

ELECTRICITY INDUSTRY PARTICIPATION CODE  
RECONCILIATION PARTICIPANT AUDIT REPORT



For

POWERSHOP NEW ZEALAND LTD

Prepared by: Steve Woods

Date audit commenced: 28 June 2018

Date audit report completed: 20 August 2018

Audit report due date: 22-Aug-18

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## EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Powershop New Zealand Ltd (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 version 7.2.

The audit found 25 non-compliance issues, which is an increase from the previous audit. Some of the issues found have an impact on settlement or on other participants. The main issues identified are as follows:

- some read change requests from other traders were incorrectly rejected
- the daily kWh figures were incorrect in some CS files
- some meter readings are not correctly applied to the end of the day
- submission did not occur for some bridged meters, faulty meters, inactive ICPs with consumption and unmetered load ICPs
- some estimates were not replaced by the 14-month revision.

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 44, which results in an indicative audit frequency of six months. I recommend the Authority considers a longer period of 12 months to be consistent with audit frequencies for other participants with similar results.

The matters raised are shown in the tables below:

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	10.6, 11.2, 15.2	Some registry discrepancies exist.  Some submission inaccuracies exist.	Moderate	Low	2	Identified
Access to metering installations	2.6	10.7(2),(4),(5) and (6)	Access not arranged for MEP to conduct time checks.	Moderate	Low	2	Disputed
Electrical connection	2.11	10.32	25 reconnected ICPs were not certified within five business days.	Moderate	Low	2	Unknown
Changes to registry information	3.3	10 of schedule 11.1	Registry not updated within 5 business days of the event for some MEP changes, reconnections and disconnections.	Moderate	Low	2	Unknown
Provision of registry information	3.5	9 of schedule 11.1	Some late changes to Active.	Strong	Low	1	Identified
ANZSIC codes	3.6	9(1)(k) of schedule 11.1	24 active ICPs with no or "Don't know" ANZSIC codes assigned.  12 of 150 ANZSIC codes appear to be incorrect.	Moderate	Low	2	Identified
Unmetered load	3.7	9(1)(f) of schedule 11.1	2 ICPs with incorrect unmetered load figures.	Moderate	Low	2	Investigating

Inactive status	3.9	19 of schedule 11.1	Some ICPs have an incorrect inactive status.	Moderate	Low	2	Unknown
Switching	4.2	3 of schedule 11.3	2 late AN files by 1 day and 2 days	Strong	Low	1	Unknown
	4.3	5 of schedule 11.3	5 late CS files. Customer read labelled as an actual for one ICP  Daily kWh incorrect for four ICPs	Moderate	Low	2	Unknown
	4.4	6 of schedule 11.3	4 late RR files. 1 RR rejected and should have been accepted.	Strong	Low	1	Unknown
	4.8	10(1) Schedule 11.3	One incorrect AN code.	Strong	Low	1	Unknown
	4.10	11 of schedule 11.3	50 late CS files. Incorrect daily kWh for six ICPs.  Readings in two CS files were from an incorrect date.	Moderate	Low	2	Unknown
	4.11	12 (2B)(b) & (3) of schedule 11.3	17 late RR files. 6 late AC 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	39 late NW files and 3 late AW files.	Strong	Low	1	Unknown
Shared unmetered load	5.1	11.14	2 shared unmetered load ICPs without registry populated or	Strong	Low	1	Unknown

			submission occurring.				
Electricity conveyed	6.1	10.13	While meters were bridged, energy was not metered and quantified according to the code for 25 ICPs.	Moderate	Low	2	Unknown
Derivation of readings	6.6	5(c) of schedule 15.2	Customer reads from photos used as validation reads in the reconciliation process and in some cases, they are not validated against other reads taken by a meter reader.	Strong	Low	1	Unknown
Meter reading application	6.7	6 Schedule 15.2	Not all meter readings are correctly applied.	Moderate	Low	2	Unknown
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, where the period of supply is less than 150 days.	Weak	Low	3	Unknown
AMI events	9.6	17 of schedule 15.2	AMI event information not provided by ARC Innovations.	Moderate	Low	2	Unknown
Permanence of meter readings	12.8	4 of Schedule 15.2	Some estimates not replaced at R14.  Some incorrect labelling of HE as FE.	Moderate	Low	2	Investigating
Preparation of	12.9	2 of schedule 15.3	Submission information	Moderate	Low	2	Disputed



submission information			not reported for some inactive ICPs.  Submission did not occur for two unmetered ICPs				
Identification of HE	12.10	3 of schedule 15.3	Incorrect labelling of HE as FE.	Moderate	Low	2	Investigating
HE reporting	13.3	10 of Schedule 15.3	Historic estimate thresholds were not met for some revisions.	Strong	Low	1	Identified
<b>Future Risk Rating</b>						<b>44</b>	
<b>Indicative Audit Frequency</b>						<b>6 months</b>	

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

## RECOMMENDATIONS

Subject	Section	Description	Recommendation
Meter reading events	6.6	Ensure all meter condition notes are loaded and actioned from the Wells file, whether a reading is obtained or not.	Regarding clause 5 of schedule 15.2
Electricity supplied	11.3	Check the difference between electricity supplied and submission totals to identify the source of the discrepancy.	Regarding clause 15.7 of part 15

## ISSUES

Subject	Section	Description	Issue
Quantification of electricity conveyed	6.1	<p>Embedded Generators are participants and can connect distributed generation without having an arrangement with a trader to purchase the generated kWh. They can also notify the RM that the kWh will be gifted and traders do not have knowledge of these arrangements.</p>	<p>Authority to clarify whether traders are non-compliant if Embedded Generators connect distributed generation without an arrangement with the trader.</p>

## 1. ADMINISTRATIVE

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

#### Code reference

*Section 11 of Electricity Industry Act 2010.*

#### Code related audit information

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

#### Audit observation

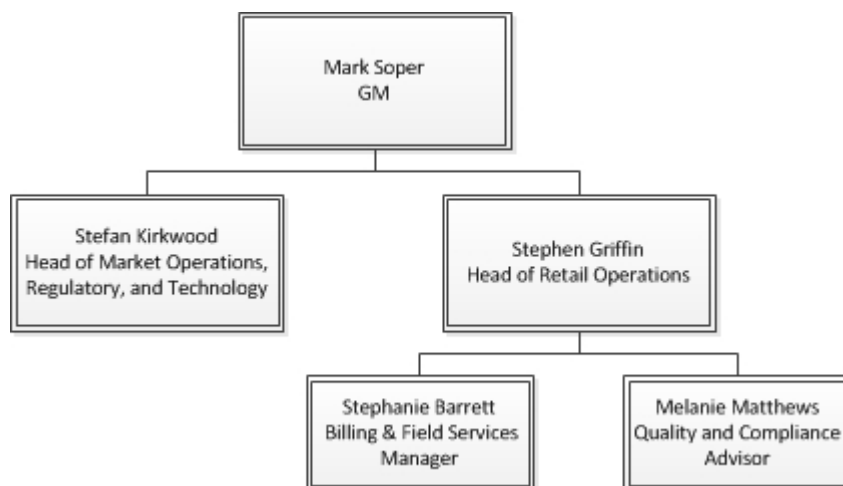
Current code exemptions were reviewed on the Electricity Authority website.

#### Audit commentary

Powershop has no current exemptions from their obligations to comply with the code.

### 1.2. Structure of Organisation

Powershop provided their current organisational structure:



### 1.3. Persons involved in this audit

Auditor:

Name	Company
Steve Woods	Veritek Limited

Personnel assisting in this audit were:

Name	Title
Stefan Kirkwood	Head of Market Operations, Regulatory and Technology.
Stephanie Barrett	Billing and Field Services Manager
Melanie Matthews	Quality and Compliance Advisor

### 1.4. Use of Agents (Clause 15.34)

#### Code reference

*Clause 15.34*

#### Code related audit information

*A reconciliation participant who uses an agent*

- *remains responsible for the contractor's fulfilment of the participant's Code obligations*
- *cannot assert that it is not responsible or liable for the obligation due to something the agent has or has not done.*

#### Audit observation

Use of agents was discussed with Powershop.

#### Audit commentary

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.

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

- Wells                                      NHH data collection

NHH AMI data is provided by the following MEPs. As mentioned in **section 1.9**, 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.

