the $\pm 1\%$ threshold indicated in the guideline by the Authority.



I compared this to the EMI UFE data for a sample of months and confirmed that the only differences between Powerco's data and the EMI data were the volumes for KIN0112POCOG. Due to the way in which this NSP which has one consumer is reconciled, 100% of volume at the NSP is classified as UFE which distorts Powerco's UFE totals in the EMI report, making it appear as though Powerco's UFE across all balancing areas is outside the threshold. The EMI UFE information showed that the 12-month rolling UFE ratio is +1.861% for the year ending June 2024 and has varied between a +1.861 and +2.074% rolling 12-month UFE ratio over the past year. It is reasonable to exclude this NSP because it is not genuine UFE.

Powerco's review concluded that the loss factors were in general slightly too high. The review proposed some loss factor changes but recommended that the changes were held until the 2025 financial year to minimise the impact. Investigation found the largest UFE differences were in the Valley

balancing areas and were caused by fluctuations in usage for large customers, and back feeding processes causing spikes and corresponding dips within the different Valley balancing areas. Powerco intends to address these issues by combining some balancing areas to better reflect how they are fed and adding some new individual loss factors over the coming years.

Powerco has one residual load SB ICP, and I confirmed that the loss factor was correctly set to 1.

Audit outcome

CONCLUSION

Powerco have a high level of compliance. Powerco have a high level of compliance. Historic data accuracy issues continue to be a focus, with improvements made to the volumes of ICPs with incorrect or incomplete addresses, progress investigating and creating ICPs for genuinely unmetered private streetlights not reconciled under distributed unmetered load ICPs, and ICPs which have been at "inactive - ready for decommissioning" status for extended periods. Previous audit recommendations have been adopted.

This audit found ten non-compliances and makes no recommendations. The majority of the non-compliances were caused by late updates, the provision of trader acceptance, and data inaccuracies.

The audit frequency table indicates that the next audit is due in 12 months. I recommend that the next audit is due in 18 months, after considering:

- that the level of compliance is high and robust validation processes are in place, and
- that eight of the ten non-compliances have a strong control rating indicating that the noncompliances found are exceptions and processes in place are robust and mitigate risk where possible.

PARTICIPANT RESPONSE

Powerco appreciates the importance of our Code obligations. We take pride that this audit has recognised our focus on continual improvement and our continued high level of compliance. Data quality and historic data corrections will continue to be our focus in the next audit period.

We will continue to improve the accuracy of data and ensure the appropriate reconciliation of streetlights in our footprint by ongoing collaboration with Waka Kotahi, councils, contractors and traders. In addition, we will be actively investigating options around the systems we are using to seek further improvements to meet our obligations in the Code.

Powerco will continue to refine its processes to strengthen controls and improve the ongoing compliance with our obligations in the Code.