VERITEK

Electricity Industry Participation Code Reconciliation Participant Audit Report

For

Powershop

Prepared by Steve Woods – Veritek Ltd

Date of Audit: 20/06/17 & 21/06/17

Date Audit Report Complete: 22/08/17

Date Audit Report Due: 23/08/17

Executive Summary

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Powershop New Zealand Ltd (Powershop)**.

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.1.

The audit found 19 non-compliance issues. Six of these relate to switching and four relate to registry updates. Improvements have been made in a number of areas during the audit period, as follows:

- registry update timeframes have improved significantly
- the number of late switching files has improved
- forward estimate thresholds were met for all balancing areas
- registry management processes are compliant.

A change came into effect on October 9th, 2015 requiring that "a switch event meter read applies to the end of the day prior to the event date for the losing trader and the start of the event date for the gaining trader." Some midnight reads from AMI sites are still being sent as estimates when they should be actuals. In addition, the October 9th 2015 Code change requires losing traders to use the gaining trader's switch event meter reading if it is from an AMI site. Powershop is rejecting some read change requests and is not always using these reads as required.

Two new issues were found with historic estimates. Firstly, historic estimates are being identified as forward estimates when a shape file is not used and secondly, a "removal reading" was ignored by the system and a forward standard estimate was conducted.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The table below provides some guidance on this matter and contains a future risk rating score of 35, which results in an indicative audit frequency of 12 months. Considering this result along with the proposed solutions to the matters raised, I believe 12 months is an appropriate recommendation.

The matters raised are shown in the tables below:

Table of Non-Compliance

Subject	Section	Clause	Non compliance	Indicative Impact	Audit History	Procedures	Remedial Action
Changes to registry information	3.3	10 of schedule 11.1	Not all status changes made within 5 business days.	Moderate	Low	2	Identified
Provision of registry information	3.5	9 of schedule 11.1	Some late changes to Active. Some late MEP notifications.	Strong	Low	1	Identified

Subject	Section	Clause	Non compliance	Indicative Impact	Audit History	Procedures	Remedial Action
ANZSIC codes	3.6	9(1)(k) of schedule 11.1	14 of 20 incorrect ANZSIC codes.	Moderate	Low	2	Identified
Unmetered load	3.7	9(1)(f) of schedule 11.1	5 ICPs with incorrect unmetered load figures.	Moderate	Low	2	Identified
Inactive status	3.9	19 of schedule 11.1	Some ICPs have an incorrect inactive status.	Moderate	Low	2	Identified
Switching	4.2	3 of schedule 11.3	1 late AN file.	Strong	Low	1	Cleared
	4.4	6 of schedule 11.3	3 late RR files.	Strong	Low	1	Cleared
	4.5	6(3)(b)of schedule 11.3	Some RR files rejected which were for AMI sites and contained actual reads.	Weak	Low	3	Identified
	4.10	11 of schedule 11.3	10 late CS files.	Moderate	Low	2	Identified
	4.11	12 (2B)(b) & (3) of schedule 11.3	10 late RR files. Some RR files rejected which were for AMI sites and contained actual reads.	Weak	Low	3	Identified
	4.15	17 of schedule 11.3	23 late NW files.	Strong	Low	1	Identified
Electricity conveyed	6.1	10.12 and 10.24 of part 10	Meters bridged at 3 ICPs.	Strong	Low	1	Identified
Phase failure monitoring	6.6	5(c) of schedule 15.2	Phase failure monitoring not conducted by Datacol.	Moderate	Low	2	Investigating
Interrogate meters once	6.8	7(1) and 7(2) of Schedule 15.2	No process for getting meter readings during the period of supply.	Weak	Low	3	Identified
AMI events	9.6	17 of schedule 15.2	AMI event information not routinely monitored. No event information from ARC.	Moderate	Low	2	Identified
Permanence of meter readings	12.8	4 of Schedule 15.2	Some estimates not replaced at R14. Some incorrect labelling of HE as FSE.	Moderate	Low	2	Not planned

Subject	Section	Clause	Non compliance	Indicative Impact	Audit History	Procedures	Remedial Action
Accuracy of submission information	12.9	2 of schedule 15.3	Incorrect submission information.	Moderate	Medium	4	Identified
FE and HE	12.10	3 of schedule 15.3	Incorrect labelling of HE as FE.	Moderate	Low	2	Identified
Proportion of HE	13.4	10 of Schedule 15.3	Historic estimate targets were not met for all revisions.	Strong	Low	1	Identified
					Future Risk Rating	**37**	
					Indicative Audit Frequency	**12 Months**	

Future risk rating	0	1-3	4-15	16-40	41-55	55+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

Table of Recommendations

Subject	Section	Clause	Recommendation for Improvement	Remedial Action
Electricity supplied	11.3	15.7 of part 15	Check the difference between electricity supplied and submission totals to confirm accuracy.	Investigating

Persons Involved in This Audit:

Auditor:

Steve Woods
Veritek Limited
Electricity Authority Approved Auditor

Powershop personnel assisting in this audit were:

Name	Title
Stefan Kirkwood	Market Operations Manager
Melanie Matthews	Quality and Compliance Advisor
Sophie Matthews	Billing and Field Services Team Leader
Anna Groves	Billing & Field Services Specialist
Chris Parkinson	Billing and Field Services Specialist
Delani Lambert	Billing & Field Services Specialist

Contents

1. Pre-Audit and Operational Infrastructure Information

1.1 Summary of Previous Audit

Powershop provided a copy of their previous audit conducted in May 2015 by Steve Woods of Veritek Limited. There were 16 non-compliances found and no recommendations were made. The status of these have been updated in the table below.

Table of Non-Compliance

Subject	Section	Clause	Non Compliance	Status
Switching	2.1.2	3 of schedule 11.3	1 late AN file.	Cleared
	2.1.4	5 of schedule 11.3	34 late CS files.	Still existing
	2.1.5	6 of schedule 11.3	2 late RR files.	Cleared
	2.2.2	10 of schedule 11.3	12 late AN files.	Cleared
	2.2.3	11 of schedule 11.3	68 late CS files.	Still existing
	2.2.4	12 of schedule 11.3	10 late RR files.	Still existing
Registry notifications	2.7.2	Clause 9 of schedule 11.1	Registry not updated within 5 days of commencement of trading. Some incorrect Active dates and one date missing.	Still existing
	2.7.3	Clause 10 of schedule 11.1	Registry not updated within 5 business days.	Still existing
Registry discrepancies	2.7.8	9(1)(d) & 11 of schedule 11.1	Registry discrepancies found in the list file.	Still existing
ANZSIC Codes	2.7.9	9(1)(k) of schedule 11.1	4 active ICPs with no ANZSIC codes.	Cleared
Meter reading requirements	3.4	Clauses 7 (1) & (2) of schedule 15.2	Not all ICPs read during the period of supply.	Still existing
Bridged meters	4.2.4	10.12 & 10.24	Some meters bypassed leading to no consumption being recorded.	Cleared
Permanence of meter readings	6.1.2	4 of schedule 15.2	Some estimates not replaced at R14.	Still existing
Provision of submission information	6.1.3	2 of schedule 15.3	Some volume was not submitted for the active period for some ICPs that became disconnected.	No examples found
Forward estimate accuracy	6.1.5	6 of schedule 15.3	FE accuracy threshold not met for some months for some balancing areas.	Cleared
HE reporting to RM	6.2.4	10 of schedule 15.3	Thresholds not met for some revisions for some months.	Still existing

Table of Recommendations

Subject	Section	Clause	Recommendation for Improvement	Status
			Nil	

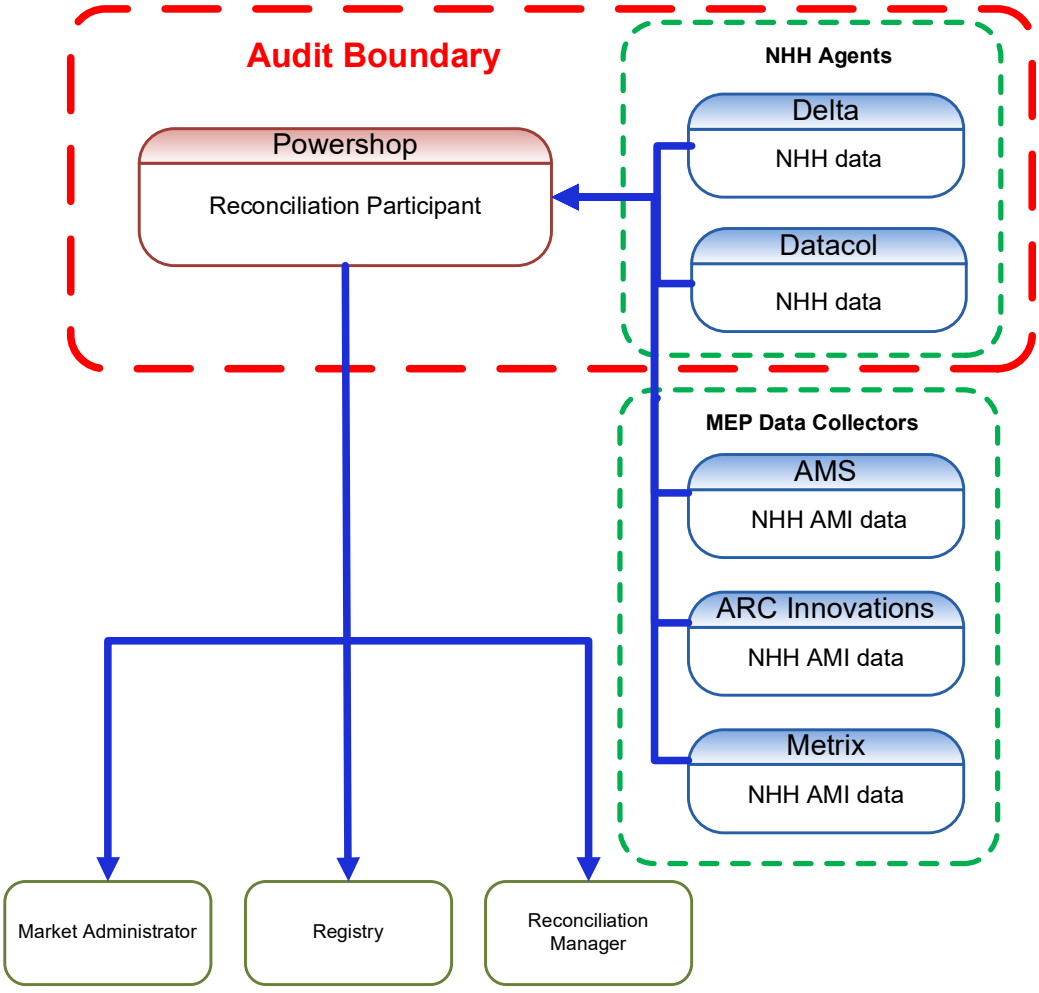
1.2 Scope of Audit

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of Powershop to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1.

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.1.

The audit was carried out at Powershop's premises, on June 20th and 21st 2017.

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



The table below shows the tasks under clause 15.38 of part 15 for which Powershop requires certification. This table also lists those agents who assist with these tasks:

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks
(a) - Maintaining registry information and performing customer and embedded generator switching	
(b) – Gathering and storing raw meter data	Datacol – NHH Delta - NHH
(c)(ii) - Creation and management of volume information	
(d) – Calculation of ICP days & delivery of a report under clause 15.6	
(da) - delivery of electricity supplied information under clause 15.7:	
(e) – Provision of submission information for reconciliation	

The agents listed above have been audited in accordance with the Guidelines for Reconciliation Participant Audits V6.2. Their audit reports are attached as appendices.

ARC Innovations, Metrix and AMS provide NHH AMI data to Powershop. This activity is conducted by these parties as MEPs not as Reconciliation Participant agents, so they are subject to their own audit regime as MEPs.

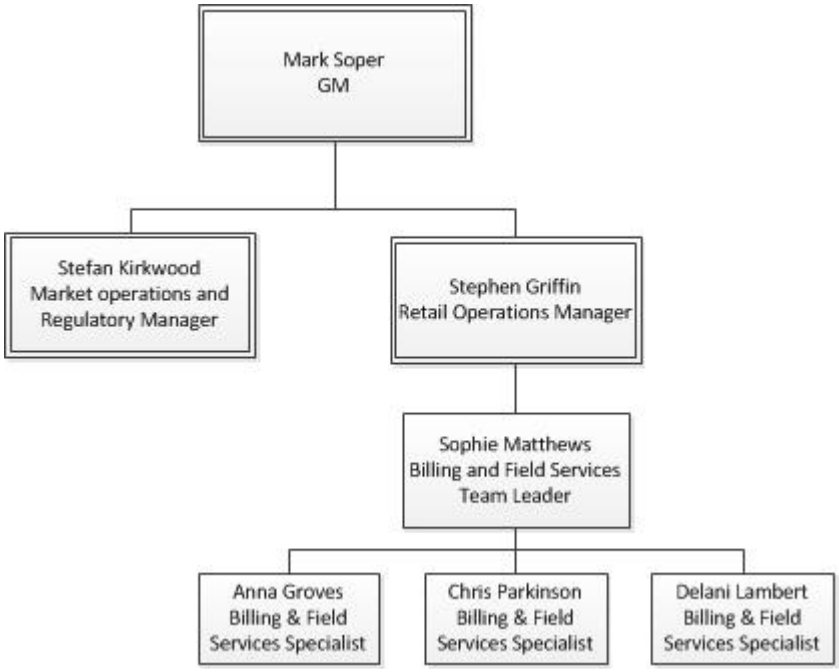
1.3 Exemptions From Obligations to Comply With Code (Section 11 of Electricity Industry Act 2010)

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.

Powershop confirms there are no exemptions in place that are relevant to the scope of this audit.

1.4 Organisation Structure

Powershop has provided an organisation chart of the relevant part of their structure, which is shown below.


Mark Soper
GM
Stefan Kirkwood
Market operations and
Regulatory Manager
Stephen Griffin
Retail Operations Manager
Sophie Matthews
Billing and Field Services
Team Leader
Anna Groves
Billing & Field
Services Specialist
Chris Parkinson
Billing & Field
Services Specialist
Delani Lambert
Billing & Field
Services Specialist

1.5 Use of Agents (Clause 15.34 of Part 15)

A reconciliation participant who has obligations under this Part may discharge those obligations by way of an agent. A reconciliation participant who utilises an agent to discharge an obligation under this Code remains responsible and liable for, and is not in any way released from, that obligation. A reconciliation participant must not assert, against anyone, that it is not responsible or liable for its obligations because the reconciliation participant's agent has done or not done something or has failed to meet a relevant standard.

Powershop has engaged the agents listed in the audit scope section. They understand their obligations and all functions conducted by agents have been subject to audit. Compliance is confirmed.

Powershop uses the following agents in relation to the functions covered by the scope of this audit:

- Datacol NHH data collection
- Delta NHH data collection.