### 1.5. 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.

### 1.6. Breaches or Breach Allegations

Powershop has no breach allegations recorded by the Electricity Authority during the audit period.

### 1.7. ICP Data

All active ICPs are summarised by meter category in the table below.

Metering Category	(2018)	(2017)	(2016)
1	65,041	59,062	57,056
2	1,133	978	838
3	-	-	-
4	-	-	-
5	-	-	-
9	5	8	1
Blank	3	8	15

Status	Number of ICPs (2018)	Number of ICPs (2017)	Number of ICPs (2016)
Active (2,0)	66,182	60,056	57,911
Inactive – new connection in progress (1,12)	42	47	43
Inactive – electrically disconnected vacant property (1,4)	880	549	431
Inactive – electrically disconnected remotely by AMI meter (1,7)	3	6	3
Inactive – electrically disconnected at pole fuse (1,8)	-	-	-
Inactive – electrically disconnected due to meter disconnected (1,9)	-	-	-
Inactive – electrically disconnected at meter box fuse (1,10)	-	-	-
Inactive – electrically disconnected at meter box switch (1,11)	-	1	0
Inactive – electrically disconnected ready for decommissioning (1,6)	3	24	25
Inactive – reconciled elsewhere (1,5)	-	-	-
Decommissioned (3)	1,975	1,692	1,439

### 1.8. Authorisation Received

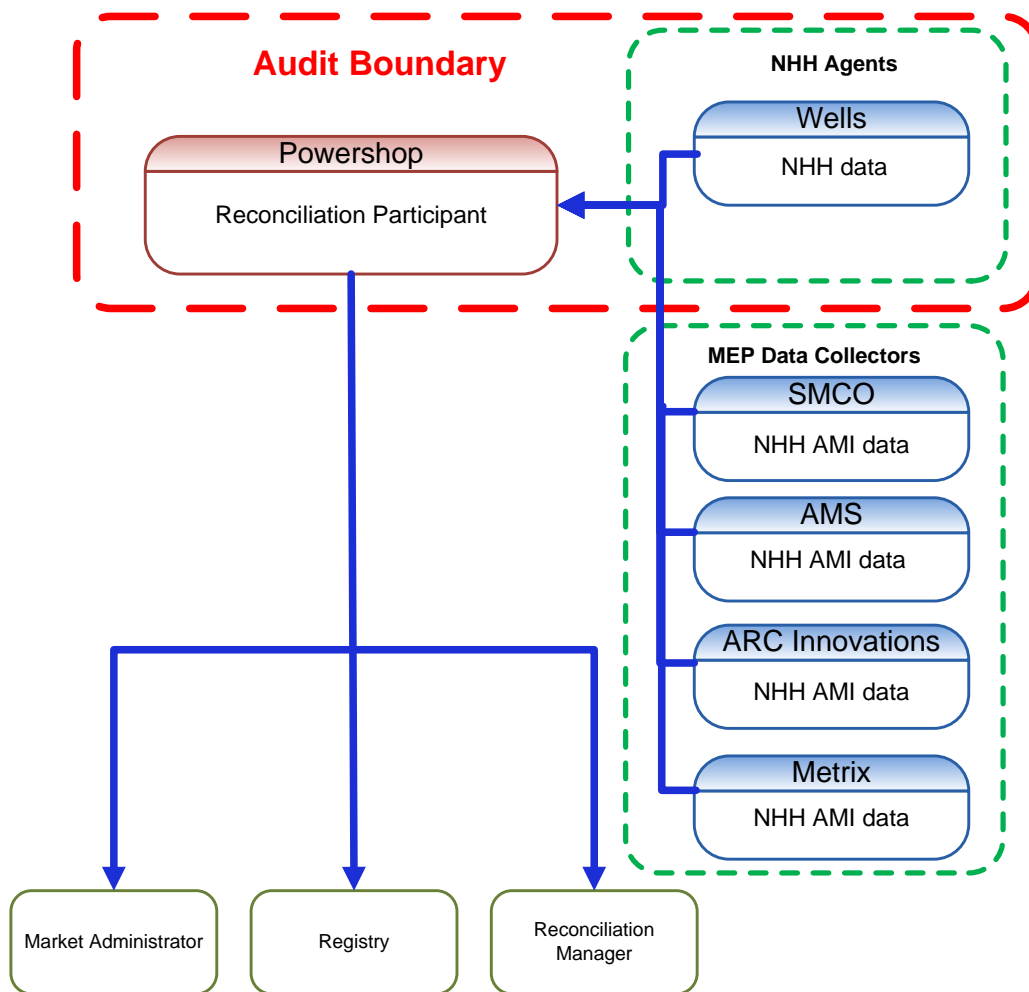
Powershop provided a letter of authorisation.

### 1.9. 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 version 7.2.

The audit was carried out at Powershop's premises, on June 28<sup>th</sup> and 29<sup>th</sup> 2018.

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	Wells - NHH
(c)(ii) - Creation and management of volume information	
(d) – Calculation of ICP days & delivery of a report under clause 15.6	

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks
(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 V7.2.

ARC Innovations, Metrix, Smartco 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.

#### 1.10. Summary of previous audit

Powershop provided a copy of their previous audit report conducted in August 2017 by Steve Woods of Veritek Limited. The summary tables below show that the issues raised are still existing. Further comment is made in the relevant sections of this report.

Subject	Section	Clause	Non-compliance	Status
Changes to registry information	3.3	10 of schedule 11.1	Not all status changes made within 5 business days.	Still existing
Provision of registry information	3.5	9 of schedule 11.1	Some late changes to Active. Some late MEP notifications.	Still existing
ANZSIC codes	3.6	9(1)(k) of schedule 11.1	14 of 20 incorrect ANZSIC codes.	Still existing
Unmetered load	3.7	9(1)(f) of schedule 11.1	5 ICPs with incorrect unmetered load figures.	Still existing
Inactive status	3.9	19 of schedule 11.1	Some ICPs have an incorrect inactive status.	Still existing
Switching	4.2	3 of schedule 11.3	1 late AN file.	Still existing



Subject	Section	Clause	Non-compliance	Status
	4.4	6 of schedule 11.3	3 late RR files.	Still existing
	4.5	6(3)(b) of schedule 11.3	Some RR files rejected which were for AMI sites and contained actual reads.	Still existing
	4.10	11 of schedule 11.3	10 late CS files.	Still existing
	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.	Still existing
	4.15	17 of schedule 11.3	23 late NW files.	Still existing
Electricity conveyed	6.1	10.12 and 10.24 of part 10	Meters bridged at 3 ICPs.	Still existing
Phase failure monitoring	6.6	5(c) of schedule 15.2	Phase failure monitoring not conducted by Datacol.	Still existing
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.	Still existing
AMI events	9.6	17 of schedule 15.2	AMI event information not routinely monitored. No event information from ARC.	Still existing
Permanence of meter readings	12.8	4 of Schedule 15.2	Some estimates not replaced at R14. Some incorrect labelling of HE as FSE.	Still existing
Accuracy of submission information	12.9	2 of schedule 15.3	Incorrect submission information.	Still existing

Subject	Section	Clause	Non-compliance	Status
FE and HE	12.10	3 of schedule 15.3	Incorrect labelling of HE as FE.	Still existing
Subject	Section	Clause	Recommendations	Status
Electricity supplied	11.3	15.7 of part 15	Check the difference between electricity supplied and submission totals to confirm accuracy.	Still existing

## 2. OPERATIONAL INFRASTRUCTURE

### 2.1. Relevant information (Clause 10.6, 11.2, 15.2)

#### Code reference

Clause 10.6, 11.2, 15.2

#### Code related audit information

*A participant must take all practicable steps to ensure that information that the participant is required to provide 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 as at 29 May 2018 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.

The accuracy of submissions is evaluated in a number of sections and in some cases the issues found are recorded in this section.

#### Audit commentary

The registry validation process includes all relevant fields.

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

Issue	2018 Qty	Comments
Active ICPs with blank ANZSIC codes	1	See <b>section 3.6</b>
Active ICPs with "T99" series unknown ANZSIC codes	23	See <b>section 3.6</b>
Status 1,7 - De-energised remotely	3	See <b>section 3.9</b>
Status 1,8 - De-energised at pole fuse	-	Compliant
Status 1,9 - De-energised due to meter disconnected	-	Compliant
UML load = zero	-	Compliant
Incorrect standard UML load		Compliant
No MEP recorded or nominated and UML= "N"	-	Compliant
Shared unmetered load incorrect	2	See <b>section 5.1</b>

Issue	2018 Qty	Comments
ICPs with different UNM load to that recorded by the Distributor	-	Compliant
Active ICPs with distributor unmetered load populated but retail unmetered load is blank and UML flag = N	2	See <b>section 3.7</b>
Active ICPs with retail unmetered load populated but distributor unmetered load is blank	2	See <b>section 3.7</b>
Incorrect Active date	1	See <b>section 3.8</b>

The other issues identified are as follows:

- consumption for inactive ICPs is not always submitted
- consumption for bridged meters is not always submitted
- consumption for faulty meters is not always submitted
- electricity supplied information is not accurate.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 10.6, 11.2, 15.2 From: 01-Jul-17 To: 30-Jun-18	Some registry discrepancies exist. Some submission inaccuracies exist. Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as moderate because they mitigate risk most of the time. The impact on settlement and participants is minor, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment		NA	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

## 2.2. Provision of information (Clause 15.35)

### Code reference

Clause 15.35

### Code related audit information

*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.

### Audit outcome

Compliant

## 2.3. Data transmission (Clause 20 Schedule 15.2)

### Code reference

Clause 20 Schedule 15.2

### Code related audit information

*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

NHH read data is transferred via SFTP by all agents and MEPs. 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.

### Audit outcome

Compliant

## 2.4. Audit trails (Clause 21 Schedule 15.2)

### Code reference

Clause 21 Schedule 15.2

### Code related audit information

*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 manager*

- *provided to and received from the reconciliation manager*
- *provided and received from other reconciliation participants and their agents.*

*The audit trail must cover all archived data in accordance with clause 18.*

*The logs of communications and processing activities must form part of the audit trail, including if automated processes are in operation.*

*Logs must be printed and filed as hard copy or maintained as data files in a secure form, along with other archived information.*

*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.

#### **Audit outcome**

Compliant

## **2.5. Retailer responsibility for electricity conveyed - participant obligations (Clause 10.4)**

#### **Code reference**

*Clause 10.4*

#### **Code related audit information**

*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.

#### **Audit outcome**

Compliant

## 2.6. Retailer responsibility for electricity conveyed - access to metering installations (Clause 10.7(2),(4),(5) and (6))

### Code reference

*Clause 10.7(2),(4),(5) and (6)*

### Code related audit information

*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.*

*The trader must use its best endeavours to provide access:*

- *in accordance with any agreements in place*
- *in a manner and timeframe which is appropriate in the circumstances.*

*If the trader has a consumer, the trader must obtain authorisation from the customer for access to the metering installation, otherwise it must arrange access to the metering installation.*

*The reconciliation participant must provide any necessary facilities, codes, keys or other means to enable the party to obtain access to the metering installation by the most practicable means.*

### 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.

I checked whether there were any specific refusals to grant access and there was one example where an MEP asked for access to be arranged in order to conduct time checks in accordance with Clause 23 of Schedule 10.7. Powershop did not arrange access for the MEP as required by this clause.

### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.6 With: Clause 10.7(2),(4),(5) and (6)  From: 15-May-18 To: 25-Jul-18	Access not arranged for MEP to conduct time checks  Potential impact: Medium Actual impact: Low  Audit history: None Controls: Moderate  Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.</p> <p>There is a minor impact on the MEP because they are also non-compliant, therefore the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
No actions have been taken by Powershop to resolve the issues it is believed that the refusal was reasonable as the request was from an MEP that is also a trader and the requested ICPs only related to a large value customer and not to all the MEPs installations that have time-clocks. To Powershop this appeared as an attempt for the retail arm to target specific customers under the guise of MEP obligations. We accept that the Code does not allow for access to be reasonably refused.		N/A	Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	
Powershop will continue to reasonably refuse access in situations such as this.		N/A	

## 2.7. Physical location of metering installations (Clause 10.35(1)&(2))

### Code reference

Clause 10.35(1)&(2)

### Code related audit information

*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:*

- if practical in the circumstances, ensure that the metering installation is located at a point of connection; or*
- 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 confirming the maximum multiplier for all active category two ICPs on the meter installation details report.

### Audit commentary

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

### Audit outcome

Compliant



## 2.8. Trader contracts to permit assignment by the Authority (Clause 11.15B)

### Code reference

Clause 11.15B

### Code related audit information

*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 under paragraph (a) or (b) or (f) or (h) of clause 14.41 (clause 11.15B(1)(a)); and*
- *the terms of the assigned contract to be amended on such an assignment to—*
- *the standard terms that the recipient trader would normally have offered to the customer immediately before the event of default occurred (clause 11.15B(1)(b)(i)); or*
- *such other terms that are more advantageous to the customer than the standard terms, as the recipient trader and the Authority agree (clause 11.15B(1)(b)(ii); and*
- *the terms of the assigned contract to be amended on such an assignment to include a minimum term in respect of which the customer must pay an amount for cancelling the contract before the expiry of the minimum term (clause 11.15B(1)(c)); and*
- *the trader to provide information about the customer to the Authority and for the Authority to provide the information to another trader if required under Schedule 11.5 (clause 11.15B(1)(d)); and*
- *the trader to assign the rights and obligations of the trader to another trader (clause 11.15B(1)(e)).*

*The terms specified in subclause (1) must be expressed to be for the benefit of the Authority for the purposes of the Contracts (Privacy) Act 1982, and not be able to be amended without the consent of the Authority (clause 11.15B(2)).*

### 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.

### Audit outcome

Compliant

## 2.9. Connection of an ICP (Clause 10.32)

### Code reference

Clause 10.32

### Code related audit information

*A reconciliation participant must only request the connection of a point of connection if they:*

- *accept responsibility for their obligations in Parts 10, 11 and 15 for the point of connection; and*
- *have an arrangement with an MEP to provide one or more metering installations for the point of connection.*

### Audit observation

The new connection process was examined in detail to evaluate the strength of controls. The list file as at 29 May 2018 and event detail report for December 2017 to May 2018 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 three ICPs with blank MEP at the time the analysis was conducted, but in all cases an MEP nomination had been made and accepted.

### Audit outcome

Compliant

## 2.10. Temporary Electrical Connection of an ICP (Clause 10.33(1))

### Code reference

*Clause 10.33(1)*

### Code related audit information

*A reconciliation participant may temporarily electrically connect a point of connection, or authorise an MEP to temporarily electrically connect a point of connection, only if:*

- *they are recorded in the registry as being responsible for the ICP; and*
- *one or more certified metering installations are in place at the ICP in accordance with Part 10; and*
- *for an ICP that has not previously been electrically connected, the network owner has given written approval.*

### Audit observation

The new connection process was examined in detail to evaluate the strength of controls. The list file as at 29 May 2018 and event detail report for December 2017 to May 2018 were analysed to confirm process compliance and that controls were functioning as expected.

### Audit commentary

Review of the list and event detail reports did not identify any instances where ICPs had been temporarily electrically connected.

### Audit outcome

Compliant

## 2.11. Electrical Connection of Point of Connection (Clause 10.33A)

### Code reference

Clause 10.33A(1)

### Code related audit information

A reconciliation participant may electrically connect or authorise the electrical connection of a point of connection only if:

- they are recorded in the registry as being responsible for the ICP; and
- one or more certified metering installations are in place at the ICP in accordance with Part 10; and
- for an ICP that has not previously been electrically connected, the network owner has given written approval.

### Audit observation

The new connection process was examined in detail to evaluate the strength of controls. The list file as at 29 May 2018 and event detail report for December 2017 to May 2018 were analysed to confirm process compliance and that controls were functioning as expected.

I checked the active dates to the initial energisation dates and certification dates for all 104 new connections identified.

### Audit commentary

Powershop had accepted responsibility for all newly energised ICPs.

Status changes to active for both new connections and reconnections were matched to certification details on the metering installation details report. 932 of the 1068 status changes identified had a certification record on the metering installation details report.

One new connection appeared as if it was not certified within five business days of becoming active but when this was checked it was found that the "Active" date was incorrect. It should be 16/01/18.