NHH AMI data is provided by the following MEPs. As mentioned in Section 1.2, this activity is conducted by these parties as MEPs not as Reconciliation Participant agents, so they are subject to their own audit regime as MEPs.

- ARC Innovations NHH data collection
- AMS NHH data collection
- Metrix NHH data collection
- SmartCo NHH data collection.

1.6 Hardware and Software

Hosting is provided by IcoNZ (primary site) and Xtreme Networks (secondary site).

Powershop data is synchronised in real time to a slave database in the currently operational live site, and also synchronised to the current secondary site. In addition to this, backups are taken daily, written to tape, and sent to a secure third party remote location. Backups are periodically tested to ensure successful restore processes.

The Database used is MySQL
http://www.mysql.com/

Application server layer is Ruby on Rails
http://www.rubyonrails.org/

The system was built by Powershop and continues to be operated in-house.

1.7 Breaches or Breach Allegations

Powershop has had three breach allegations recorded by the Electricity Authority during the audit period. The details are as follows:

1. Incorrect AN codes used. The committee decided to take no further action.
2. Contacting the customer of a protected trader before the finalisation of a switch. The committee decided to take no further action.
3. Misleading information in a withdrawal notice. It was decided Powershop had not breached the Code.

1.8 ICP Data

Powershop provided a list file as at June 2017.

ICP Status	Number of ICPs 2017	Number of ICPs 2016	Number of ICPs 2015	Number of ICPs 2014
Active (2)	60,056	57,911	57,937	56,269
Inactive- new connection in progress (1,12)	47	43	89	69
Inactive- de-energised remotely by AMI meter (1,7)	6	3	0	0
Inactive – disconnected at meter box (1,11)	1	0	0	0
Inactive – vacant (1,4)	549	431	544	7
Inactive – ready for decommissioning (1,6)	24	25	28	3
Decommissioned (3)	1,692	1,439	1,233	401

All active ICP's are summarised by meter category in the table below.

Category	2017	2016	2015	2014	2013	2012
1	59,062	57,056	57,146	55,625	51,362	45,813
2	978	838	778	623	556	449
9	8	1	3	10	-	-
Blank	8	15	10	11	-	-
0	N/A	NA	NA	NA	1	-

1.9 Authorisation Received

A letter of authorisation was not required or sought.

2. Operational Infrastructure

2.1 Relevant Information (Clause 10.6 of Part 10 & Clause 11.2 of Part 11 &15.2 of Part 15)

A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under Part 15 is:
(a) complete and accurate
(b) not misleading or deceptive
(c) not likely to mislead or deceive.

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

Audit Observation
The process to find and correct incorrect information was examined. The list file was examined to confirm that all information was correct and not misleading, and to identify any registry discrepancies. The registry validation process was examined in detail in relation to the achievement of this requirement.

Audit Commentary
The audit found several examples where corrections were required and they were all conducted as soon as practicable. Compliance is confirmed.

2.2 Provision of Information (Clause 15.35)

If an obligation exists to provide information in accordance with Part 15, a participant must deliver that information to the required person within the timeframe specified in the Code, or, in the absence of any such timeframe, within any timeframe notified by the Authority. Such information must be delivered in the format determined from time to time by the Authority.

Audit Observation
Processes to provide information were reviewed and observed throughout the audit.

Audit Commentary
This area is discussed in a number of sections in this report and compliance is confirmed with regard to timeliness and format of information in accordance with Part 15.

2.3 Data Transmission (Clause 20 of Schedule 15.2)

Transmissions and transfers of data related to metering information between reconciliation participants or their agents, for the purposes of the Code, must be carried out electronically using systems that ensure the security and integrity of the data transmitted and received.

Audit Observation

I observed the relevant SFTP folders for each agent and MEP to confirm compliance.

Audit Commentary

All data is provided by SFTP. Compliance is confirmed.

2.4 Audit Trails (Clause 21 of Schedule 15.2)

Each reconciliation participant must ensure that a complete audit trail exists for all data gathering, validation, and processing functions of the reconciliation participant.

The audit trail must include details of information:
- provided to and received from the registry
- provided to and received from the reconciliation manager
- provided and received from other reconciliation participants and their agents.

The logs must include (at a minimum) the following:
- an activity identifier (clause 21(4)(a))
- the date and time of the activity (clause 21(4)(b))
- the operator identifier (clause 21(4)(c)).

Audit Observation

A complete audit trail was checked for all data gathering, validation and processing functions. I reviewed audit trails for a small sample of events. Large samples were not necessary because audit trail fields are expected to be the same for every transaction of the same type.

Audit Commentary

A complete audit trail was viewed for all data gathering, validation and processing functions. The logs of these activities include the activity identifier, date and time and an operator identifier.

2.5 Retailer Responsibility for Electricity Conveyed - Participant Obligations (Clause 10.4)

If a participant must obtain a consumer's consent, approval, or authorisation, the participant must ensure it:
- extends to the full term of the arrangement
- covers any participants who may need to rely on that consent.

Audit Observation

I reviewed Powershop's current terms and conditions.

Audit Commentary

The terms and conditions include arrangements for meter access and shutdowns, and these clauses extend to agents. Compliance is confirmed.

2.6 Retailer Responsibility for Electricity Conveyed - Access to Metering Installations (Clause 10.7(2),(4),(5) and (6))

The responsible reconciliation participant must, if requested, arrange access for the metering installation to the following parties:

- the Authority

- an ATH

- an auditor

- an MEP

- a gaining metering equipment provider.

Audit Observation

I reviewed Powershop's current terms and conditions, and discussed compliance with these clauses.

Audit Commentary

Powershop's contract with their customers includes consent to access for authorised parties for the duration of the contract. Powershop confirmed that they have been able to arrange access for other parties when requested. This was observed with the meter reading process and with the field services process. Compliance is confirmed.

2.7 Physical Location of Metering Installations (Clause 10.35(1)&(2))

A reconciliation participant responsible for ensuring there is a category 1 metering installation or category 2 metering installation must ensure that the metering installation is located as physically close to a point of connection as practical in the circumstances.

A reconciliation participant responsible for ensuring there is a category 3 or higher metering installation must:

(a) if practical in the circumstances, ensure that the metering installation is located at a point of connection; or

(b) if it is not practical in the circumstances to locate the metering installation at the point of connection, calculate the quantity of electricity conveyed through the point of connection using a loss compensation process approved by the certifying ATH.

Audit Observation

A discussion was held regarding knowledge of any ICPs with loss compensation present. The presence of loss compensation factors was also checked by examining multipliers on the registry for a sample of five Category 2 ICPs.

Audit Commentary

Powershop is not responsible for any metering installations with loss compensation factors.

2.8 Trader Contracts to Permit Assignment by the Authority (Clause 11.15B of Part 11)

A trader must at all times ensure that the terms of each contract between a customer and a trader permit the Authority to assign the rights and obligations of the trader under the contract to another trader if the trader commits an event of default

Audit Observation

I reviewed Powershop's current terms and conditions.

Audit Commentary

Powershop's terms and conditions contain the appropriate clauses to achieve compliance with this requirement. Compliance is confirmed

2.9 Electrical Connection of an ICP (Clause 10.32)

A reconciliation participant must only request electrical connection of a point of connection if they:
- accept responsibility for the ICP and the obligations under Parts 10 and 11, and, under Part 15; and
- have an arrangement with an MEP to provide metering at the point of connection under Part 15.

Audit Observation

The new connection process was examined in detail to evaluate the strength of controls. The list file and event detail report for the six months from 01/01/17 to 31/03/17 were analysed to confirm process compliance and that controls are functioning as expected.

Audit Commentary

The new connection process is compliant and contains a step for Powershop to accept responsibility. I checked the records for ten new connections and in all cases, Powershop had accepted responsibility.

Powershop has arrangements in place with all MEPs, either a signed contract or an exchange of correspondence confirming an "arrangement" to provide services. The list file contained seven ICPs with blank MEP at the time the analysis was conducted, but these had all been updated by the MEPs by the time of the on-site audit. All of the nominations were correct. Compliance is confirmed.

2.10 Metering Certification (Clause 10.33(2))

A reconciliation participant may energise or authorise the energisation of a connection only if the reconciliation participant has accepted responsibility for the point of connection if one or more certified metering installations are in place.

Audit Observation

The new connection process was examined in detail. The list file as at June 2017 and event detail report for the period January to March 2017 were analysed. I checked the active dates to the initial energisation dates and certification dates for all 90 new connections.

Audit Commentary

Powershop had accepted responsibility for all newly energised ICPs and the analysis confirms that there were no ICPs energised without certified metering installations. Compliance is confirmed.

2.11 Arrangements for Line Function Services (Clause 11.16)

A reconciliation participant must ensure it has an arrangement with the relevant network prior to accepting responsibility for an installation.

Audit Observation

The process to ensure an arrangement is in place before trading commences on a Network was examined.

Audit Commentary

Powershop demonstrated the existence of either a UoSA or other trading arrangement for all networks. Compliance is confirmed.

2.12 Arrangements for Metering Equipment Provision (Clause 10.36)

A reconciliation participant must ensure it has an arrangement with the relevant MEP prior to accepting responsibility for an installation.

Audit Observation

The process to ensure an arrangement is in place with the metering equipment provider before an ICP is created or switched in was checked.

Audit Commentary

Powershop has an arrangement in place with all MEPs that manage metering in relation to their customer base. The new connection process also contains a step that requires nomination of an MEP (which is a preferred MEP by region). MEP MN rejections are monitored to ensure correction occurs if the incorrect MEP is nominated. There were no nomination rejections during the audit period. Compliance is confirmed.

3. Maintaining Registry Information

3.1 Obtaining ICP Identifiers (Clause 11.3 of Part 11)

The following participants must obtain an ICP identifier for any point of connection, as defined in clause 11.3(3) of part 11, to any local network or embedded network:

a. *a trader who has agreed to purchase electricity from an embedded generator or sell electricity to a consumer*
b. *an embedded generator who sells electricity directly to the clearing manager*
c. *a direct purchaser connected to a local network or an embedded network*
d. *an embedded network owner in relation to a point of connection on an embedded network that is settled by differencing*
e. *a network owner in relation to a shared unmetered load point of connection to the network owner's network*
f. *a network owner in relation to a point of connection between the network owner's network and an embedded network.*

Audit Observation

The "new connections" process was examined in detail to confirm compliance with the requirement to obtain ICP identifiers for points of connection to local or embedded networks.

Audit Commentary

A walkthrough of the process confirmed that this requirement is well understood and managed by Powershop. There were no connections to networks identified without ICPs. Compliance is confirmed.

3.2 Provision of Information to the Registry (Clause 11.7(2)

Each trader must provide information to the registry about each ICP at which it trades electricity in accordance with Schedule 11.1.

Audit Observation

The new connection process was examined in detail. The list file was analysed in conjunction with the event detail report for the audit period to evaluate the updating of the registry in relation to new connections. This clause links directly to Section 3.5 below. The findings for the accuracy and timeliness of updates are detailed there.

Audit Commentary

This clause links directly to Section 3.5 below. The findings for the accuracy and timeliness of updates is detailed there

3.3 Changes to Registry Information (Clause 10 Schedule 11.1)

If information provided by a trader to the registry about an ICP changes, the trader must notify the registry of the change no later than five business days after the change.

Audit Observation

The event detail report was analysed for the period of January to March 2017 to identify late registry updates for status changes. A selection of late updates for all changes was evaluated.

Audit Commentary

The table below shows the level of compliance for changes to Active and Inactive. The figures for changes to de-energised vacant and ready for decommissioning show a lower level of compliance and a long duration. This is mainly caused by processing a one off list of decommissioned ICPs from Vector. Many status changes were made to de-energised vacant and then to de-energised ready for decommissioning, when they could have been made straight to de-energised ready for decommissioning. Some of the changes were not required because the ICPs were already at the correct status. They were backdated to the date the ICP became vacant. Compliance has improved for reconnections and changes to new connection in progress.

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Changes to active - reconnections	2015	1,587	1,084	503	11.3	68%
	June - Sept 2015	499	311	188	10.0	62%
	Oct 2015 - Feb 2016	486	363	123	11.3	75%
	March to May 2016	350	273	77	7.38	78%
	2017	**431**	**353**	**78**	**6.4**	**82%**
Change to de-energised vacant	2015	923	698	225	8.1	76%
	2016	391	327	64	8.1	84%
	2017	**143**	**96**	**47**	**118.7**	**67%**
Change to de-energised ready for decommissioning	2015	123	45	78	66.8	36%
	2016	69	38	31	18.4	55%
	2017	**23**	**5**	**18**	**137.4**	**22%**
Change to de-energised new connection in progress	2015	116	80	36	15.4	69%
	2016	297	274	23	3.3	92%
	2017	**111**	**101**	**10**	**2.4**	**96%**

Non-compliance	Description
With: Clause 10 of schedule 11.1 **From/to:** 01/07/16 to 30/06/17	Not all status changes made within 5 business days. **Potential impact:** Low **Actual impact:** Low **Audit history:** Multiple times **Controls:** Moderate **Breach Risk Rating: 2**
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate because some of the status changes were not required; therefore there is room for improvement. There was no effect on settlement; therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
No Comment		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Powershop is happy that the process improvements made have had a significant (positive) impact on code compliance, and will continue to refine the process to make further improvements.	Ongoing	

3.4 Trader Responsibility for an ICP (Clause 11.18)

A trader ceases to be responsible for an ICP if another trader accepts responsibility in the registry; the ICP is decommissioned. If decommissioning an ICP, the trader must ensure that a final meter interrogation takes place, and that the MEP is notified.

Audit Observation

Retailers Responsibility to Nominate and Record MEP in the Registry

The new connection process was discussed and the list file, as at June 2017, was examined to confirm that all active ICPs have an MEP recorded.

ICP Decommissioning

The process for the decommissioning of ICPs was examined to ensure a process was in place to obtain a final meter reading.

Audit Commentary

Retailers Responsibility to Nominate and Record MEP in the Registry

All ICPs have a valid MEP recorded. At the time the analysis was conducted, seven ICPs had not been updated with metering details by the MEPs but they had been correctly nominated. The metering details were updated by the time of the on-site audit.

MEP rejections are monitored and there have not been any during the audit period. Compliance is confirmed.

ICP Decommissioning

Powershop continues with their obligations under this clause. ICPs that are vacant and active, or inactive are still maintained in the database.

85 ICPs were decommissioned during the audit period and for a sample of ten, the MEP was notified and a final reading was obtained. Compliance is confirmed.

3.5 Provision of Information to the Registry (Clause 9 Schedule 11.1)

The content of files provided to the registry contains the information set out in clause 9 of schedule 11.1.

Audit Observation

The new connection process was examined in detail. The list file was analysed in conjunction with the event detail report for the period from January to March 2017 to evaluate the updating of the registry in relation to new connections. I used the extreme case methodology examining all four ICPs that were updated greater than five business days from the event date. I checked both late MEP nominations. I checked all registry records for possible discrepancies, using a standard set of queries.

Audit Commentary

The table below shows that four ICPs were updated late to the registry. Late field notification was the cause for two, and investigations into the correctness of data caused the other two. The MEP was nominated late for two new connections. All active dates were correct for new connections.

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Changes to active - new connections	2015	313	138	175	12.9	44%
	June - Sept 2015	146	83	63	7.9	57%
	Oct 2015 - Feb 2016	108	91	17	3.7	84%
	March to May 2016	65	63	2	2	97%
	2017	**90**	**86**	**4**	**2.4**	**96%**

There were 47 late MEP nominations out of 133 records that were not new connections. A check of a sample of ten showed that the expected nomination was not made at the time a deployment letter was sent for five of ten ICPs and for the remaining five, Powershop was asked to backdate the nomination to LMGL to the date the ICP switched in to Powershop.

Analysis of the list file identified a small number of ANZSIC code and unmetered load field discrepancies, which are discussed in the relevant sections. No other discrepancies were identified.

Non-compliance is recorded for the late registry updates.

Non-compliance	Description
With: Clause 9 of schedule 11.1 **From/to:** 01/07/16 to 30/06/17	Some late changes to Active. Some late MEP notifications. **Potential impact:** Low **Actual impact:** Low **Audit history:** Multiple times **Controls:** Strong **Breach Risk Rating:** 1
Audit Risk Rating	**Rationale for audit risk rating**
Low	This area has strong controls and the late updates identified relate to exceptional circumstances. The audit risk rating is low, because the impact on settlement is minor.

Actions taken to resolve the issue	Completion date	Remedial action Status
No Comment		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Powershop is satisfied that its process improvements have made a significant impact on code compliance and will continue to refine the process in order to make further improvements.	Ongoing	

3.6 ANZSIC Codes (Clause 9 (1(k) of Schedule 11.1)

Traders must populate the relevant ANZSIC code for all ICPs for which they are responsible.

Audit Observation

The process to capture and manage ANZISC codes was examined. A Registry List file was reviewed to check ANZSIC codes. Google streetview was examined for 20 ICPs.

Audit Commentary

The list file was analysed and I found the following issues:

- 189 ICPs with code T99*
- 14 of 20 ICPs checked with codes of T99* could be identified by looking at streetview.

Non-compliance	Description
With: Clause 9(1)(k) of schedule 11.1 **From/to:** 01/07/16 to 30/06/17	14 of 20 incorrect ANZSIC codes. **Potential impact:** Low **Actual impact:** Low **Audit history:** Multiple times **Controls:** Moderate **Breach Risk Rating: 2**
Audit Risk Rating	**Rationale for audit risk rating**
Low	There is an improvement opportunity for the controls in place to ensure codes are correct. There is no impact on settlement outcomes from incorrect ANZSIC codes but there is a minor impact on the Electricity's reporting accuracy, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
No Comment		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Regular internal audits of ANZSIC codes used by our business sales team will continue to be carried out.	Ongoing	

3.7 Changes to Unmetered Load (Clause 9(1)(f) of Schedule 11.1)

Traders must populate the unmetered load details for all ICPs with unmetered load for which they are responsible.

Audit Observation

The process to manage unmetered load was examined. The list file as at June 2017 was examined to identify any ICPs where:

- Unmetered load is identified by the Distributor but none is recorded by Powershop
- Powershop's unmetered load figure doesn't match with the Distributor's figure (where it's possible to calculate this if the Distributor is using the recommended format) and the variance is greater than 1.0kWh per day. 1.0 kWh per day was chosen as a sample only; this does not indicate compliance is achieved if an error is found that is less than 1.0 kWh per day.

Audit Commentary

Two ICPs have unmetered load recorded as "x1" by the distributor and Powershop does not have unmetered load recorded. It appears that Powershop is correct and the "x1" was removed soon after it was populated.

There are five ICPs where Powershop has unmetered load related to builder's temporary supplies, but where the distributor has removed their unmetered load figure. It appears that these unmetered temporary supplies have been replaced by permanent supplies. Powershop's daily unmetered load figure is therefore incorrect.

Non-compliance	Description
With: Clause 9(1)(f) of schedule 11.1 **From/to:** 01/07/16 to 30/06/17	5 ICPs with incorrect unmetered load figures. **Potential impact:** Low **Actual impact:** Low **Audit history:** None **Controls:** Moderate **Breach Risk Rating: 2**
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls did not identify that these figures were inaccurate. There is only a minor impact on settlement because submission is occurring when it shouldn't be, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
All identified instances of incorrect UML have been rectified		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Powershop will reiterate the importance of checking for UML when maintaining BTS ICPs.	Ongoing	

3.8 Management of "Active" Status (Clause 17 Schedule 11.1)

Before being given an "Active" status the retailer is required to ensure that the ICP has only one customer, embedded generator, or direct purchaser; and that the electricity consumed is quantified by a metering installation(s) or other approved method of calculation.

Audit Observation

The new connection process was examined in detail as discussed in Sections 2.9 & 3.5 above. The list file as at June 2017 was examined to identify any ICPs still at the status "Inactive - new connection in progress" with an initial energisation date populated.

The process for the management of ICP reconnection was examined. The event detail report for the audit period was analyse, and the findings in relation to the timeliness of updates to registry are recorded in Section 3.3 Changes to registry information.

Audit Commentary

The status of an ICP is only changed to "Active" once confirmation has been received by a contractor. Submission information is provided for all "Active" ICPs, even if they are vacant.

Before being given an "Active" status the trader is required to ensure that the ICP has only one customer, embedded generator, or direct purchaser; and that the electricity consumed is quantified by a metering installation(s) or other Authority approved method of calculation. The database will not allow more than one party per ICP nor will it allow an ICP to be set up without either a meter or if it is unmetered, the daily kWh.

I did not identify any ICPs with incorrect active statuses.

3.9 Management of "Inactive" Status (Clause 19 Schedule 11.1)

The ICP status of "inactive" must be managed by the relevant trader and indicates that:
- electricity cannot flow at that ICP; or
- submission information related to the ICP is not required by the reconciliation manager for the purpose of compiling reconciliation information.

Audit Observation

An event detail report for the period of January to March 2017 was reviewed, to identify all changes to inactive during that period.

The inactive status of "new connections in progress" was examined for new connections. The list file was examined to identify any ICPs at the "Inactive - new connection in progress" for greater than 24 months or where there was an initial energisation date populated.

The process to manage ICPs at the other inactive statuses was examined by conducting a walk-through of the process. The findings in relation to the timeliness of updates to registry are recorded in Section 3.3 Changes to registry information.

Audit Commentary

Powershop uses the statuses of de-energised vacant, ready for decommissioning and new connection in progress. The do not use any other inactive statuses.

There are no ICPs at new connection in progress for long periods or where the initial energisation date is populated.

There are 114 ICPs recorded as inactive but with consumption. At least two of these (ICPs 0000019424CPE6A and 0020219000WRBBE) were confirmed as having an incorrect status and it is likely many more also have the incorrect status recorded.

Powershop has an ongoing process to investigate and resolve these, and once the status is changed back to Active the consumption is included in the revision process.

Non-compliance	Description
With: Clause 19 of schedule 11.1 **From/to:** 01/07/16 to 30/06/17	Some ICPs have an incorrect inactive status. **Potential impact:** Medium **Actual impact:** Low **Audit history:** None **Controls:** Moderate **Breach Risk Rating: 2**
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are recorded as moderate because it appears there may be room for improvement given that the number has increased since the last audit. There is only a minor effect on settlement because 5,300 kWh is yet to be submitted, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
All identified instances of incorrect status have been rectified		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Powershop will continue to refine its process that identifies and actions these instances	Ongoing	

3.10 ICPs at New or Ready Status for 24 months (Clause 15 Schedule 11.1)

If an ICP has had the status of "New" or "Ready" for 24 calendar months or more, the distributor must ask the trader whether it should continue to have that status, and must decommission the ICP if the trader advises the ICP should not continue to have that status.

Audit Observation

Whilst this is a Distributor's code obligation, I investigated whether any queries had been received from Distributors in relation to ICPs at the "New" or "Ready" status for more than 24 months and what process is in place to manage and respond to such requests.

Audit Commentary

Powershop does not have reporting in relation to this clause; however there is no evidence of non-compliance.

3.11 Change of MEP (Clause 10.22(1)(a)(i))

If the MEP for an ICP which is not also an NSP changes, the trader must notify the registry of the gaining MEP in accordance with Part 11.

Audit Observation

The process to manage a change of MEP on an existing ICP was examined.

Audit Commentary

This clause does not place a responsibility on Powershop; it only states that the MEP changes once Powershop has advised the registry. Registry advice is covered by Part 11.

4. Performing Customer and Embedded Generator Switching

The switching process was evaluated by examining the records for a selection of ICPs and by reviewing the historic switch breach report for the period ending May 2017.

Powershop's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. Powershop "holds" NT files until the "cooling down" period has ended.

NHH Standard Switching

4.1 Inform Registry of Switch Request for ICPs (Clause 2 of Schedule 11.3)

The standard switch process applies where a trader and a customer or embedded generator enters into an arrangement in which the trader commences trading electricity with the customer or embedded generator at a non-half hour or unmetered ICP at which another trader supplies electricity, or the trader assumes responsibility for such an ICP.

If the uninvited direct sale agreement applies to an arrangement described above, the gaining trader must identify the period within which the customer or embedded generator may cancel the arrangement in accordance with section 36M of the Fair Trading Act 1986. The arrangement is deemed to come into effect on the day after the expiry of that period.

A gaining trader must advise the registry of a switch no later than two business days after the arrangement comes into effect and include in its advice to the registry that the switch type is TR and one or more profile codes associated with that ICP.

Audit Observation

The switch gain process was examined to determine when Powershop deems all conditions to be met. A sample of five ICPs using the typical sampling methodology was checked to confirm that these were notified to the registry within two business days.

Audit Commentary

All NT files were sent within two business days of conditions being met. Compliance is confirmed.

4.2 Losing Trader Response to Switch Request (Clauses 3 & 4 of Schedule 11.3)

Within three business days after receipt of notification of a switch from the registry, the losing trader must establish a proposed event date. The event date must be no more than 10 business days after the date of receipt of such notification, and in any 12 month period, at least 50% of the event dates must be no more than five business days after the date of notification.

The losing trader must then provide acknowledgement of the switch request by providing the proposed event date to the registry and a valid switch response code; or providing a request for withdrawal.

Audit Observation

An event detail report for the audit period was reviewed to identify AN files issued by Powershop during the audit period. A sample of three ANs per response code were reviewed to determine whether the codes had been correctly applied.

The switch breach detail report was examined for the audit period.

The event detail report was analysed to assess compliance with the requirement to meet the setting of event dates requirement.

Audit Commentary

The switching process was examined in relation to Powershop as the "losing trader" for a sample of 15 NHH ICPs. All AN codes were correct.

The switch breach report for the audit period recorded was examined. One AN file was sent one day late.

Event dates set by the losing trader must be within 10 business days of receipt of a NT file. Over a 12 month period 50% of event dates must be within five business days.

The event detail report contained 1,695 transfer switches. 21 had an event date between five and ten days. None were over ten days. Based on this evidence, Powershop is likely to achieve compliance with the requirement to ensure 50% of event dates are within five business days. Compliance is confirmed.

Non-compliance	Description
With: Clause 3 of schedule 11.3 **From/to:** 28/04/17 to 01/05/17	1 late AN file. **Potential impact:** Low **Actual impact:** Low **Audit history:** None **Controls:** Strong **Breach Risk Rating:** 1
Audit Risk Rating	**Rationale for audit risk rating**

Low	The controls are strong for the management of AN files. There is no impact on settlement or on other participants because only one file was one day late. The audit risk rating is therefore low.

Actions taken to resolve the issue	Completion date	Remedial action Status
No comment		Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
No comment		

4.3 Losing Trader Must Provide Final Information (Clause 5 of Schedule 11.3)

If the losing trader provides information to the registry in accordance with clause 3(a) of Schedule 11.3 with the required information, no later than five business days after the event date, the losing trader must complete the switch by providing a CS file.

Audit Observation

An event detail report for the audit period was reviewed, to identify CS files issued by Powershop during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of five records. The content checked included:

- correct identification of meter readings and correct date of last meter reading
- accuracy of meter readings
- accuracy of average daily consumption (this is based on the most recent read to read consumption).

I checked a further 10 ICPs where the average daily consumption was zero and five ICPs where the average daily consumption was over 200 kWh.

The process to manage the sending of the CS file within five business days of the event date was examined.

The switch breach history report for the audit period was reviewed to identify late CS files.

Audit Commentary

The accuracy of the content of CS files was confirmed by checking a sample. The content checked included:

- correct identification of meter readings and correct date of meter readings
- accuracy of meter readings
- accuracy of average daily consumption.

Compliance is confirmed for the file content, including the 15 ICPs where average daily consumption was evaluated.

AMI reads are not used in CS files. A system change was conducted to enable this to occur, but all switch out reads are still estimates.

The switch breach report contained 42 late files but a check of ten confirmed the switch breach report is inaccurate. Compliance is confirmed.

4.4 Retailers Must Use Same Reading (Clause 6 & 6A Of Schedule 11.3)

If the validated meter reading or permanent estimate provided by the losing trader differs by less than 200 kWh from a value established by the gaining trader for a Transfer Switch event, the gaining trader uses the losing trader's validated meter reading or permanent estimate as the switch event meter reading.

Audit Observation

The process for the management of read requests was examined.

The event detail report and switch breach report were analysed to identify all read change requests and acknowledgements during the audit period.

A sample of 20 read change requests from the event detail report was selected using the diverse sample methodology.

No Powershop RR files were rejected.

Audit Commentary

In cases where Powershop is the gaining trader and they dispute the switch meter reading because the validated meter reading or permanent estimate provided by the losing trader differs by 200 kWh or more the retailer, within four calendar months of the actual event date they attempt to provide to the losing trader a changed switch meter reading supported by two validated meter readings as required by this clause.

The "switch breach report" recorded three late RR files. The content of RR files is compliant.

The late sending of some RR files is recorded as non-compliance below.

Non-compliance	Description
With: Clause 6 of schedule 11.3 **From/to:** 20/09/16 to 12/06/17	3 late RR files. **Potential impact:** Low **Actual impact:** Low **Audit history:** None **Controls:** Strong **Breach Risk Rating:** 1
Audit Risk Rating	**Rationale for audit risk rating**

Low	The controls are strong and the three files were only approx. 1 week over the allowable time period. The impact on settlement is minor because the number of ICPs is low; therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
No comment		Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
No comment		

4.5 NHH Switch Event Meter Reading (Clause 6(2) and (3) Schedule 11.3)

If the losing trader trades electricity from a non-half hour meter, with a switch event meter reading that is not from an AMI certified meter flagged Y on the registry: and
- the gaining trader will trade electricity from a meter with a half hour submission type in the registry;
- the gaining trader within five business days after receiving final information from the registry, may provide the losing trader with a switch event meter reading from that meter. The losing trader must use that switch event meter reading.