ICP	Energisation date	Final Certification date	Active date
0007183706RNEF9	14/12/2017	16/01/2018	14/12/2017

Clause 10.33A(2)(a)(iii) requires the reconciliation participant to ensure certification of metering installations occurs within five business days of electrical connection. The Code does not differentiate between new connections and reconnections.

25 reconnections were not certified within five business days of electrical connection. They are listed below.

ICP	Reconnection date	Final Certification date
0052578401WRDCA	18/01/2018	12/03/2018
0000001035EDDF4	14/03/2018	Still interim certified
0000001246DE464	19/04/2018	Still interim certified
0000001836CPDAF	24/01/2018	Still interim certified
0000013562CPA04	8/03/2018	Still interim certified

ICP	Reconnection date	Final Certification date
0000054130UN5EE	3/04/2018	Still interim certified
0000124165WE23D	3/04/2018	Still interim certified
0000131268UNDE5	26/04/2018	Still interim certified
0000138097TRE53	9/04/2018	Still interim certified
0000153643TR9A5	20/04/2018	Still interim certified
0000156768TR400	11/05/2018	Still interim certified
0000163936UN54C	11/12/2017	Still interim certified
0000165636TR55B	24/07/2017	Still interim certified
0000184683UNCA3	1/03/2018	Still interim certified
0000195177TR125	9/05/2018	Still interim certified
0000546184NRE90	2/05/2018	Still interim certified
0000707335WEA78	19/02/2018	Still interim certified
0001400122UN534	23/12/2014	Still interim certified
0030128207PCC71	9/02/2018	Still interim certified
0112770649LC45B	29/03/2018	Still interim certified
0169641260LCC12	19/01/2018	Still interim certified
0234074521LC587	13/04/2018	Still interim certified
1000006597BP6D7	6/04/2018	Still interim certified
1000006599BP54C	26/03/2018	Still interim certified
1001157851LC93C	24/04/2018	Still interim certified

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.11 With: Clause 10.32 From: 01-Jul-17 To: 06-Jun-18	25 reconnections were not certified within five business days. Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	I've rated the controls as moderate because they are strong for new connections but there are no controls in place for ensuring certification occurs at the time of reconnection. Uncertified metering installations are likely to be less accurate than certified metering installations, so there could be a minor impact on settlement. The audit risk rating is recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

## 2.12. Arrangements for line function services (Clause 11.16)

### Code reference

Clause 11.16

### Code related audit information

*Before providing the registry manager with any information in accordance with clause 11.7(2) or clause 11.18(4), a trader must ensure that it, or its customer, has made any necessary arrangements for the provision of line function services in relation to the relevant ICP*

*Before providing the registry manager with any information in accordance with clause 11.7(2) or clause 11.18(4), a trader must have entered into an arrangement with an MEP for each metering installation at the ICP.*

### 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.

### Audit outcome

Compliant

## 2.13. Arrangements for metering equipment provision (Clause 10.36)

### Code reference

*Clause 10.36*

### Code related audit information

*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 63 MN rejections, which are discussed in **Section 3.4**.

### Audit outcome

Compliant

### 3. MAINTAINING REGISTRY INFORMATION

#### 3.1. Obtaining ICP identifiers (Clause 11.3)

##### Code reference

Clause 11.3

##### Code related audit information

*The following participants must, before assuming responsibility for certain points of connection on a local network or embedded network, obtain an ICP identifier for the point of connection:*

- 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.*

*ICP identifiers must be obtained for points of connection at which any of the following occur:*

- a consumer purchases electricity from a trader 11.3(3)(a)*
- a trader purchases electricity from an embedded generator 11.3(3)(b)*
- a direct purchaser purchases electricity from the clearing manager 11.3(3)(c)*
- an embedded generator sells electricity directly to the clearing manager 11.3(3)(d)*
- a network is settled by differencing 11.3(3)(e)*
- there is a distributor status ICP on the parent network point of connection of an embedded network or at the point of connection of shared unmetered load 11.3(3)(f).*

##### 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

This requirement is well managed and understood by Powershop. The process is detailed in **section 2.9** above.

There were no connections to networks identified without ICPs.

##### Audit outcome

Compliant

### 3.2. Providing registry information (Clause 11.7(2))

#### Code reference

Clause 11.7(2)

#### Code related audit information

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

#### Audit observation

The new connection process was examined in detail to evaluate the strength of controls. The list file as at 29 May 2018 and event detail report for December 2017 to May 2018 were analysed to confirm process compliance and that controls are functioning as expected. This clause links directly to **section 3.5** below. The findings for the timeliness of updates are detailed there.

#### Audit commentary

The new connection process is detailed in **section 2.9** above. The process in place ensures that the trader required information is populated as required by this clause.

#### Audit outcome

Compliant

### 3.3. Changes to registry information (Clause 10 Schedule 11.1)

#### Code reference

Clause 10 Schedule 11.1

#### Code related audit information

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

#### Audit observation

The process to manage status changes is discussed in detail in **sections 3.8 and 3.9** below.

In this section I examined the event detail report for December 2017 to May 2018. I used the extreme case methodology examining a sample of the 20 latest updates (or the whole population if there were less than 20) that were updated greater than 30 days from the event date for each of the event type.

#### Audit commentary

The table below shows the level of compliance for changes to Active and Inactive.

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%
	2015	499	311	188	10.0	62%
	2016	486	363	123	11.3	75%



Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
	2016	350	273	77	7.38	78%
	2017	431	353	78	6.4	82%
	<b>2018</b>	<b>979</b>	<b>691</b>	<b>288</b>	<b>11</b>	<b>71%</b>
Change to de-energised vacant (1,4)	2015	923	698	225	8.1	76%
	2016	391	327	64	8.1	84%
	2017	143	96	47	118.7	67%
	<b>2018</b>	<b>1,182</b>	<b>1,036</b>	<b>146</b>	<b>13</b>	<b>88%</b>
Change to de-energised ready for decommissioning (1,6)	2015	123	45	78	66.8	36%
	2016	69	38	31	18.4	55%
	2017	23	5	18	137.4	22%
	<b>2018</b>	<b>15</b>	<b>1</b>	<b>14</b>	<b>65</b>	<b>1%</b>
Change to de-energised new connection in progress (1,12)	2015	116	80	36	15.4	69%
	2016	297	274	23	3.3	92%
	2017	111	101	10	2.4	96%
	<b>2018</b>	<b>147</b>	<b>92</b>	<b>55</b>	<b>15</b>	<b>63%</b>
Change of MEP	<b>2018</b>	<b>1020</b>	<b>860</b>	<b>160</b>	<b>5</b>	<b>84%</b>

Compliance has improved for changes to de-energised vacant and for MEP changes but has reduced for other statuses. It appears that there have been some ICPs created for new connections without Powershop's knowledge and there were also many status issues created by the Kaikoura earthquake.

#### Reconnections

A check of a sample of 20 reconnections over 30 days found that processing issues caused the late updates for four ICPs. One ICP had late field notification and 15 ICPs were found to be consuming while recorded as electrically disconnected.

#### Disconnections

A check of a sample of 20 disconnections over 30 days found that processing issues caused the late updates for five ICPs. Two were disconnected without Powershop's knowledge and 13 were disconnected for safety by the distributor following the Kaikoura earthquake but Powershop was not advised.

#### Ready for decommissioning

There were three examples over 30 days. Two because Powershop was not advised the ICPs were being decommissioned and one because field notification was late.

#### New connection in progress

There were 14 examples over 30 days. Four were due to processing issues and ten because Powershop was not advised of the new connections by the distributors.

#### MEP nominations

A check of a sample of 20 found that processing issues caused the late updates for 14 ICPs and for six ICPs, Powershop was not aware a new connection had occurred until several weeks later.

#### **Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 3.3 With: Clause 10 Schedule 11.1  From: 01-Dec-17 To: 31-May-18	Registry not updated within five business days of the event for some MEP changes, reconnections and disconnections.  Potential impact: Low  Actual impact: Low  Audit history: Multiple times  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as moderate because some of the late status changes were due to processing issues; therefore, there is room for improvement.  There was a minor effect on settlement; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

### 3.4. Trader responsibility for an ICP (Clause 11.18)

#### Code reference

*Clause 11.18*

#### Code related audit information

*A trader becomes responsible for an ICP when the trader is recorded in the registry as being responsible for the ICP.*

*A trader ceases to be responsible for an ICP if:*

- *another trader is recorded in the registry as accepting responsibility for the ICP (clause 11.18(2)(a)); or*
- *the ICP is decommissioned in accordance with clause 20 of Schedule 11.1 (clause 11.18(2)(b)).*
- *if an ICP is to be decommissioned, the trader who is responsible for the ICP must (clause 11.18(3)):*
  - o *arrange for a final interrogation to take place prior to or upon meter removal (clause 11.18(3)(a)); and*
  - o *advise the MEP responsible for the metering installation of the decommissioning (clause 11.18(3)(b)).*

*A trader who is responsible for an ICP (excluding UML) must ensure that an MEP is recorded in the registry for that ICP (clause 11.18(4)).*

*A trader must not trade at an ICP (excluding UML) unless an MEP is recorded in the registry for that ICP (clause 11.18(5)).*

#### Audit observation

##### Retailers Responsibility to Nominate and Record MEP in the Registry

The new connection process was discussed and the list file, as at 29 May 2018, was examined to confirm that all active ICPs have an MEP recorded.

##### ICP Decommissioning

The process for the decommissioning of ICPs was examined. A typical sample of ten ICPs was checked 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

Three active ICPs with no MEP were identified through analysis of the registry list. In all cases Powershop had made an MEP nomination, which was accepted. By the time of the audit the metering details were loaded for all three.

MEP rejections are monitored, and 63 were rejected during the audit period. In all cases, the incorrect MEP was nominated. There was no impact because there was existing metering present.

##### ICP Decommissioning

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

72 ICPs were decommissioned during the audit period. For the sample of ten ICPs checked, the MEP was notified and a final reading was obtained.

#### Audit outcome

Compliant

### 3.5. Provision of information to the registry manager (Clause 9 Schedule 11.1)

#### Code reference

Clause 9 Schedule 11.1

#### Code related audit information

*Each trader must provide the following information to the registry manager for each ICP for which it is recorded in the registry as having responsibility:*

- a) the participant identifier of the trader, as approved by the Authority (clause 9(1)(a))*
- b) the profile code for each profile at that ICP, as approved by the Authority (clause 9(1)(b))*
- c) the metering equipment provider for each category 1 metering or higher (clause 9(1)(c))*
- d) the type of submission information the trader will provide to the RM for the ICP (clause 9(1)(ea))*
- e) if a settlement type of UNM is assigned to that ICP, either:*
  - the code ENG if the load is profiled through an engineering profile in accordance with profile class 2.1 (clause 9(1)(f)(i)); or*
  - in all other cases, the daily average kWh of unmetered load at the ICP (clause 9(1)(f)(ii)).*
  - the type and capacity of any unmetered load at each ICP (clause 9(1)(g))*
  - the status of the ICP, as defined in clauses 12 to 20 (clause 9(1)(j))*
  - except if the ICP exists for the purposes of reconciling an embedded network or the ICP has distributor status, the trader must provide the relevant business classification code applicable to the customer (clause 9(1)(k)).*

*The trader must provide information specified in (a) to (j) above within five business days of trading (clause 9(2)).*

*The trader must provide information specified in 9(1)(k) no later than 20 business days of trading (clause 9(3))*

#### 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 December 2017 to May 2018 to evaluate the updating of the registry in relation to new connections. All 18 ICPs that were updated greater than five business days from the event date were examined. I checked all registry records for possible discrepancies, using a standard set of queries.

#### Audit commentary

The table below shows that 13 ICPs were updated late to the registry. Six were late due to late field notification and seven were late due to processing issues.

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%
	<b>2018</b>	<b>89</b>	<b>76</b>	<b>13</b>	<b>5</b>	<b>85%</b>

Non-compliance is recorded for the late registry updates. MEP nominations are discussed in **section 3.3**.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: Clause 9 Schedule 11.1  From: 01-Dec-17 To: 31-May-18	Some late changes to active.  Potential impact: Low  Actual impact: Low  Audit history: Multiple times  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	This area has strong controls and the late updates identified relate to isolated 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		NA	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	

### 3.6. ANZSIC codes (Clause 9 (1(k) of Schedule 11.1)

#### Code reference

*Clause 9 (1(k) of Schedule 11.1*

#### Code related audit information

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

#### Audit observation

The process to capture and manage ANZSIC codes was examined. A Registry List as at 29 May 2018 was reviewed to check ANZSIC codes including identifying all ICPs with an undefined ANZSIC code within the “T99” series and blank ANZSIC codes. I checked all 23 ICPs to confirm if they were valid “don’t know”.

I selected a sample of 100 active ICPs across non-residential ANZSIC codes using the diverse characteristic methodology and 50 residential coded ICPs using the typical case methodology to confirm the validity of the codes applied.

#### Audit commentary

ANZSIC codes are periodically reviewed by Powershop.

The registry list was reviewed and found there has been a reduction in the number of unknown ANZSIC codes, as shown in the table below.

Issue	2017	2018
T99 series unknown ANZSIC	189	23
Blank ANZSIC	-	1
<b>Total unknown</b>	<b>189</b>	<b>24</b>

The one blank ANZSIC code has now been correctly updated.

All 23 “T99” ICPs were checked on google streetview and for 21 ICPs a likely ANZSIC code could be derived.

All 50 residential ANZSIC codes checked were correct.

12 of the 100 non-residential codes appear to be incorrect.

#### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.6 With: 9 (1(k) of Schedule 11.1 From: 29-May-2018 To: 29-May-2018	24 active ICPs with no or “Don’t know” ANZSIC codes assigned. 12 of 150 ANZSIC codes appear to be incorrect Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	Rationale for audit risk rating
<b>Low</b>	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	NA	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Powershop no longer allows T99x to be entered as an option. The ANZSIC code entered is the one provided by the customer on inbound which we have no reason to believe is incorrect.	NA	

### 3.7. Changes to unmetered load (Clause 9(1)(f) of Schedule 11.1)

#### Code reference

*Clause 9(1)(f) of Schedule 11.1*

#### Code related audit information

*if a settlement type of UNM is assigned to that ICP, the trader must populate:*

*the code ENG - if the load is profiled through an engineering profile in accordance with profile class 2.1 (clause 9(1)(f)(i)); or*

*the daily average kWh of unmetered load at the ICP - in all other cases (clause 9(1)(f)(ii)).*

#### Audit observation

The process to manage unmetered load was examined. The list file as at May 2018 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 0.1 kWh per day. 0.1 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 0.1 kWh per day.

#### Audit commentary

Powershop conducts validation between their unmetered load information and that contained in the registry.

Examination of the list file found 40 active ICPs have unmetered load recorded, excluding shared unmetered load. Of the loads that were able to be checked (15 out of 40 ICPs), all matched within 0.1 kWh per day.

I compared the distributor and trader unmetered load details and found:

- two active ICPs where the distributor recorded unmetered load but Powershop did not; both are shared unmetered load ICPs and this is discussed in **section 5.1**
- four active ICPs where Powershop recorded unmetered load but the distributor did not; the table below contains the details.

ICP	Daily kWh	Unmetered details	Comments
0000452106UNFE6	2.66	0232;11.5;BusShelter	This one appears to be correct.

0007179569RNF0C	1.536	192;08.0; Builders Temp Supply	This builder's supply was replaced with a metered permanent supply on 27/11/17. The previous trader should have removed the unmetered fields.
0007181101RN675	1	0192;08.0;Builders Temporary Supply	This builder's supply was replaced with a metered permanent supply on 01/12/17. The previous trader should have removed the unmetered fields.
0015729112ELB25	1.187	Blank	I recommend checking with Electra. Electra removed their unmetered details on 24/05/18 effective from 01/04/08.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.7 With: Clause 9(1)(f) of Schedule 11.1  From: 26-Feb-18 To: 16-Jul-18	2 ICPs with incorrect unmetered load.  Potential impact: Low  Actual impact: Low  Audit history: Once previously  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as moderate because they mitigate risk most of the time but did not identify that these figures were inaccurate.  There is only a minor impact on settlement (300 kWh up until 16/07/18) 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 discrepancies are being investigated		Ongoing	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	



### 3.8. Management of “active” status (Clause 17 Schedule 11.1)

#### Code reference

Clause 17 Schedule 11.1

#### Code related audit information

*The ICP status of “active” is managed by the relevant trader and indicates that:*

- *the associated electrical installations are electrically connected (clause 17(1)(a))*
- *the trader must provide information related to the ICP in accordance with Part 15, to the reconciliation manager for the purpose of compiling reconciliation information (clause 17(1)(b)).*

*Before an ICP is given the “active” status, the trader must ensure that:*

- *the ICP has only one customer, embedded generator, or direct purchaser (clause 17(2)(a))*
- *the electricity consumed is quantified by a metering installation or a method of calculation approved by the Authority (clause 17(2)(b)).*

#### Audit observation

The new connection process was examined in detail as discussed in **sections 2.9** and **3.5** above. The list file as at 29 May 2018 was examined to identify any ICPs still at the status “Inactive - new connection in progress” with an initial energisation date populated.