Audit Observation

The process for the management of read requests was examined. The event detail report and switch breach report were analysed for 20 ICPs where Powershop rejected RR files. Four of these were for TR switches.

Audit Commentary

Three of the four rejections by Powershop were sent within five business days by the other trader and included AMI reads, so they should have been accepted. One RR included AMI reads but was not sent within five business days so was legitimately rejected.
The total consumption difference is small but this is still recorded as non-compliance.

Non-compliance	Description
With: Clause 6(3)(b)of schedule 11.3 **From/to:** 05/01/17 to 20/02/17	Some RR files rejected which were for AMI sites and contained actual reads. **Potential impact:** Medium **Actual impact:** Low **Audit history:** Once **Controls:** Weak **Breach Risk Rating: 3**
Audit Risk Rating	**Rationale for audit risk rating**

Low	Controls do not appear to be adequately identifying instances where RR files should be accepted. There is a minor impact on settlement, other participants and customers. In every case the other trader will be using the actual AMI reading therefore the customer will be over billed or under billed and the submission will be too high or too low.

Actions taken to resolve the issue	Completion date	Remedial action Status
AMI read changes being received are so low in difference (often under 10kWh) that is has no obvious benefit to Powershop or the customer. Powershop has been developing its system to ensure the switch loss read it sends to "HHR only traders" is an actual but this results in a delay in switch times (but still within the Code required timeframes).		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Powershop will continue to refine is processes in this area		

4.6 Disputes (Clause 7 of Schedule 11.3 & Clause 15.29 of Part 15)

A losing trader or gaining trader may notify the other that it disputes a switch event meter reading, notified under clauses 1 to 6. Such a dispute must be resolved in accordance with clause 15.29.

Audit Observation

Confirm with Powershop whether any disputes have needed to be resolved in accordance with this clause.

Audit Commentary

Powershop confirms that no disputes have needed to be resolved in accordance with this clause.

NHH Switch Move

4.7 Gaining Trader Informs Registry of Switch Request (Clause 9 of Schedule 11.3)

The code requires that "for each ICP, to which a switch relates, the gaining trader must advise the registry of the switch no later than two business days after the arrangement with the customer or embedded generator comes into effect."

Audit Observation

The switch gain process was examined to determine when Powershop deems all conditions to be met. A sample of five ICPs using the typical sampling methodology was checked to confirm that these were notified to the registry within two business days.

Audit Commentary

All NT files were sent within two business days of conditions being met. Compliance is confirmed.

4.8 Losing Trader Provides Information (Clause 10 of Schedule 11.3)

After receiving notification of a switch request from the registry, the losing trader must respond to the switch request within five business days.

Audit Observation

An event detail report for the period January to March 2017 was reviewed, to identify AN files issued by Powershop during the audit period. A sample of three ANs per response code were reviewed to determine whether the codes had been correctly applied.

The switch breach history report for the audit period was reviewed in relation to late AN files.

CS files are examined in Section 4.10.

Audit Commentary

The switch breach report for the audit period recorded was examined. All AN files were sent on time.

All 15 AN response codes were correct. Compliance is confirmed.

4.9 Losing Trader Determines a Different Switch Date (Clause 10 Schedule 11.3)

If the losing trader determines a different date, the losing trader must also complete the switch by providing to the registry as described in sub-clause (1)(a):
- the event date proposed by the losing trader; and
- a valid switch response code; and
- final information as required under clause 1.

Audit Observation

The setting of event dates for move switches was examined. The event detail report for the audit period was examined comparing the NT requested event date with the AN event date sent by Powershop for any switches dated earlier than the NT requested date. The report was also checked to for any event dates that were set greater than ten days from the NT receipt date.

Audit Commentary

No event dates were set earlier than the requested date. None were later than 10 business days. Compliance is confirmed.

4.10 Losing Trader Must Provide Final Information (Clause 11 of Schedule 11.3)

If the losing trader has provided information to the registry in accordance with clause 10(a), within three business days after the later of the actual event date or date of receipt of the switch request, the losing trader must provide a CS file.

An event detail report for the audit period was reviewed, to identify CS files issued by Powershop during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of five records. The content checked included:

- correct identification of meter readings and correct date of last meter reading
- accuracy of meter readings
- accuracy of average daily consumption (this is based on the most recent read to read consumption).

I checked a further 10 ICPs where the average daily consumption was zero and five ICPs where the average daily consumption was over 200 kWh.

The process to manage the sending of the CS file within five business days of the event date was examined.

The switch breach history report for the audit period was reviewed to identify late CS files.

Audit Commentary

The accuracy of the content of CS files was confirmed by checking a sample. The content checked included:

- correct identification of meter readings and correct date of meter readings for all NHH and Cat 1 & 2 AMI sites
- accuracy of meter readings
- accuracy of average daily consumption (this is based on the most recent read to read consumption).

Compliance is confirmed for the file content, including for the 15 ICPs where average daily consumption was evaluated.

The switch breach report contained 93 late CS files. I manually checked 21 of these and found 10 genuine late files.

Non-compliance	Description
With: Clause 11 of schedule 11.3 **From/to:** 01/07/16 to 30/06/17	10 late CS files. **Potential impact:** Low **Actual impact:** Low **Audit history:** Multiple times **Controls:** Moderate **Breach Risk Rating: 2**
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate because there is room for improvement. There is no impact on settlement and only a minor impact on other participants because the files were between 1 and 8 days late.

Actions taken to resolve the issue	Completion date	Remedial action Status
No comment		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
No comment		

4.11 Gaining Trader Changes to Switch Meter Reading (Clause 12 Schedule 11.3)

The gaining trader may use the switch event meter reading supplied by the losing trader, or may, at its own cost, obtain its own switch event meter reading. If the gaining trader elects to use this new switch event meter reading, the gaining trader must notify the losing trader of the switch event meter reading and the actual event date to which it refers as follows:

- if the switch meter reading established by the gaining trader differs by less than 200 kWh from that provided by the losing trader, both traders must use the switch event meter reading provided by the gaining trader (clause 12(2)(a)); or

- if the switch event meter reading provided by the losing trader differs by 200 kWh or more from a value established by the gaining trader, the gaining trader may dispute the switch meter reading. In this case, the gaining trader, within 4 calendar months of the actual event date, must provide to the losing trader a changed validated meter reading or a permanent estimate supported by two validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):

- notify the gaining trader if it does not accept the switch event meter reading and the losing trader and the gaining trader must resolve the dispute in accordance with the disputes procedure in clause 15.29 (with all necessary amendments) (clause 12(3)(a)); or

- if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader (clause 12(3)(b)).

12(2A) If the losing trader trades electricity from a non-half hour meter, with a switch event meter reading that is not from an AMI certified meter flagged Y on the registry,
- the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 12(2A)(b));
- the gaining trader no later than five business days after receiving final information from the registry, may provide the losing trader with a switch event meter reading from that meter. The losing trader must use that switch event meter reading (clause 12(2B)).

Audit Observation

The process for the management of read requests was examined.

The event detail report and switch breach report were analysed to identify all read change requests and acknowledgements during the audit period.

A sample of 20 read change requests from the event detail report was selected using the diverse sample methodology. 16 of these were MI switches. I also checked for late RR files in the switch breach report.

Audit Commentary

The "switch breach report" contained 10 late RR files. The main issue was meter reading access in order to validate against actual reads.

The content of RR files is compliant.

I checked 16 RR rejections by Powershop. 12 of the 16 included actual AMI reads but only three of the 12 were sent within five business days so Powershop legitimately rejected nine, but should have accepted three.

Non-compliance	Description
With: Clause 12 (2B)(b) & (3) of schedule 11.3 **From/to:** 20/09/16 to 12/06/17	10 late RR files. Some RR files rejected which were for AMI sites and contained actual reads. **Potential impact:** Medium **Actual impact:** Low **Audit history:** Once **Controls:** Weak **Breach Risk Rating: 3**
Audit Risk Rating	**Rationale for audit risk rating**
Low	Controls do not appear to be adequately identifying instances where RR files should be accepted. There is a minor impact on settlement, other participants and customers. In every case the other trader will be using the actual AMI reading therefore the customer will be over billed or under billed and the submission will be too high or too low.

Actions taken to resolve the issue	Completion date	Remedial action Status

RR files are sent by Powershop to make corrections to switch reads (if they are correct) for the benefit of the consumer. Powershop believes that this should be an acceptable exception for lateness.		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

Gaining Trader (HH) Switching

4.12 Gaining Trader Informs Registry of Switch Request (Clause 14 of Schedule 11.3)

The gaining trader switch process applies where a trader and a customer or embedded generator enters into an arrangement in which the trader commences trading electricity with the customer or embedded generator to trade electricity through or assume responsibility for:
- a half hour metering installation that is not a category 1 or 2 metering installation, that has an ICP with a submission type half hour on the registry and an AMI flag of "N"; or
- a half hour metering installation that has a submission flag of half hour and an AMI flag of "N" and is traded by the losing trader as non-half hour; or
- a non-half hour metering installation at an ICP with the losing trader trades through a half hour metering installation with an AMI flag of "N".

Audit Observation
Powershop did not send any HH switch requests during the audit period.

Audit Commentary
Powershop did not send any HH switch requests during the audit period.

4.13 Losing Trader Provision of Information (Clause 15 of Schedule 11.3)

Within three business days after the losing trader is informed about the switch by the registry, the losing trader must:
15(a) - provide to the registry a valid switch response code as approved by the Authority; or
15(b) - provide a request for withdrawal of the switch in accordance with clause 17.

Audit Observation
The HHR switch process was examined and the event detail report and switch breach report were analysed to identify all HHR switch files sent during the audit period.

Audit Commentary
The switch breach report for the audit period was examined. All AN files were sent on time. Compliance is confirmed.

4.14 Gaining Trader to Notify Registry (Clause 16 of Schedule 11.3)

The gaining trader must complete the switch no later than three business days, after receiving the valid switch response code, by advising the registry of the event date.

Audit Observation

Powershop did not send any HH switch requests during the audit period.

Audit Commentary

Powershop did not send any HH switch requests during the audit period.

4.15 Withdrawal of Switch Requests (Clauses 17 & 18 of Schedule 11.3)

A losing trader or gaining trader may request that a switch request be withdrawn at any time until the expiry of two calendar months after the event date of the switch.

Within five business days after receiving a notification from the registry of a switch, the trader receiving the withdrawal must notify the registry that the switch withdrawal request is accepted or rejected. A switch withdrawal request must not become effective until accepted by the trader who received the withdrawal.

On receipt of a rejection notification from the registry, a trader may re-submit the switch withdrawal request for an ICP. All switch withdrawal requests must be resolved within 10 business days after the date of the initial switch withdrawal request.

If the trader requests that a switch request be withdrawn, and the resolution of that switch withdrawal request results in the switch proceeding, within two business days after receipt of notification from the registry in accordance with clause 22(b), the losing trader must comply with clauses 3,5,10 and 11 (whichever is appropriate) and the gaining trader must comply with clause 16.

Audit Observation

The switch withdrawal process was examined. The content of a sample of two ICPs for each withdrawal code was checked using the typical sampling methodology from the event detail report. All four switch rejections were checked. The event detail report was also analysed to confirm timeliness of switch requests as this is not currently being identified in the switch breach report. This identified 23 ICPs that were backdated greater than two months from the event date. The switch breach report was checked for any late switch withdrawal acknowledgements and found none were recorded.

Audit Commentary

The content of some NW files was compared to details in Powershop's records, and in all cases, the withdrawal reasons provided by Powershop were accurate.

All NW rejections by Powershop were based on sound information supported by good notes in the system.

For the NW rejections by other traders, Powershop had good reasons, supported by notes in the system at the time of sending the NW.

The switch breach report was examined and found no AW breaches.

23 NW files were sent later than two calendar months.

Non-compliance	Description
With: Clause 17 of schedule 11.3 **From/to:** 01/07/16 to 30/06/17	23 late NW files. **Potential impact:** Low **Actual impact:** Low **Audit history:** None **Controls:** Strong **Breach Risk Rating:** 1
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are strong for the management of withdrawals. Whilst 23 files were late the issues only become clear after billing had occurred and then an investigation was completed. There was a minor impact on settlement due to the correction of consumption information. There was also only a minor impact on the customer; therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
No comment		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
No comment		

4.16 Metering Information (Clause 21 Schedule 11.3)

For an interrogation or validated meter reading or permanent estimate carried out in accordance with Schedule 11.3:
- the trader who carries out the interrogation, switch event meter reading must ensure that the interrogation is as accurate as possible, or that the switch event meter reading is fair and reasonable.
- the cost of every interrogation or switch event meter reading carried out in accordance with clauses 5(b) or 11(b) or (c) must be met by the losing trader. The costs in every other case must be met by the gaining trader.

Audit Observation

The meter reading process in relation to meter reads for switching purposes was examined. Examples to confirm this procedure have been examined as part of the sending of final information for switches and read requests made.

Audit Commentary

Whilst some meter readings have been changed as part of the switching process, the estimation methodology is considered sound. Meter readings are entered manually and there is an additional check of all meter readings against the source date to confirm accuracy. Compliance is confirmed.

4.17 Switch Saving Protection (Clause 11.15AA to 11.15AD of Part 11)

A trader that buys electricity from the clearing manager may elect to have a switch saving protection by giving notice to the Authority in writing.

If a protected trader enters into an arrangement with a customer of another trader (the losing trader), or a trader enters into an arrangement with a customer of a protected trader, to commence trading electricity with the customer, the losing trader must not, by any means, initiate contact with the customer to attempt to persuade the customer to terminate the arrangement during the period from the receipt of the NT to the event date of the switch including by:
11.15AB(4)(a) - making a counter offer to the customer; or
11.15AB(4)(b) - offering an enticement to the customer.

Audit Observation
The Electricity Registry switch save protected retailer list was examined to confirm that Powershop is not a save protected retailer.

Win-back processes were examined to determine whether they are compliant.

I checked the event detail report for all withdrawn switches from the audit period to identify any withdrawn switches with a CX code applied prior to the switch completion date in relation to any switch save protected retailers.

Audit Commentary
There were no examples of NW CX files being sent prior to the switch completion. Compliance is confirmed.

5. Maintenance of Unmetered Load

5.1 Maintaining Shared Unmetered Load (Clause 11.14 of Part 11)

The trader must adhere to the process for maintaining shared unmetered load.

Audit Observation
The registry list was reviewed to confirm Powershop's unmetered load figures matched the distributor's figure.