The event detail report and list file report were checked for any variances between the initial electrical connection date, meter certification date and the active date for the 104 new connections. All variances were checked.

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

#### 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.

A Review of the registry list identified three ICPs with “Inactive - new connection in progress” with an initial energisation date populated. All were timing differences; and the registry was updated to active prior to the audit.

I did not identify any ICPs with incorrect active statuses.

The event detail report and list file report were checked for any variances between the initial electrical connection date, meter certification date and the active date for the 104 new connections. The following variances were identified:

ICP	Initial electrical connection date	Active Date	Cert Date	Comment
1002038328UNFB5	22/01/2018	30/08/2017	30/08/2017	Active date is correct
0007183706RNEF9	16/01/2018	14/12/2017	16/01/2018	Active date is incorrect
0000507283CE8CC	23/04/2018	20/04/2018	20/04/2018	Active date is correct
0000569499NRECE	8/02/2018	7/02/2018	7/02/2018	Active date is correct
0007183482RN9BA	18/12/2017	20/12/2017	20/12/2017	Active date is correct

The one incorrect event date is recorded as a non-compliance in **Section 2.1**.

### Audit outcome

Compliant

## 3.9. Management of “inactive” status (Clause 19 Schedule 11.1)

### Code reference

*Clause 19 Schedule 11.1*

### Code related audit information

*The ICP status of “inactive” must be managed by the relevant trader and indicates that:*

- *electricity cannot flow at that ICP (clause 19(a)); or*
- *submission information related to the ICP is not required by the reconciliation manager for the purpose of compiling reconciliation information (clause 19(b)).*

### Audit observation

An event detail report for the period of December 2017 to May 2018 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**.

### 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. A sample of updates were checked and confirmed that the correct status applied.

Review of the registry list identified three ICPs with “Inactive - new connection in progress” with an initial energisation date populated. All were timing differences; and the registry was updated to active prior to the audit.

A report was provided of 30 ICPs with consumption while inactive. A check of 10 of these ICPs found that the Active date was corrected, and submission occurred for one ICP but not for the other nine. Submission

occurred for 33 kWh for the one ICP and the total consumption for the other nine is 287 kWh. None of the 2017 examples appeared in this report, indicating they were all resolved.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.9 With: Clause 19 Schedule 11.1  From: 01-Jul-17 To: 30-Jun-18	Some ICPs have an incorrect inactive status.  Potential impact: Medium  Actual impact: Low  Audit history: Once  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.  The impact on settlement and participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

### 3.10. ICPs at new or ready status for 24 months (Clause 15 Schedule 11.1)

#### Code reference

Clause 15 Schedule 11.1

#### Code related audit information

*If an ICP has had the status of "New" or "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 have not received any requests of this nature. Any requests received from Distributors are actioned.

**Audit outcome**

Compliant

## 4. PERFORMING CUSTOMER AND EMBEDDED GENERATOR SWITCHING

### 4.1. Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3)

#### Code reference

Clause 2 Schedule 11.3

#### Code related audit information

*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 manager of a switch no later than two business days after the arrangement comes into effect and include in its advice to the registry manager 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

Powershop's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files are sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind. The ICPs checked confirmed all were sent within two days of all conditions being met.

#### Audit outcome

Compliant

### 4.2. Losing trader response to switch request and event dates - standard switch (Clauses 3 and 4 Schedule 11.3)

#### Code reference

Clauses 3 and 4 Schedule 11.3

#### Code related audit information

*Within three business days after receiving notice of a switch from the registry manager, 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 (clause 3(a) of Schedule 11.3):*
- *providing the proposed event date to the registry manager and a valid switch response code (clause 3(a)(i) and (ii) of Schedule 11.3); or*
- *providing a request for withdrawal of the switch in accordance with clause 17 (clause 3(c) of Schedule 11.3).*

*When establishing an event date for clause 4, the losing trader must disregard every event date established by the losing trader for a customer who has been with the losing trader for less than two calendar months (clause 4(2) of Schedule 11.3).*

#### Audit observation

An event detail report for December 2017 to May 2018 was reviewed to identify AN files issued by Powershop during the audit period. A sample of two 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.

#### Audit commentary

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

The switch breach report for the audit period recorded was examined. Three AN files were showing as being sent between one and three days late. One ICP was on the report in error but two AN files were 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 was reviewed for 3,556 transfer switches; all had an event date within five business days of receipt of the NT.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: Clause 3 of Schedule 11.3 From: 11-Aug-17 To: 14-Aug-17	Two late AN files by one day and two days Potential impact: Low Actual impact: None Audit history: Once previously Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are strong for the management of AN files. There was only one late file and it was only one day late. 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		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	

No comment	NA	
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#### 4.3. Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3)

##### Code reference

Clause 5 Schedule 11.3

##### Code related audit information

*If the losing trader provides information to the registry manager 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 event date to the registry manager (clause 5(a)); and*
- *provide to the gaining trader a switch event meter reading as at the event date, for each meter or data storage device that is recorded in the registry with accumulator of C and a settlement indicator of Y (clause 5(b)); and*
- *if a switch event meter reading is not a validated reading, provide the date of the last meter reading (clause 5(c)).*

##### Audit observation

An event detail report for December 2017 to May 2018 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 the ten highest daily average consumptions.

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 of five records. In all cases the content was accurate.

I checked 10 ICPs with zero in the average daily consumption field and found two ICPs where zero was incorrect. The consumption on one was 16.8 kWh per day and the other was 14.8 kWh per day. I checked a further 10 ICPs where the average daily consumption was over 300 kWh per day and found two that were incorrect. One was recorded as 829 and should have been 613 and the other was recorded as 798 and should have been 922.

One issue was identified when checking the RR process. ICP 0000031431TR30E had a customer read reported as an actual read in the CS file.

The switch breach report contained 5 late files for transfer switches.

##### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.3 With: Clause 5 Schedule 11.3 From: 01-Jun-17 To: 31-May-18	5 late CS files. Customer read labelled as an actual for one ICP. Daily kWh incorrect for four ICPs Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate because they mitigate risk most of the time. There is no impact on settlement and a minor impact on other participants. The audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

#### 4.4. Retailers must use same reading - standard switch (Clause 6(1) and 6A Schedule 11.3)

##### Code reference

Clause 6(1) and 6A Schedule 11.3

##### Code related audit information

*The losing trader and the gaining trader must both use the same switch event meter reading as determined by the following procedure:*

- *if the switch event meter reading provided by the losing trader differs by less than 200 kWh from a value established by the gaining trader, the gaining trader must use the losing trader's validated meter reading or permanent estimate (clause 6(a)); or*
- *the gaining trader may dispute the switch meter reading if the validated meter reading or permanent estimate provided by the losing trader differs by 200 kWh or more (clause 6(b)).*

*If the gaining trader disputes a switch meter reading because the switch event meter reading provided by the losing trader differs by 200 kWh or more, the gaining trader must, within four calendar months of the actual event date, provide to the losing trader a changed switch event meter reading supported by two validated meter readings.*

- *the losing trader can choose not to accept the reading, however must advise the gaining trader no later than five business days after receiving the switch event meter reading from the gaining trader (clause 6A(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 6A(b)).*

#### Audit observation

The process for the management of read requests was examined.

The event detail report for December 2017 to May 2018 was analysed to identify all read change requests and acknowledgements during the audit period. A sample of five read change requests from the event detail report was selected using the diverse sample methodology.

Powershop rejected five RR files for transfer switches and I checked all of these, along with five RR files rejected by other traders. The content of a diverse sample of ten RR files was examined.

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

#### 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, they attempt to provide to the losing trader a changed switch meter reading supported by two validated meter readings within four calendar months of the actual event date as required by this clause.

Three of the five rejected RR files sent by other traders should not have been rejected. Two were from participants trading as HHR and one was for a difference greater than 200 kWh where the Powershop reading in the CS file was an estimate. The kWh difference is not large, 11 or one ICP, 15 for another and 529 for the final ICP, however the Code requires these RRs to be accepted. Non-compliance is recorded in this section for the third ICP. The other two are recorded in **Section 4.5**.

The “switch breach report” recorded four late RR files and no late AC files for transfer switches. Two were sent late due to a processing issue, one was due to not having sufficient read history and one was due to a read negotiation with the other trader. The number of days late ranged from three to 19. The late sending of some RR files is recorded as non-compliance below.

#### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.4 With: Clause 6(1) and 6A Schedule 11.3 From: 01-Dec-17 To: 31-May-18	4 late RR files. 1 RR rejected and should have been accepted. Potential impact: Low Actual impact: Low Audit history: Once previously Controls: Strong Breach risk rating: 1
Audit risk rating	Rationale for audit risk rating
Low	The controls are recorded as strong because they mitigate risk to an acceptable level. The impact on settlement and participants is minor, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
No comment	NA	Unknown
Preventative actions taken to ensure no further issues will occur	Completion date	
No comment	NA	

#### 4.5. Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3)

##### Code reference

*Clause 6(2) and (3) Schedule 11.3*

##### Code related audit information

*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 in the registry: and*

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 6(2)(b));*
- *the gaining trader within five business days after receiving final information from the registry manager, 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 for December 2017 to May 2018 was analysed. All RR files sent within five business days were reviewed.

##### Audit commentary

Two RR files were sent to Powershop by traders proposing a HHR submission type. Neither of the files were sent within five business days and both were rejected.

##### Audit outcome

Compliant

#### 4.6. Disputes - standard switch (Clause 7 Schedule 11.3)

##### Code reference

*Clause 7 Schedule 11.3*

##### Code related audit information

*A losing trader or gaining trader may give written notice to the other that it disputes a switch event meter reading provided under clauses 1 to 6. Such a dispute must be resolved in accordance with clause 15.29 (with all necessary amendments).*

##### Audit observation

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

##### Audit commentary

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

## Audit outcome

Compliant

### 4.7. Gaining trader informs registry of switch request - switch move (Clause 9 Schedule 11.3)

#### Code reference

*Clause 9 Schedule 11.3*

#### Code related audit information

*The switch move process applies where a gaining trader has an arrangement with a customer or embedded generator to trade electricity at an ICP using non half-hour metering or an unmetered ICP, or to assume responsibility for such an ICP, and no other trader has an agreement to trade electricity at that ICP, this is referred to as a switch move and the following provisions apply:*

*If the “uninvited direct sale agreement” applies, 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.*

*In the event of a switch move, the gaining trader must advise the registry manager of a switch and the proposed event date no later than two business days after the arrangement comes into effect.*

*In its advice to the registry manager the gaining trader must include:*

- *a proposed event date (clause 9(2)(a)); and*
- *that the switch type is "MI" (clause 9(2)(b); and*
- *one or more profile codes of a profile at the ICP (clause 9(2)(c)).*

#### 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

Powershop’s processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files are sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind. The ICPs checked and confirmed all were sent within two days of all conditions being met.

## Audit outcome

Compliant

#### 4.8. Losing trader provides information - switch move (Clause 10(1) Schedule 11.3)

##### Code reference

*Clause 10(1) Schedule 11.3*

##### Code related audit information

*10(1) Within five business days after receiving notice of a switch move request from the registry manager—*

- *10(1)(a) If the losing trader accepts the event date proposed by the gaining trader, the losing trader must complete the switch by providing to the registry manager:*
  - o *confirmation of the switch event date; and*
  - o *a valid switch response code; and*
  - o *final information as required under clause 11; or*
- *10(1)(b) If the losing trader does not accept the event date proposed by the gaining trader, the losing trader must acknowledge the switch request to the registry manager and determine a different event date that—*
  - o *is not earlier than the gaining trader's proposed event date, and*
  - o *is no later than 10 business days after the date the losing trader receives notice; or*
- *10(1)(c) request that the switch be withdrawn in accordance with clause 17.*

##### Audit observation

An event detail report for December 2017 to May 2018 was reviewed to identify AN files issued by Powershop during the audit period. A sample of two 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.

##### Audit commentary

The switching process was examined in relation to Powershop as the “losing trader” for a sample of ten NHH ICPs. Nine AN codes were correct but one was incorrect for ICP 0000004433TE511 where AD should have been sent, but AA was sent.

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

8,468 switch move requests were identified on the event detail report. These were analysed and found:

- 100% had an event date within ten business days of receipt of the NT
- Powershop’s proposed event date was the same as or later than the gaining traders proposed event date for all switches.

##### Audit outcome

Compliant

Non-compliance	Description		
Audit Ref: 4.8 With: Clause 10(1) Schedule 11.3  From: 05-Apr-18 To: 09-Apr-18	One incorrect AN code.  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		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No Comment		NA	

#### 4.9. Losing trader determines a different date - switch move (Clause 10(2) Schedule 11.3)

##### Code reference

Clause 10(2) Schedule 11.3

##### Code related audit information

*If the losing trader determines a different date, the losing trader must also complete the switch by providing to the registry manager as described in subclause (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 switch moves was examined. The event detail report for December 2017 to May 2018 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

All event dates were compliant. No event dates were set later than ten business days.

##### Audit outcome

Compliant

#### 4.10. Losing trader must provide final information - switch move (Clause 11 Schedule 11.3)

##### Code reference

*Clause 11 Schedule 11.3*

##### Code related audit information

*The losing trader must provide final information to the registry manager for the purposes of clause 10(1)(a)(ii), including—*

- *the event date (clause 11(a)); and*
- *a switch event meter reading as at the event date for each meter or data storage device that is recorded in the registry with an accumulator type of C and a settlement indicator of Y (clause 11(b)); and*
- *if the switch event meter reading is not a validated meter reading, the date of the last meter reading of the meter or storage device. (clause (11(c)).*

##### Audit observation

An event detail report for December 2017 to May 2018 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 the ten highest daily average consumptions.

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. Three issues were found with the accuracy of CS files. The issues are as follows:

- three ICPs with zero in the daily kWh field should have had consumption recorded
- three ICPs a daily kWh figure greater than 300 were incorrect, one had 1,429 and it should have been 4.8
- two ICPs had readings recorded as “A” but they were readings for the beginning of the previous day, not the beginning of the switch event date; these reads should have been estimated with an additional days consumption and the reads should have been recorded as “E”.

The switch breach report contained 187 late files for switch moves. Analysis of these found that 50 were genuinely late. I checked a sample of ten and it appears a system issue caused most of the late files.

##### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.10 With: Clause 11 Schedule 11.3  From: 01-Jun-17 To: 31-May-18	50 late CS files. Incorrect daily kWh for six ICPs. Readings in two CS files were from an incorrect date. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as moderate because there is room for improvement. There is a minor impact on settlement and on other participants if the daily kWh figures are used and there is a minor impact on traders where CS files were sent late. The audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No Comment		NA	

#### 4.11. Gaining trader changes to switch meter reading - switch move (Clause 12 Schedule 11.3)

##### Code reference

Clause 12 Schedule 11.3

##### Code related audit information

*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 advise 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 four 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)):*

- *advise 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 in 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 manager, 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 for December 2017 to May 2018 was analysed to identify all read change requests and acknowledgements during the audit period. A sample of five read change requests from the event detail report was selected using the diverse sample methodology.

Powershop rejected 53 RR files for switch moves and I checked a diverse sample of ten of these, including all rejections where the RR was sent within five business days. I also checked five RR files rejected by other traders. The content of a diverse sample of ten RR files was examined.

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

### **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, they attempt to provide to the losing trader a changed switch meter reading supported by two validated meter readings within four calendar months of the actual event date, as required by this clause.