Audit Commentary

The registry list was reviewed and I found Powershop's daily unmetered load figure was correct for all 42 ICPs.

5.2 Unmetered Threshold (Clause 10.14(2)(b) of Part 10)

The reconciliation participant must ensure that unmetered load does not exceed 3,000 kWh per annum, or 6,000 kWh per annum if the load is predictable and of a type approved and published by the Authority.

Audit Observation

Examination of the list file found no active ICPs with unmetered load greater than 6,000 kWh per annum. There are no records with consumption between 3,000 and 6,000 kWh per annum.

Audit Commentary

Examination of the list file found no active ICPs with unmetered load greater than 6,000 kWh per annum. There are three ICPs with consumption between 3,000 and 6,000 kWh per annum and they are all approved lighting loads. Compliance is confirmed.

5.3 Unmetered Threshold Exceeded (Clause 10.14 (5))

If the unmetered load limit is exceeded the retailer must:
- within 20 business days, commence corrective measure to ensure it complies with Part 10
- within 20 business days of commencing the corrective measure, complete the corrective measures
- no later than 10 business days after it becomes aware of the limit having been exceeded, advise each participant who is or would be expected to be affected of:
- the date the limit was calculated or estimated to have been exceeded
- the details of the corrective measures that the retailer proposes to take or is taking to reduce the unmetered load.

Audit Observation

Examination of the list file found no active ICPs with unmetered load greater than 6,000 kWh per annum. There are no records with consumption between 3,000 and 6,000 kWh per annum.

Audit Commentary

Examination of the list file found no active ICPs with unmetered load greater than 6,000 kWh per annum. There are three ICPs with consumption between 3,000 and 6,000 kWh per annum and they are all approved lighting loads. Compliance is confirmed.

5.4 Distributed Unmetered Load (Clause 11 of Schedule 15.3)

An up-to-date database must be maintained for each type of distributed unmetered load for which the retailer is responsible. The information in the database must be maintained in a manner that the resulting submission information meets the accuracy requirements of clause 15.2.

A separate audit is required for distributed unmetered load data bases.

The database must satisfy the requirements of Schedule 15.5 with regard to the methodology for deriving submission information.

Audit Observation

Powershop does not have any distributed unmetered load.

Audit Commentary

Powershop does not have any distributed unmetered load.

6. Gathering and Storing Raw Meter Data

6.1 Electricity Conveyed & Notification by Embedded Generators (Clause 10.13, Clause 10.24 and 15.13)

A trader must ensure that for each energised ICP that electricity is conveyed is in accordance with the code.

A participant is not required to quantify the electricity at a point of connection if the electricity is supplied by an embedded generator who has given the Reconciliation Manager a notification under clause 15.13 of Part 15.

Audit Observation

The process to manage distributed generation was examined. The list file was analysed and all ICPs where the Distributor has indicated distributed generation were identified. This was further broken down to identify any ICPs with a non-distributed generation profile. The metering configuration for these ICPs was analysed to confirm if an injection channel was present and therefore distributed generation is present.

There were three examples of bridged meters and these were all analysed.

Audit Commentary

A trader must ensure that for each energised ICP that electricity is conveyed is in accordance with the code. A participant is not required to quantify the electricity at a point of connection if the electricity is supplied by an embedded generator who has given the Reconciliation Manager a notification under clause 15.13 of Part 15.

Powershop's list file was examined in relation to ICPs with generation listed by the Distributor. 31 were identified. Seven of the 31 do not have a PV1 profile or an injection channel in the meter. Powershop's terms and conditions state that their customers must not generate electricity or inject it into a distribution network; therefore, Powershop's position is that they are not responsible for quantifying the electricity generated because they have not agreed to purchase it. For one ICP, the customer was specifically informed that Powershop would not purchase the generation quantities. There are some exceptions to this policy where Powershop has agreed to purchase the generated volumes.

Powershop' new connection process includes a check that metering is installed before energisation occurs, or that any unmetered load is quantified. All ICPs were metered correctly. There are no ICPs where subtraction occurs. Compliance is confirmed.

Three ICPs had meters bridged during the audit period. In all cases, the consumption information was corrected for the period of bridging. Whilst bridged meters are being identified and the consumption information corrected, it is still a matter of non-compliance with the clauses shown in the table below.

Clauses	Comments
10.12 of part 10	Powershop has interfered with the metering installation without permission from the MEP.
10.24 of part 10	Powershop has not ensured all electricity conveyed is quantified in accordance with the Code.

Non-compliance	Description
With: Clause 10.12 and 10.24 of part 10 **From/to:** 01/07/16 to 30/06/17	Meters bridged at 3 ICPs. **Potential impact:** Medium **Actual impact:** Low **Audit history:** Multiple times **Controls:** Strong **Breach Risk Rating: 1**
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are strong with regard to identification of bridged meters and the subsequent correction of data. There is a minor impact on settlement because estimates are created for the period of the bridge; therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
No comment		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Powershop will continue to provide more frequent compliance refresher training for the team to ensure anyone involved in process has complete understanding of Powershop's code obligations.	Ongoing	

6.2 Responsibility for Metering at GIP (Clause 10.26 of Part 10)

For each proposed metering installation or change to a metering installation that is a connection to the grid, the participant, must:

- provide to the grid owner a copy of the metering installation design (before ordering the equipment)

- provide at least three months for the grid owner to review and comment on the design

- respond within three business days of receipt to any request from the grid owner for additional details or changes to the design

- ensure any reasonable changes from the grid owner are carried out.

The participant responsible for the metering installation must:

- advise the reconciliation manager of the certification expiry date not later than 10 business days after certification of the metering installation

- become the MEP or contract with a person to be the MEP

- advise the reconciliation manager of the MEP identifier no later than 20 days after entering into a contract or assuming responsibility to be the MEP.

Audit Observation

Powershop is not responsible for any GIP metering.

Audit Commentary

Powershop is not responsible for any GIP metering.

6.3 Certification of Control Devices (Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3)

The reconciliation participant must advise the metering equipment provider if a control device is used to control load or switch meter registers.

The reconciliation participant must ensure the control device is certified prior to using it for reconciliation purposes.

Audit Observation

A registry list file was reviewed for the audit period to confirm what profiles were being used by Powershop.

Audit Commentary

A registry list file was reviewed for the audit period to confirm what profiles were being used by Powershop. RPS, PV1 and POD/PON profiles are used. All POD/PON ICPs have AMI metering installed where the day/night registers are internal to the meter and no control devices are used in the process. Compliance is confirmed.

6.4 Reporting of Defective Metering Installations (Clause 10.43(2) and (3))

If a participant becomes aware of an event or circumstance that lead it to believe a metering installation could be inaccurate, defective, or not fit for purpose they must:
- advise the MEP
- include in the advice all relevant details.

Audit Observation

I asked Powershop if there were any examples of defective metering identified during the audit period. The three ICPs where meters were bridged are considered defective. I checked that notification had been made to the MEP in all cases.

Audit Commentary

The MEPs were notified for all three ICPs where meters were bridged. Compliance is confirmed.

6.5 Collection of Information by Certified Reconciliation Participant (Clause 2 of Schedule 15.2)

A reconciliation participant must obtain raw meter data used to determine volume information from the services access interface. Except when only the Metering Equipment Provider can electronically interrogate a metering installation for which it is responsible and they have an arrangement with the reconciliation participant which prevents them from interrogating the metering installation themselves.

Audit Observation

The data collection process was examined to confirm the source of volume information and whether it was obtained from the services access interface.

Audit Commentary

All information used to determine volume information is collected by agents or by MEPs and is derived from the services access interface. Compliance is confirmed.

6.6 Derivation of Meter Readings (Clause 3(1), 3(2) and 5 Schedule 15.2)

All meter readings must in accordance with the participants certified processes and procedures and using its certified facilities be sourced directly from raw meter data and, if appropriate, be derived and calculated from financial records.

All validated meter readings must be derived from meter readings.

A meter reading provided by a consumer may be used as a validated meter reading only if another set of validated meter readings not provided by the consumer are used during the validation process.
During the manual interrogation of each NHH metering installation the reconciliation participant must:
(a) obtain the meter register
(b) ensure seals are present and intact
(c) check for phase failure (if supported by the meter)
(d) check for signs of tampering and damage

(e) check for electrically unsafe situations
if the relevant parts of the metering installation are visible and it is safe to do so.

Audit Observation

The data collection process was examined by a walk-through of the importing and validation steps.

Audit Commentary

AMI Information used to determine volume information is provided by several Meter Equipment Providers to Powershop. This function was examined as part of their respective MEP audits.

NHH manual reads are provided by Delta and Datacol. Delta's audit report confirms compliance with points a to e above. Datacol's audit report records that phase failure checks are not conducted, which does not achieve compliance.

Customer reads are provided and they are validated against other non-customer reads. The checks listed above are conducted from the photos. Compliance is confirmed.

Non-compliance	Description
With: Clause 5(c) of schedule 15.2 **From/to:** 01/07/16 to 30/06/17	Phase failure monitoring not conducted by Datacol. **Potential impact:** Medium **Actual impact:** Low **Audit history:** Multiple times **Controls:** Moderate **Breach Risk Rating: 2**
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate because most of the required checks are conducted. There is no evidence of any impact on settlement, therefore the audit risk rating is low

Actions taken to resolve the issue	Completion date	Remedial action Status
Datacol have advised Powershop that they are meter readers not electricians for phase failure monitoring		investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
No comment		

6.7 NHH Meter Reading Application (Clause 6 Schedule 15.2)

For NHH switch event meter reads, for the gaining trader the reading applies from 0000 hours on the day of the relevant event date and for the losing trader at 2400 hours at the end of the day before the relevant event date.

In all other cases, All NHH readings apply from 0000hrs on the day after the last meter interrogation up to and including 2400hrs on the day of the meter interrogation.

Audit Observation

The process of the application of meter readings was examined by a walk-through of the steps and by sighting five examples in the database.

Audit Commentary

AMI reads are timestamped at 23:59:59 to ensure they are allocated to the correct date. Meter readings from Delta and Datacol have a date and time-stamp on the day of the reading. Application of reads was also reviewed as part of the historic estimate checks, discussed in section 12.11. Compliance is confirmed

6.8 Interrogate Meters Once (Clause 7(1) and (2) Schedule 15.2)

A validated meter reading must be obtained in respect of every meter register for every non-half hour metered ICP for which the participant is responsible, at least once during the period of supply to the ICP by the reconciliation participant, unless exceptional circumstances prevent this from occurring. This may be a validated meter reading at the time the ICP is switched to, or from, the reconciliation participant.

The NHH meter reading frequency guidelines published by the Electricity Authority define "Exceptional circumstances" as meaning "circumstances in which access to the relevant meter is not achieved despite the reconciliation participant's best endeavours". "Best endeavours" is defined as "Where a reconciliation participant failed to interrogate an ICP as a result of access issues, the reconciliation participant had made a minimum of three attempts to contact the customer, by using at least two methods of communication".

Audit Observation

The process to manage missed reads was examined by a walk-through of the trigger points leading to actions to get meter readings.

Powershop does not have a list of ICPs not read during the period of supply.

Audit Commentary

The meter reading access process starts at 150 days, therefore any ICPs that switch in and out within a short period will not always have a meter reading. This is recorded as non-compliance.

Non-compliance	Description
With: Clauses 7(1) and 7(2) of Schedule 15.2 **From/to:** 01/07/16 to 30/06/17	No process for getting meter readings during the period of supply. **Potential impact:** Low **Actual impact:** Low **Audit history:** Multiple times **Controls:** Weak **Breach Risk Rating: 3**

Audit Risk Rating	Rationale for audit risk rating
Low	The impact on settlement from an estimate for a short period is minor therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
No comment		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Powershop has a "Switched Out ICPs with no Actual Reads" repor t but in many cases it is not beneficial for Powershop to pursue. The ongoing AMI deployment is expected to reduce the instances of these.	Ongoing	

6.9 NHH Meters Interrogated Annually (Clause 8(1) and (2) Schedule 15.2)

At least once every 12 months, each reconciliation participant must obtain a validated meter reading for every meter register for non-half hour metered ICPs, at which the reconciliation participant trades continuously for each 12 month period.

If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 8(1).

Audit Observation

The meter reading process was examined along with the required reporting.

Audit Commentary

Powershop has a process in place that is designed to achieve compliance with the "best endeavours" requirements. The process includes the following steps during every meter reading cycle when meter readings cannot be obtained.

- key packs are left by meter readers
- an automated email is sent to customers.

Outbound calls are made to customers when the above attempts have failed and a letter is couriered at 150 days. There are only 35 ICPs (excluding vacant) where meter readings have not been obtained despite best endeavours. Compliance is confirmed.

6.10 NHH Meters 90% Read Rate (Clause 9(1) and (2) of Schedule 15.2)

In relation to each NSP, each reconciliation participant must ensure that for each NHH ICP at which the reconciliation participant trades continuously for each four months, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every four months for 90% of the non-half hour ICPs.

A report is to be sent to the market administrator providing the percentage, in relation to each NSP, for which consumption information has been collected no later than 20 business days after the end of each month.

If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 9(1).

Audit Observation

The meter reading process was examined along with any reporting in place.

Audit Commentary

Powershop's reporting for April 2017 showed that this target was achieved for 220 of 229 NSPs. The table below details the 10 NSPs where the target was not met.

NSP	Not Read ICPs	Total ICPs	Read Percentage
STU0111	1	5	80%
WQG0011	5	8	37%
ASY0111	1	9	88%
CUL0661	15	28	46%
PBS0011	1	3	66%
PPW0011	1	9	88%
TET0011	1	2	50%
TFJ0011	1	5	80%
EDN0331	3	15	80%

In most cases, there were a low number of ICPs, which makes compliance difficult to achieve. In all cases, Powershop demonstrated "best endeavours despite exceptional circumstances". This was confirmed by checking Powershop's process and records. Compliance is confirmed.

6.11 NHH Meter Interrogation Log (Clause 10 Schedule 15.2)

The following information must be logged as the result of each interrogation of the NHH metering:
10(a) - the means to establish the identity of the individual meter reader
10(b) - the ICP identifier of the ICP, and the meter and register identification
10(c) - the method being used for the interrogation and the device ID of equipment being used for interrogation of the meter.
10(d) - the date and time of the meter interrogation.

Audit Observation

Data is collected by agents and MEPs. MEP's compliance is discussed in their individual audit reports. I checked the agents audit reports to confirm compliance with this clause.

Audit Commentary
The agents' audit reports confirm compliance.

6.12 HHR Data Collection (Clause 11(1) Schedule 15.2)

Raw meter data from all electronically interrogated metering installations must be obtained via the services access interface. This may be carried out by a portable device or remotely.

Audit Observation
Powershop does not deal with HHR data.

Audit Commentary
Powershop does not deal with HHR data.

6.13 HHR Interrogation Data Requirement (Clause 11(2) Schedule 15.2)

The following information is collected during each interrogation of HHR metering:

- *the unique identifier (device ID) of the meter or data logger;*
- *the connection time, disconnection time and recorder time;*
- *the half-hour metering information for each trading period;*
- *events log.*

The interrogation log must be examined by the reconciliation participant responsible for collecting the data and appropriate action must be taken if problems are apparent or an automated software function flags exceptions.

Audit Observation
Powershop does not deal with HHR data.

Audit Commentary
Powershop does not deal with HHR data.

6.14 HHR Interrogation Log Requirements (Clause 11(3) Schedule 15.2)

The interrogation log forms part of the interrogation audit trail and, as a minimum, must contain the following information:
11(3)(a) - the date of interrogation
11(3)(b) - the time of commencement of interrogation
11(3)(c) - the operator identification (if available)
11(3)(d) - the unique identifier of the meter or data storage device
11(3)(e) - the clock errors outside the range specified in Table 1 of clause 2
11(3)(f) - the method of interrogation
11(3)(g) - the identifier of the reading device used for interrogation (if applicable).

Audit Observation
Powershop does not deal with HHR data.

Audit Commentary
Powershop does not deal with HHR data.

7. Storing raw meter data

7.1 Trading Period Duration (Clause 13 Schedule 15.2)

The trading period duration, normally 30 minutes, must be within ±0.1% (±2 seconds).

Audit Observation
Powershop does not deal with HHR data.

Audit Commentary
Powershop does not deal with HHR data.

7.2 Archiving and Storage of Raw Meter Data (Clause 18 Schedule 15.2)

A reconciliation participant who is responsible for interrogating a metering installation must archive all raw meter data and any changes to the raw meter data for at least 48 months, in accordance with clause 8(6) of Schedule 10.6.

Procedures must be in place to ensure that raw meter data cannot be accessed by unauthorised personnel.

Meter readings cannot be modified without an audit trail being created.

Audit Observation
Processes to archive and store raw meter data were reviewed.

Audit Commentary
When this data reaches Powershop's systems, the level of security is robust and data cannot be accessed by unauthorised personnel.

Powershop has retained reading data since they began trading.

Compliance with clause 18.3 of schedule 15.2 was examined, which requires that ".....meter readings cannot be modified without an audit trail being created." Readings cannot be modified without an audit trail being created. Readings are imported into a raw data table and any adjustments or corrections are made to working data, not raw data. Compliance is confirmed.

7.3 Non Metering Information Collected / Archived (Clause 21(5) Schedule 15.2)

All relevant non-metering information, such as external control equipment operation logs, used in the determination of profile data must be collected, and archived in accordance with clause 18.

Audit Observation

Processes to record non-metering information were discussed.

Audit Commentary

Powershop does not deal with any non-metering information.

7.4 Data Storage Device Clock Synchronisation (Clause 2(5)&(6) of Schedule 15.2)

When electronically interrogating the meter the participant must ensure that the clock is synchronised and correct the clock and raw data where necessary.

Audit Observation

All AMI data is provided by MEPs and is not collected by Powershop.

Audit Commentary

All AMI data is provided by MEPs and is not collected by Powershop.

8. Creating and Managing (Including Validating, Estimating, Storing, Correcting and Archiving) Volume Information

8.1 Correction of NHH Meter Readings (Clause 19(1) Schedule 15.2)

If errors are detected during validation of non-half hour meter readings, one of the following must be undertaken:
- confirmation of the original meter reading by carrying out another meter reading
- replacement of the original meter reading by another meter reading (even if the replacement meter reading may be at a different date)
- if the original meter reading cannot be confirmed or replaced by a meter reading from another interrogation, then an estimated reading is substituted and the estimated reading is marked as an estimate and it is subsequently replaced in accordance with clause 4(2).

Audit Observation

The correction of NHH meter readings were reviewed by checking processes and examples of corrections.

Audit Commentary

Where errors are detected during validation of non-half hour meter readings then firstly a check reading is performed. If an original meter reading cannot be confirmed by a check reading then an estimated reading is used which is appropriately labelled.

Some examples were examined where correction had occurred and in all cases, the corrected volume flowed through the relevant revision files. Compliance is confirmed.

8.2 Correction of HHR Metering Information (Clause 19(2) Schedule 15.2)

If errors are detected during validation of half hour metering information the correction must be as follows:
- if a check meter or data storage device is installed at the metering installation, data from this source may be substituted
- in the absence of any check meter or data storage device, data may be substituted from another period if the total of all substituted intervals matches the total consumption recorded on the meter, if available, and the pattern of consumption is considered materially similar to the period in error.

Audit Observation
Powershop does not deal with any HHR data.

Audit Commentary
Powershop does not deal with any HHR data.

8.3 Error and Loss Compensation Arrangements (Clause 19(3) Schedule 15.2)

If error compensation and loss compensation are carried out as part of the process of determining accurate data, the compensation process must be documented and must comply with audit trail requirements.

Audit Observation
I asked Powershop if any error or loss compensation arrangements were in place.

Audit Commentary
Powershop confirmed that no error or loss compensation arrangements are in place.

8.4 Correction of HHR and NHH Raw Meter Data (Clause 22(1) and (2) Schedule 15.2)

In correcting a meter reading in accordance with clause 19, the raw meter data must not be overwritten. If the raw meter data and the meter readings are the same, an automatic secure backup of the affected data must be made and archived by the processing or data correction application.
If data is corrected or altered, a journal must be generated and archived with the raw meter data file. The journal must contain the following:
22(2)(a) - the date of the correction or alteration

22(2)(b) - the time of the correction or alteration
22(2)(c) - the operator identifier of the reconciliation participant
22(2)(d) - the half-hour metering data or the non-half hour metering data corrected or altered, and the total difference in volume of such corrected or altered data
22(2)(e) - the technique used to arrive at the corrected data
22(2)(f) - the reason for the correction or alteration.

Audit Observation
Corrections are discussed in section 8.1. Raw data is retained by the agents and MEPs and is not edited in any way by any process. Audit trails are discussed in section 2.3.

Raw meter data retention for MEPs was reviewed as part of their MEP audits.

Audit Commentary
There were no examples of corrections to raw meter data. Compliance is confirmed.

9. Estimating and Validating Volume Information

9.1 Identification of Readings (Clause 3(3) Schedule 15.2)

All estimated readings and permanent estimates must be clearly identified as an estimate at source and in any exchange of metering data or volume information between participants.

Audit Observation
Provision of estimated reads to other participants during switching was reviewed in sections 4.3, 4.4, 4.10 and 4.11.

Correct identification of estimated reads and review of the estimation process was completed in section 8.1.

Audit Commentary
Estimated readings are clearly identified as required by this clause. Compliance is confirmed.

9.2 Derivation of Volume Information (Clause 3(4) Schedule 15.2)

Volume information must be directly derived, in accordance with Schedule 15.2, from:
3(4)(a) - validated meter readings
3(4)(b) - estimated readings
3(4)(c) - permanent estimates.

Audit Observation
A sample of submission data was reviewed in section 12, to confirm that volume was based on readings as required.

Audit Commentary

Review of submission data confirmed that it is based on readings as required by this clause.

Compliance is confirmed.

9.3 Meter Data Used to Derive Volume Information (Clause 3(5) Schedule 15.2)

All meter data that is used for derive volume information must not be rounded or truncated from the stored data from the metering installation.

Audit Observation

A sample of submission data was reviewed in section 12, to confirm that volume was based on readings as required.

Audit Commentary

Data provided by the MEPs and agents is not rounded or truncated. Compliance is confirmed.

9.4 Half Hour Estimates (Clause 15 Schedule 15.2)

If a reconciliation participant is unable to interrogate an electronically interrogated metering installation before the deadline for providing submission information, the submission to the reconciliation manager must be the reconciliation participant's best estimate of the quantity of electricity that was purchased or sold in each trading period during any applicable consumption period for that metering installation.

The reconciliation participant must use reasonable endeavours to ensure that estimated submission information is within the percentage specified by the Authority.

Audit Observation

Powershop does not deal with any HHR data.

Audit Commentary

Powershop does not deal with any HHR data.

9.5 NHH Metering Information Data Validation (Clause 16 Schedule 15.2)

Each validity check of non-half hour meter readings and estimated readings must include the following:
16(2)(a) - confirmation that the meter reading or estimated reading relates to the correct ICP, meter, and register
16(2)(b) - checks for invalid dates and times
16(2)(c) - confirmation that the meter reading or estimated reading lies within an acceptable range compared with the expected pattern, previous pattern, or trend
16(2)(d) - confirmation that there is no obvious corruption of the data, including unexpected zero values.

Audit Observation

I reviewed and observed the NHH data validation process, including checking a sample of data validations.

Audit Commentary

There are several steps to validation of NHH data. At source, the handheld data input devices perform a localised validation to ensure that the reading is within expected high-low parameters. Readings outside these parameters have to be re-entered and acknowledged by the data collector. A meter cannot be skipped without reading unless a reason is entered.

A further validation occurs within the Powershop system, this validation checks the following:

- meter and register number match
- missing readings
- invalid dates and times
- consumption more than 500% of that expected
- readings lower than the previous reading
- transposed reads.

Billing validation is also conducted; this includes:

- long billing period
- short billing period
- high consumption
- low consumption.

The process for managing zero consumption appears to be well managed. Every instance of zero consumption is investigated. Outbound calls, check readings and site visits are organised as necessary.

The matter of “bypassed” metering was evaluated to ensure validation processes are comprehensive enough to identify any meters that have been bypassed. Powershop’s zero consumption process identifies any bridged meters. Three examples were examined in detail. I confirmed that consumption information is appropriately corrected and flows through to submission files.

Compliance is confirmed.

9.6 Electronic Meter Readings and Estimated Readings (Clause 17 Schedule 15.2)

Each validity check of electronically interrogated meter readings and estimate readings must be at a frequency that will allow a further interrogation of the data storage device before the data is overwritten within the data storage device and before this data can be used for any purpose under the Code.

Each validity check of a meter reading obtained by electronic interrogation or an estimated reading must include:
17(4)(a) - checks for missing data
17(4)(b) - checks for invalid dates and times
17(4)(c) - checks of unexpected zero values
17(4)(d) - comparison with expected or previous flow patterns
17(4)(e) - comparisons of meter readings with data on any data storage device registers that are available
17(4)(f) - a review of meter and data storage device event list. Any event that could have affected the integrity of metering data must be investigated.

Audit Observation

I checked the validation steps by conducting a walk-through of the process. I observed the AMI event logs where they were available and I observed the associated correspondence related to specific issues to resolve.

Audit Commentary

Powershop carries out the same validation used for manually read ICPs.

Powershop receives some event information from some MEPs but not all relevant event information is being provided; therefore routine monitoring of relevant events is not occurring.

Event information is received from AMS & SmartCo and it is in a usable format. No event information is received from ARC Innovations. This is recorded as non-compliance.

Non-compliance	Description
With: Clause 17 of schedule 15.2 **From/to:** 01/07/16 to 30/06/17	AMI event information not routinely monitored. No event information from ARC. **Potential impact:** High **Actual impact:** Low **Audit history:** None **Controls:** Moderate **Breach Risk Rating: 2**
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are considered moderate because there is room for improvement. No examples were found where settlement was affected and the major issues are dealt with, so the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
No comment		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Powershop is engaging with all ARC to ensure the required information is delivered.	Ongoing	

10. Provision of Metering Information to the Grid Owner in Accordance With Subpart 4 of Part 13 (clause 15.38(1)(f))

10.1 Generators to Provide HHR Metering Information (Clause 13.136)

The generator (and/or embedded generator) must provide to the pricing manager and the grid owner connected to the local network in which the embedded generator is located, half hour metering information in accordance with clause 13.138 in relation to generating plant that is subject to a dispatch instruction:
- that injects electricity directly into a local network; or
- if the meter configuration is such that the electricity flows into a local network without first passing through a grid injection point or grid exit point metering installation.

Audit Observation
Powershop does not have responsibilities for the provision of information to the grid owner.

Audit Commentary
Powershop does not have responsibilities for the provision of information to the grid owner.

10.2 Unoffered & Intermittent Generation Provision of Metering Information (Clause 13.137)

Each generator must provide the pricing manager and the relevant grid owner half-hour metering information for:
- any unoffered generation from a generating station with a point of connection to the grid 13.137(1)(a)
- any electricity supplied from an intermittent generating station with a point of connection to the grid. 13.137(1)(b)
The generator must provide the pricing manager and the relevant grid owner with the half-hour metering information required under this clause in accordance with the requirements of Part 15 for the collection of that generator's volume information (clause 13.137(2))
If such half-hour metering information is not available, the generator must provide the pricing manager and the relevant grid owner a reasonable estimate of such data (clause 13.137(3)).

Audit Observation

Powershop does not have responsibilities for the provision of information to the grid owner.

Audit Commentary

Powershop does not have responsibilities for the provision of information to the grid owner.

10.3 Loss Adjustment of HHR Metering Information (Clause 13.138)

The generator must provide the information required by clauses 13.136 and 13.137,
13.138(1)(a) - adjusted for losses (if any) relative to the grid injection point or, for embedded generators the grid exit point, at which it offered the electricity
13.138(1)(b) - in the manner and form that the pricing manager stipulates
13.138(1)(c) - by 0500 hours on a trading day for each trading period of the previous trading day.
The generator must provide the half-hour metering information required under this clause in accordance with the requirements of Part 15 for the collection of the generator's volume information.

Audit Observation

Powershop does not have responsibilities for the provision of information to the grid owner.

Audit Commentary

Powershop does not have responsibilities for the provision of information to the grid owner.

10.4 Notification of the Provision of HHR Metering Information (Clause 13.140)

If the generator provides half-hourly metering information to the pricing manager or a grid owner under clauses 13.136 to 13.138, or 13.138A, it must also, by 0500 hours of that day, advise the relevant grid owner.

Audit Observation

Powershop does not have responsibilities for the provision of information to the grid owner.

Audit Commentary

Powershop does not have responsibilities for the provision of information to the grid owner.

11. Provision of Submission Information for Reconciliation

11.1 Buying and Selling Notifications (Clause 15.3)

Unless an embedded generator has given a notification in respect of the point of connection under clause 15.3, a trader must notify the reconciliation manager if it is to commence or cease trading electricity at a point of connection using a profile with a profile code other than HHR, RPS, UML, EG1, or PV1 at least five business days before commencing or ceasing trader.

The notification must comply with any procedures or requirements specified by the reconciliation manager.

Audit Observation

A registry list was reviewed for the audit period to determine which non-standard profiles were used. The process was examined to ensure trading notification requirements were identified.

Audit Commentary

Powershop's system will not allow a customer to be established in an area without a trading notification. If a submission file included a profile where a trading notification had not been provided, it would fail the "file checker" and could not be sent until a notification was made. Compliance is confirmed.

11.2 Calculation of ICP Days (Clause 15.6)

Each retailer and direct purchaser (excluding direct consumers) must deliver a report to the reconciliation manager detailing the number of ICP days for each NSP for each submission file of submission information in respect of:
15.6(1)(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period
15.6(1)(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.

Audit Observation

The process for the calculation of ICP days was examined by checking three NSPs with a small number of ICPs to confirm the AV110 ICP days calculation was correct.

I reviewed variances for 11 months of GR100 reports to identify any large discrepancies.

Audit Commentary

The ICP days calculation was confirmed to be correct for the three-month revision for December 2016 for NSPs KIK0111, ABY0111 and CNL0011.

The ICP days notification times were met during the audit period.

The following table shows the ICP days difference between Powershop's database and the RM return file (GR100) for all available revisions for 11 months. Negative percentage figures indicate that the

Powershop ICP days figures are higher than those contained on the registry and conversely a positive number indicates that the Registry's figures are higher than those contained on the Registry. The table indicates that there are no large discrepancies present.

Compliance is confirmed.

Month	Ri	R1	R3	R7	R14
Jan 2016	0.01%	0.04%	0.00%	0.00%	0.00%
Feb 2016	0.03%	0.01%	0.00%	0.00%	0.00%
March 2016	0.00%	0.00%	0.00%	0.00%	-
April 2016	0.00%	0.00%	0.00%	0.00%	-
May 2016	0.01%	0.01%	0.00%	0.00%	-
June 2016	0.02%	0.00%	-0.01%	0.00%	-
August 2016	0.01%	-0.01%	0.00%	0.00%	
Sept 2016	0.02%	0.01%	0.00%	0.00%	
Oct 2016	0.01%	0.00%	-0.01%	0.00%	
Nov 2016	0.01%	0.00%	0.00%		
Dec 2016	0.03%	-0.02%	-0.01%		

11.3 Electricity Supplied Information Provision to the Reconciliation Manager (Clauses 15.7 of Part 15)

A retailer must deliver to the reconciliation manager its total monthly quantity of electricity supplied for each NSP, aggregated by invoice month, for which it has provided submission information to the reconciliation manager, including revised submission information for that period as non- loss adjusted values in respect of:
15.7(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period
15.7(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.

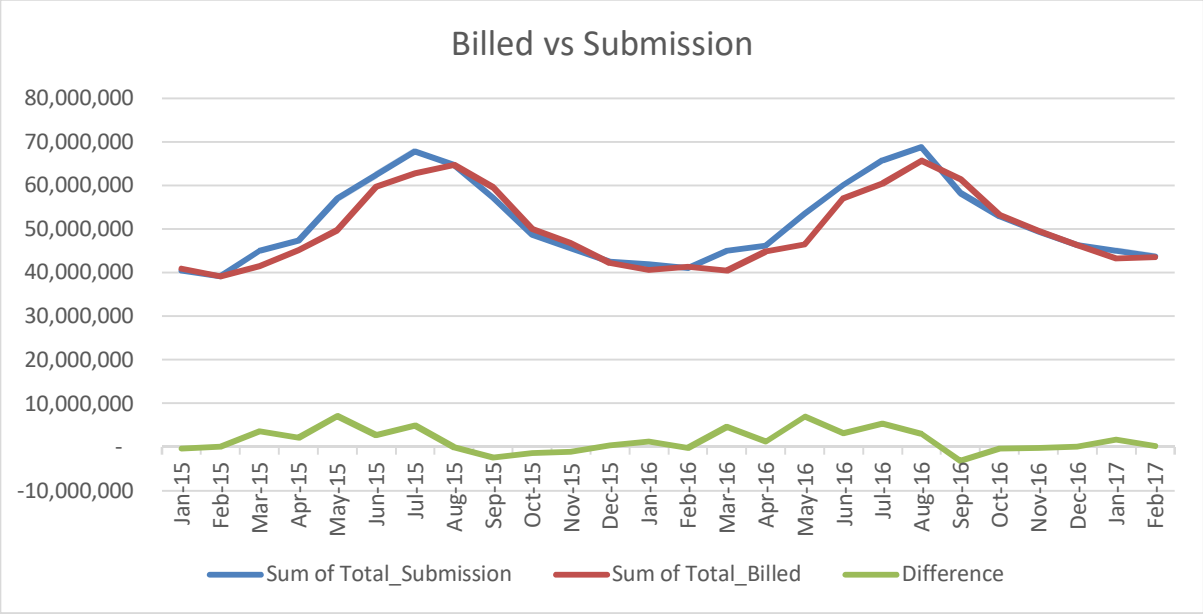
Audit Observation

The electricity supplied calculation was confirmed by selecting three NSPs with a small number of ICPs and checking that the AV120 total matched the sum of the individual invoices for the NSP. I also compared the GR130 reports for a two-year period to identify any anomalies.

Audit Commentary

The electricity supplied calculation was confirmed to be correct for the three-month revision for December 2016 for NSPs KIK0111, ABY0111 and CNL0011. Compliance is confirmed for the sample checked.

The graph below shows that the submitted information is 3.0% higher than the billed total. In previous audit reports the difference has been closer to 1.0% and was explainable because of the growing nature of the customer base. The customer base has been stable over the period of the graph and I consider that the difference of 3.0% warrants investigation. Variation is expected on a month to month basis, but over a two year period, with a stable number of ICPs, the totals are expected to be less than 1.0%.



I recommend this variance is examined to determine whether there is any inaccuracy with electricity supplied or submission data.

Recommendation	Description	Audited party comment	Remedial action
Regarding: Clause 15.7 of part 15	Check the difference between electricity supplied and submission totals to confirm accuracy.	No comment	Investigating

11.4 HHR Aggregates Information Provision to the Reconciliation Manager (Clause 15.8)

A retailer or direct purchaser (excluding direct consumers) must deliver to the reconciliation manager its total monthly quantity of electricity supplied for each half hourly metered ICP for which it has provided submission information to the reconciliation manager, including:
15.8(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period

15.8(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.

Audit Observation

Powershop does not deal with any HHR data.

Audit Commentary

Powershop does not deal with any HHR data.

12. Submission Computation

12.1 Daylight Saving Adjustment (Clause 15.36)

The reconciliation participant must provide submission information to the reconciliation manager that is adjusted for NZDT using one of the techniques set out in clause 15.36(3) specified by the Authority.

Audit Observation

Powershop does not deal with any HHR data.

Audit Commentary

Powershop does not deal with any HHR data.

12.2 Creation of Submission Information (Clause 15.4)

By 1600 hours on the 4th business day of each reconciliation period, the reconciliation participant must deliver submission information to the reconciliation manager for all NSPs for which the reconciliation participant is recorded in the registry as having traded electricity during the consumption period immediately before that reconciliation period (in accordance with Schedule 15.3).

By 1600 hours on the 13th business day of each reconciliation period, the reconciliation participant must deliver submission information to the reconciliation manager for all points of connection for which the reconciliation participant is recorded in the registry as having traded electricity during any consumption period being reconciled in accordance with clauses 15.27 and 15.28, and in respect of which it has obtained revised submission information (in accordance with Schedule 15.3).

Audit Observation

This clause relates to the timeliness of files and whether they include all ICPs. I checked three NSPs with a small number of ICPs to confirm whether all ICPs were included.

A list of breaches was obtained from the Electricity Authority. There were no breaches for late provision of submission information.

Audit Commentary

No breaches had been recorded for late provision of submission information.

The check of three NSPs confirmed the accuracy of the files. Compliance is confirmed.

12.3 Allocation of Submission Information (Clause 15.5)

In preparing and submitting submission information, the reconciliation participant must allocate volume information for each ICP to the NSP indicated by the data held by the registry for the relevant consumption period at the time the reconciliation participant assembles the submission information. Volume information must be derived in accordance with Schedule 15.2.

However, if, in relation to a point of connection at which the reconciliation participant trades electricity, a notification given by an embedded generator under clause 15.13 for an embedded generating station is in force, the reconciliation participant is not required to comply with the above in relation to electricity generated by the embedded generating station.

Audit Observation

Processes to ensure that information used to aggregate the reconciliation reports is consistent with the registry were reviewed and registry validation includes all relevant fields.

The process to ensure that AV080 submissions are accurate was discussed and observed. The process for aggregating the AV080 was examined by checking aggregation for individual NSPs.

A typical sample of five active-vacant ICPs were reviewed to ensure that they are included in the AV080 submission.

A process walkthrough was conducted to confirm zeroing occurs.

Audit Commentary

The NSP level aggregation check confirmed the accuracy of the factors. A walk-through of the validation process confirmed that all factors are included.

I confirmed that submission occurs for all active-vacant ICPs.

The process walkthrough confirmed there were no issues related to not zeroing redundant combinations.

Sound validations are in place to identify issues. The validations include variance between revisions, variance to previous month and difference between billed and submission. Compliance is confirmed.

12.4 Grid Owner Volumes Information (Clause 15.9)

The participant (if a grid owner) must deliver to the reconciliation manager for each point of connection for all of its GXPs, the following:
- submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.9(a))
- revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period (clause 15.9(b)).

Audit Observation
A registry list with history was reviewed for the audit period to confirm that Powershop has not supplied any GIPs.

Audit Commentary
Examination of the list file found that Powershop has not supplied any GIPs. Powershop is not required to report any grid owner volume information.

12.5 Provision of NSP Submission Information (Clause 15.10)

The participant (if a local or embedded network owner) must provide to the reconciliation manager for each NSP for which the participant has given a notification under clause 25(1) Schedule 11.1 (which relates to the creation, decommissioning, and transfer of NSPs) the following:
- submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.10(a))
- revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period (clause 15.10(b)).

Audit Observation
Powershop is not a local or embedded network owner.

Audit Commentary
Powershop is not a local or embedded network owner, and is not required to provide NSP submission information.

12.6 Grid Connected Generation (Clause 15.11)

The participant (if a grid connected generator) must deliver to the reconciliation manager for each of its points of connection, the following:
- submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.11(a))
- revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period (clause 15.11(b)).

Audit Observation

A registry list with history was reviewed for the audit period to confirm that Powershop has not supplied any GIPs.

Audit Commentary

Examination of the list file found that Powershop has not supplied any GIPs. Powershop is not required to report any grid connected generation.

12.7 Accuracy of Submission Information (Clause 15.12)

If the reconciliation participant has submitted information and then subsequently obtained more accurate information, the participant must provide the most accurate information available to the reconciliation manager or participant, as the case may be, at the next available opportunity for submission (in accordance with clauses 15.20A, 15.27, and 15.28).

Audit Observation

I conducted a walk-through of the process for revisions and I checked some specific corrections at an ICP level to confirm revisions were conducted.

Audit Commentary

Review of submissions confirmed revisions were submitted as expected. Evidence was observed of revised consumption information where changes were made. Specifically I checked three ICPs where meters had been bridged and the volumes correctly flowed through to revision files.

Compliance is confirmed.

12.8 Permanence of Meter Readings for Reconciliation (Clause 4 Schedule 15.2)

Only volume information created using validated meter readings, or if such values are unavailable, permanent estimates, has permanence within the reconciliation processes (unless subsequently found to be in error).

Volume information created using estimated readings must be subsequently replaced at the earliest opportunity by the reconciliation participant by volume information that has been created using validated meter readings or permanent estimates by, at the latest, the month 14 revision cycle.

A permanent estimate may be used in place of a validated meter reading, but only if, despite having used reasonable endeavours; the reconciliation participant has been unable to obtain a validated meter reading.

Audit Observation

AV080 14 month revisions were reviewed to identify any forward estimate still existing.

Audit Commentary

A review of AV080 14 month revisions for September 2015 and October 2015 showed forward estimates remained at the time of the 14-month revision. Powershop does not have a process for the replacement of estimates with permanent estimates at the 14-month revision. For October 2015, there was 124,792 kWh recorded as FE in the 14-month revision. This was 0.26% of the total submission for the month. The analysis of some specific ICPs where HE was not 100% in the April 2016 file identified an issue where an ICP was read on 31/03/16, again on 01/04/16 and then a further reading was obtained on 30/04/16. The system calculated the consumption correctly, but labelled the first day as FSE (forward standard estimate) instead of HE.

Non-compliance	Description
With: Clause 4 of Schedule 15.2 **From/to:** 01/07/16 to 30/06/17	Some estimates not replaced at R14. Some incorrect labelling of HE as FSE. **Potential impact:** Low **Actual impact:** Low **Audit history:** Multiple times **Controls:** Moderate **Breach Risk Rating: 2**
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are considered moderate because meter reading processes are strong leading to a very small proportion of FE still existing at 14 months. There is a minor impact on settlement; therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
Powershop does not believe that all volumes can be made HE. Volumes based on only estimates where no actual meter readings have been obtained cannot be made HE as the absence of actuals meter readings prevents either a "validated meter readings" or "permanent estimate" being used		Not planned due to differing interpretation of Code requirements
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Powershop's smart meter deployment program is expected to reduce the number of instances where a meter reading cannot be obtained with 14 months	Ongoing	

12.9 Creation of Submission Information (Clause 2 Schedule 15.3)

If a reconciliation participant prepares submission information for each NSP for the relevant consumption periods in accordance with the Code, such submission information must comprise the following:

- half hour volume information for each ICP notified in accordance with clause 11.7(2) for which there is a category 3 or higher metering installation (clause 2(1)(a))

- for each ICP about which information is provided under clause 11.7(2) for which there is a category 1 or category 2 metering installation (clause 2(1)(b)):
- half hour volume information for the ICP; or
- non-half hour volumes information calculated under clauses 4 to 6 (as applicable).
- unmetered load quantities for each ICP that has unmetered load associated with it derived from the quantity recorded in the registry against the relevant ICP and the number of days in the period, the distributed unmetered load database, or other sources of relevant information (clause 2(1)(c))
- to create non half hour submission information a reconciliation participant must only use information that is dependent on a control device if (clause 2(2)):
(a) the certification of the control device is recorded on the registry; or
(b) the metering installation in which the control device is location has interim certification.
- to create submission information for a point of connection the reconciliation participant must apply to the raw meter data (clause 2(3):
- for each ICP, the compensation factor that is recorded in the registry (clause 2(3)(a))
- for each NSP the compensation factor that is recorded in the metering installations most recent certification report (clause 2(3)(b)).

Audit Observation

The registry list with history was reviewed for the audit period to confirm that Powershop supplies:

- NHH information
- Generation information under the PV1 profile
- Unmetered load.

The accuracy of submission information was checked in numerous sections, plus I checked the accuracy of generation and unmetered submissions.

Audit Commentary

One issue was found with the accuracy of submission information, which is that consumption information for ICPs with a de-energised status not submitted.

Non-compliance	Description
With: Clause 2 of schedule 15.3 **From/to:** 01/07/16 to 30/06/17	Incorrect submission information. **Potential impact:** Medium **Actual impact:** Medium **Audit history:** None **Controls:** Moderate **Breach Risk Rating: 4**
Audit Risk Rating	**Rationale for audit risk rating**
Medium	There was a moderate effect on settlement; therefore the audit risk rating is medium.

Actions taken to resolve the issue	Completion date	Remedial action Status
No comment		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

No comment		

12.10 Historical Estimates and Forward Estimates (Clause 3 Schedule 15.3)

For each ICP that has a non-half hour metering installation, volume information derived from validated meter readings, estimated readings, or permanent estimates must be allocated to consumption periods using the following techniques to create historical estimates and forward estimates (clause 3(1)).

Each estimate that is a forward estimate or a historical estimate must clearly be identified as such (clause 3(2)).

If validated meter readings are not available for the purpose of clauses 4 and 5, permanent estimates may be used in place of validated meter readings (clause 3(3)).

Audit Observation

Review six AV080 submissions for revisions 1 to 7, to confirm that historic estimates are included and identified.

Permanence of meter readings is reviewed in section 12.8. The methodology to create forward estimates is reviewed in section 12.11.

Audit Commentary

I reviewed nine AV080 submissions for a diverse sample of months and revisions and confirm that forward and historic estimates are included, and identified as such. I also checked some NSPs where the quantity of HE had not met the threshold and found two scenarios that were not correct. One ICP had a removal reading, which was used but the consumption was labelled as a forward standard estimate (FSE). The second scenario was where reads were available but a shape file was not available. The calculation is correct but the consumption is labelled as FSE. In every case, where a shape files is not available the consumption is incorrectly labelled as FE.

Non-compliance	Description
With: Clause 3 of schedule 15.3 **From/to:** 01/07/16 to 30/06/17	Incorrect labelling of HE as FE. **Potential impact:** Low **Actual impact:** Low **Audit history:** Multiple times **Controls:** Moderate **Breach Risk Rating: 2**
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate, because there is room for improvement. There is no impact on settlement so the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
No comment		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Powershop has identified that its system is coded to fall-back to FSE if no profile shape can be found, and then leaves that calculated volume as being labelled FSE. Once the solution (expected to be just relabelling the volume as HE) is properly defined, development will begin to implement it. This work was delayed from the previous year due to the low market impact.	Dec 2017	Identified

12.11 Historical Estimate Process (Clause 4 and 5 Schedule 15.3)

The methodology outlined in clause 4 of Schedule 15.3 must be used when preparing historic estimates of volume information for each ICP when the relevant seasonal adjustment shape is available.

If a seasonal adjustment shape is not available, the methodology for preparing an historical estimate of volume information for each ICP must be the same as in clause 4, except that the relevant quantities kWh_{Px} must be prorated as determined by the reconciliation participant using its own methodology or on a flat shape basis using the relevant number of days that are within the consumption period and within the period covered by kWh_{Px}

Audit Observation

To assist with determining compliance of the Historical Estimate (HE) processes, Powershop was supplied with a list of scenarios, and for some individual ICPs a manual HE calculation was conducted, and compared to the result from Powershop' system. Where scenarios were not present, they were created in the test system to confirm compliance.

Audit Commentary

Powershop provided examples of historic estimate calculations, which were reviewed. I found that correct shape files had been applied and the calculations were correct. Compliance is confirmed for the scenarios examined below.

Test	Scenario	Test expectation	Compliance
C	ICP becomes Inactive, then Active, then Inactive again within a month.	Consumption is only calculated for the Active portion of the month.	Compliant
G	ICP Starts part way through a month.	Consumption is calculated to include the 1st day of responsibility.	Compliant
H	ICP Ends part way through a month.	Consumption is calculated to include the last day of responsibility.	Compliant
I & J	ICP is Lost and Won Back in a month.	Consumption is calculated for each day of responsibility.	Compliant

12.12 Forward Estimate Process (Clause 6 Schedule 15.3)

Forward estimates may be used only in respect of any period for which an historical estimate cannot be calculated.

The methodology used for calculating a forward estimate may be determined by the reconciliation participant, only if it ensures that the accuracy is within the percentage of error specified by the Authority.

Audit Observation

The process to create forward estimates was reviewed.

Forward estimates were checked for accuracy by analysing the GR170 file for variances between revisions over the audit period.

Audit Commentary

Powershop's forward estimate process is based on a "straight line" forward standard estimate methodology, and where no historical information is available a "forward default' estimate of 25 units per day is used.

The forward standard methodology is based on the following:

- daily consumption from the "admin" field (based on previous validated meter readings); or
- daily consumption from the switch in CS file
- daily consumption from the customer at the time of registration.

The accuracy of the initial submission, in comparison to each subsequent revision is required to be within 15% and within 100,000 kWh. Powershop met this accuracy requirement for all of balancing areas for the eight months selected.

Quantity of Balancing Areas with Differences Over 15% and 100,000 kWh

Month	Revision 1	Revision 3	Revision 7	Revision 14	Total Balancing Areas
Sept 2015	0	0	0	0	104
Oct 2015	0	0	0	0	104
Nov 2015	0	0	0	-	106
May 2016	0	0	0	-	110
June 2016	0	0	0	-	121
Sept 2016	0	0	0	-	127
Oct 2016	0	0	-	-	131

Nov 2016	0	0	-	-	132

Total Variation between Revisions

Month	Revision 1	Revision 3	Revision 7	Revision 14
Sept 2015	0.99%	1.57%	1.61%	1.59%
Oct 2015	0.00%	2.25%	2.37%	2.38%
Nov 2015	0.98%	1.61%	1.68%	-
May 2016	-0.77%	-0.78%	-0.66%	-
June 2016	-0.99%	-0.59%	-0.69%	-
Sept 2016	0.61%	1.13%	1.14%	-
Oct 2016	0.98%	1.71%	-	-
Nov 2016	0.94%	1.38%	-	-

12.13 Compulsory Meter Reading After Profile Change (Clause 7 Schedule 15.3)

If the reconciliation participant changes the profile associated with a meter, it must, when determining the volume information for that meter and its respective ICP, use a validated meter reading or permanent estimate on the day on which the profile change is to take effect.

The reconciliation participant must use the volume information from that validated meter reading or permanent estimate in calculating the relevant historical estimates of each profile for that meter.

Audit Observation

A registry list with history was reviewed for the audit period to confirm that Powershop has only used the RPS, POD/PON and PV1 profiles during the audit period.

Audit Commentary

In the event of a profile change, Powershop uses a validated meter reading on the day that the change is effective. Profile changes normally have an associated metering change and the readings from this process are used. Compliance is confirmed.

13. Submission Format and Timing

13.1 Market Administrator Meter Reading Reports (Clauses 8 & 9 of Schedule 15.2)

Provision of meter read frequency reports to the Authority, no later than 20 business days after the end of the month.

Audit Observation

I checked whether the meter reading reports had been prepared and submitted in accordance with this clause.

Audit Commentary

These reports were all submitted on time. Compliance is confirmed.

13.2 Provision of Submission Information to the RM (Clause 8 Schedule 15.3)

Submission information provided to the reconciliation manager must be aggregated to the following level:

- NSP code (clause 8(a))
- reconciliation type (clause 8(b))
- profile (clause 8(c))
- loss category code (clause 8(d))
- flow direction (clause 8(e))
- dedicated NSP (clause 8(f))
- trading period for half hour metered ICPs and consumption period or day for all other ICPs (clause 8(g)).

Audit Observation

The process to ensure that AV080 submissions are accurate was evaluated by checking three NSPs with a small number of ICPs to ensure the totals were correct and accurate.

Audit Commentary

AV080 files are aggregated correctly. Compliance with the requirement to use correct aggregation factors is confirmed.

13.3 Reporting Resolution (Clause 9 Schedule 15.3)

When reporting submission information, the number of decimal places must be rounded to not more than two decimal places.

If the unrounded digit to the right of the second decimal place is greater than or equal to five, the second digit is rounded up, and

If the digit to the right of the second decimal place is less than five, the second digit is unchanged.

Audit Observation

Aggregation of the AV080 file was reviewed and as part of these checks, I verified that the data provided for submission was correctly rounded.

Audit Commentary

Submissions are correctly rounded to two decimal places. Compliance is confirmed.

13.4 Historical Estimate Reporting to RM (Clause 10 Schedule 15.3)

By 1600 hours on the 13th business day of each reconciliation period the reconciliation participant must report to the reconciliation manager the proportion of historical estimates per NSP contained within its non-half hour submission information.
The proportion of submission information per NSP that is comprised of historical estimates must (unless exceptional circumstances exist) be:
- at least 80% for revised data provided at the month 3 revision (clause 10(3)(a))
- at least 90% for revised data provided at the month 7 revision (clause 10(3)(b))
- 100% for revised data provided at the month 14 revision. (clause 10(3)(c))

Audit Observation

The timeliness of submissions of historic estimate was reviewed in section 12.2.

I reviewed GR170 reports for the entire audit period to confirm that historic estimate requirements were met.

Audit Commentary

The quantity of historical estimates is contained in the submission file and is not a separate report.

The revision files were examined for eight separate months, which showed that the targets were met for nearly all NSPs for the 3 and 7 month revisions. The 100% target has not been met for all NSPs for the 14 month revision.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Sept 2015	155	155	85	156
Oct 2015	154	154	84	157
Nov 2015	153	153	-	157
May 2016	161	163	-	165
June 2016	177	179	-	182
Sept 2016	190	191	-	194

Oct 2016	196	-	-	198
Nov 2016	198	-	-	201

The table below shows that Powershop's percentage HE at a summary level for all NSPs is well above the required targets.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Sept 2015	99.10%	99.48%	99.63%
Oct 2015	98.26%	99.61%	99.74%
Nov 2015	99.15%	99.50%	-
May 2016	99.18%	99.64%	-
June 2016	98.32%	99.67%	-
Sept 2016	99.13%	99.51%	-
Oct 2016	99.02%	-	-
Nov 2016	98.92%	-	-

Non-compliance	Description
With: Clause 10 of Schedule 15.3 **From/to:** October and November 2016	Historic estimate targets were not met for all revisions. **Potential impact:** Medium **Actual impact:** Low **Audit history:** Multiple times **Controls:** Strong **Breach Risk Rating: 1**
Audit Risk Rating	**Rationale for audit risk rating**
Low	Strong controls are in place to get actual or customer readings to derive submission information. The impact on settlement is minor; therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
No comment		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
No comment		

14. Conclusions

The audit found 19 non-compliance issues. Six of these relate to switching and four relate to registry updates. Improvements have been made in a number of areas during the audit period, as follows:

- registry update timeframes have improved significantly
- the number of late switching files has improved
- forward estimate thresholds were met for all balancing areas
- registry management processes are compliant.

A change came into effect on October 9th, 2015 requiring that "a switch event meter read applies to the end of the day prior to the event date for the losing trader and the start of the event date for the gaining trader." Some midnight reads from AMI sites are still being sent as estimates when they should be actuals. In addition the October 9th 2015 Code change requires losing traders to use the gaining trader's switch event meter reading if it is from an AMI site. Powershop is rejecting some read change requests and is not always using these reads as required.

Two new issues were found with historic estimates. Firstly, historic estimates are being identified as forward estimates when a shape file is not used and secondly, a "removal reading" was ignored by the system and a forward standard estimate was conducted.

The matters raised are shown in the tables below:

Table of Non-Compliance

Subject	Section	Clause	Non compliance	Indicative Impact	Audit History	Procedures	Remedial Action
Changes to registry information	3.3	10 of schedule 11.1	Not all status changes made within 5 business days.	Moderate	Low	2	Identified
Provision of registry information	3.5	9 of schedule 11.1	Some late changes to Active. Some late MEP notifications.	Strong	Low	1	Identified
ANZSIC codes	3.6	9(1)(k) of schedule 11.1	14 of 20 incorrect ANZSIC codes.	Moderate	Low	2	Identified
Unmetered load	3.7	9(1)(f) of schedule 11.1	5 ICPs with incorrect unmetered load figures.	Moderate	Low	2	Identified
Inactive status	3.9	19 of schedule 11.1	Some ICPs have an incorrect inactive status.	Moderate	Low	2	Identified
Switching	4.2	3 of schedule 11.3	1 late AN file.	Strong	Low	1	Cleared

Subject	Section	Clause	Non compliance	Indicative Impact	Audit History	Procedures	Remedial Action
	4.4	6 of schedule 11.3	3 late RR files.	Strong	Low	1	Cleared
	4.5	6(3)(b)of schedule 11.3	Some RR files rejected which were for AMI sites and contained actual reads.	Weak	Low	3	Identified
	4.10	11 of schedule 11.3	10 late CS files.	Moderate	Low	2	Identified
	4.11	12 (2B)(b) & (3) of schedule 11.3	10 late RR files. Some RR files rejected which were for AMI sites and contained actual reads.	Weak	Low	3	Identified
	4.15	17 of schedule 11.3	23 late NW files.	Strong	Low	1	Identified
Electricity conveyed	6.1	10.12 and 10.24 of part 10	Meters bridged at 3 ICPs.	Strong	Low	1	Identified
Phase failure monitoring	6.6	5(c) of schedule 15.2	Phase failure monitoring not conducted by Datacol.	Moderate	Low	2	Investigating
Interrogate meters once	6.8	7(1) and 7(2) of Schedule 15.2	No process for getting meter readings during the period of supply.	Weak	Low	3	Identified
AMI events	9.6	17 of schedule 15.2	AMI event information not routinely monitored. No event information from ARC.	Moderate	Low	2	Identified
Permanence of meter readings	12.8	4 of Schedule 15.2	Some estimates not replaced at R14. Some incorrect labelling of HE as FSE.	Moderate	Low	2	Not planned
Accuracy of submission information	12.9	2 of schedule 15.3	Incorrect submission information.	Moderate	Medium	4	Identified
FE and HE	12.10	3 of schedule 15.3	Incorrect labelling of HE as FE.	Moderate	Low	2	Identified
Proportion of HE	13.4	10 of Schedule 15.3	Historic estimate targets were not met for all revisions.	Strong	Low	1	Identified
					Future Risk Rating	**37**	
					Indicative Audit Frequency	**12 Months**	

Future risk rating	0	1-3	4-15	16-40	41-55	55+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

Table of Recommendations

Subject	Section	Clause	Recommendation for Improvement	Remedial Action
Electricity supplied	11.3	15.7 of part 15	Check the difference between electricity supplied and submission totals to confirm accuracy.	Investigating

Future risk rating	0	1-3	4-15	16-40	41-55	55+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

Table of Recommendations

Subject	Section	Clause	Recommendation for Improvement	Remedial Action
Electricity supplied	11.3	15.7 of part 15	Check the difference between electricity supplied and submission totals to confirm accuracy.	Investigating

Signed by:

Steve Woods
Veritek Limited
Electricity Authority Approved Auditor

Signed by:

Stefan Kirkwood
Reconciliation and Metering Manager

15. Powershop Response