Six of ten rejected RR files should have been accepted. Four of the six were from traders intending to trade HHR and there does not appear to be any justification for the rejections. The total kWh difference for the four ICPs is 110. For two of the six Powershop provided readings taken on an earlier date when the ICPs became vacant. The readings were lower than more recent readings and the readings in the RR files from the other traders should have been accepted. The total kWh difference for the two ICPs was 3,302.

The “switch breach report” recorded 17 late RR files and six late AC files for switch moves. The most common reason for late RR files is late notification by customers or the lack of meter readings post switch. The late sending of some RR files is recorded as non-compliance below.

### **Audit outcome**

Non-compliant



Non-compliance	Description		
Audit Ref: 4.11 With: Clause 6(1) and 6A Schedule 11.3 From: 01-Dec-17 To: 31-May-18	17 late RR files. 6 late AC files. Some RR files rejected which were for AMI sites and contained actual reads. Potential impact: Medium Actual impact: Low Audit history: Twice previously 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 for the benefit of the consumer. Powershop believes that this should be an acceptable exception for lateness		NA	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

#### 4.12. Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3)

##### Code reference

Clause 13 Schedule 11.3

##### Code related audit information

*The gaining trader switch process applies when a trader has an arrangement with a 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) at an ICP with a submission type of half hour in the registry and an AMI flag of "N"; or*
- *a half hour metering installation at an ICP that has a submission type of half hour in the registry 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 at which the losing trader trades electricity through a half hour metering installation with an AMI flag of "N".*

*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 manager of the switch and expected event date no later than three business days after the arrangement comes into effect.*

*14(2) The gaining trader must include in its advice to the registry manager:*

- a) a proposed event date; and*
- b) that the switch type is HH.*

*14(3) The proposed event date must be a date that is after the date on which the gaining trader advises the registry manager, unless clause 14(4) applies.*

*14(4) The proposed event date is a date before the date on which the gaining trader advised the registry manager, if:*

*14(4)(a) – the proposed event date is in the same month as the date on which the gaining trader advised the registry manager; or*

*14(4)(b) – the proposed event date is no more than 90 days before the date on which the gaining trader advises the registry manager and this date is agreed between the losing and gaining traders.*

#### **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.

#### **Audit outcome**

Compliant

### **4.13. Losing trader provision of information - gaining trader switch (Clause 15 Schedule 11.3)**

#### **Code reference**

*Clause 15 Schedule 11.3*

#### **Code related audit information**

*Within three business days after the losing trader is informed about the switch by the registry manager, the losing trader must:*

*15(a) - provide to the registry manager 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**

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

#### **Audit commentary**

Review of the event detail report for December 2017 to May 2018 confirmed that Powershop did not receive any HH switch requests during the audit period.

#### **Audit outcome**

Compliant

#### 4.14. Gaining trader to advise the registry manager - gaining trader switch (Clause 16 Schedule 11.3)

##### Code reference

*Clause 16 Schedule 11.3*

##### Code related audit information

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

*If the ICP is being electrically disconnected, or if metering equipment is being removed, the gaining trader must either-*

*16(a)- give the losing trader or MEP for the ICP an opportunity to interrogate the metering installation immediately before the ICP is electrically disconnected or the metering equipment is removed; or*

*16(b)- carry out an interrogation and, no later than five business days after the metering installation is electrically disconnected or removed, advise the losing trader of the results and metering component numbers for each data channel in the metering installation.*

##### Audit observation

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

##### Audit commentary

Review of the event detail report for December 2017 to May 2018 confirmed that Powershop did not receive any HH switch requests during the audit period.

##### Audit outcome

Compliant

#### 4.15. Withdrawal of switch requests (Clauses 17 and 18 Schedule 11.3)

##### Code reference

*Clauses 17 and 18 Schedule 11.3*

##### Code related audit information

*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.*

*If a trader requests the withdrawal of a switch, the following provisions apply:*

- *for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*
  - o *the participant identifier of the trader making the withdrawal request (clause 18(c)(i));*
  - and*
  - o *the withdrawal advisory code published by the Authority (clause 18(c)(ii))*
- *within five business days after receiving notice from the registry manager of a switch, the trader receiving the withdrawal must advise the registry manager 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 (clause 18(d))*
- *on receipt of a rejection notice from the registry manager, in accordance with clause 18(d), a trader may re-submit the switch withdrawal request for an ICP in accordance with clause 18(c). All switch withdrawal requests must be resolved within 10 business days after the date of the initial switch withdrawal request (clause 18(e))*

- *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 receiving notice from the registry manager 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 (clause 18(f)).*

#### Audit observation

The switch withdrawal process was examined.

The content of a sample of two ICPs from the event detail report for each withdrawal code (or all if less than two were available) were checked using the typical sampling methodology.

A sample of ten switch rejections were checked using the typical sample methodology.

The event detail report was also analysed to confirm timeliness of switch withdrawal requests, as this is not currently being identified in the switch breach report.

The switch breach report was checked for any late switch withdrawal acknowledgements and found eight were recorded.

#### Audit commentary

The content of 14 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.

Analysis of the event detail report found 39 NWs issued more than two calendar months after the switch date. 29 of these withdrawals used the code for wrong premises, and I note that this issue often does not become apparent for an extended period after a switch completes. A sample of the ten latest files were reviewed and it was confirmed that the issues only became known when customers queried their invoice some time after the switch.

The switch breach report was examined and found four late NWs and three AW files. The NW files were not late, but the AW files were late.

#### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.15 With: Clauses 17 and 18 Schedule 11.3  From: 01-Dec-17 To: 31-May-18	39 late NW files and three late AW files.  Potential impact: Low Actual impact: Low Audit history: Once previously Controls: Strong Breach risk rating: 1

Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are strong for the management of withdrawals. Whilst 42 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		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

#### 4.16. Metering information (Clause 21 Schedule 11.3)

##### Code reference

Clause 21 Schedule 11.3

##### Code related audit information

For an interrogation or validated meter reading or permanent estimate carried out in accordance with Schedule 11.3:

*21(a)- 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.*

*21(b) and (c) - 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

All meter readings used in the switching process are validated meter readings or permanent estimates. This process is discussed further in **section 4.3**.

Powershop's policy regarding the management of meter reading expenses is compliant.

##### Audit outcome

Compliant

#### 4.17. Switch saving protection (Clause 11.15AA to 11.15AB)

##### Code reference

*Clause 11.15AA to 11.15AB*

##### Code related audit information

*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 December 2017 to May 2018 to identify all withdrawn with a CX code applied prior to the switch completion date in relation to any switch save protected retailers.

##### Audit commentary

There were five CX withdrawals made prior to the switch completion date, in four cases the other retailer was not switch save protected at the time.

A withdrawal for ICP 0000138726UN57E was attempted the day before a switch to a save protected retailer completed. Powershop showed records confirming the customer initiated the contact. Powershop did not contact the customer. Globug rejected the NW, and there was no impact.

##### Audit outcome

Compliant

## 5. MAINTENANCE OF UNMETERED LOAD

### 5.1. Maintaining shared unmetered load (Clause 11.14)

#### Code reference

Clause 11.14

#### Code related audit information

*The trader must adhere to the process for maintaining shared unmetered load as outlined in clause 11.14:*

*11.14(2) - The distributor must give written notice to the traders responsible for the ICPs across which the unmetered load is shared, of the ICP identifiers of the ICPs.*

*11.14(3) - A trader who receives such a notification from a distributor must give written notice to the distributor if it wishes to add or omit any ICP from the ICPs across which unmetered load is to be shared.*

*11.14(4) - A distributor who receives such a notification of changes from the trader under (3) must give written notice to the registry manager and each trader responsible for any of the ICPs across which the unmetered load is shared.*

*11.14(5) - If a distributor becomes aware of any change to the capacity of a shared unmetered load ICP or if a shared unmetered load ICP is decommissioned, it must give written notice to all traders affected by that change as soon as practicable after that change or decommissioning.*

*11.14(6) - Each trader who receives such a notification must, as soon as practicable after receiving the notification, adjust the unmetered load information for each ICP in the list for which it is responsible to ensure that the entire shared unmetered load is shared equally across each ICP.*

*11.14(7) - A trader must take responsibility for shared unmetered load assigned to an ICP for which the trader becomes responsible as a result of a switch in accordance with Part 11.*

*11.14(8) - A trader must not relinquish responsibility for shared unmetered load assigned to an ICP if there would then be no ICPs left across which that load could be shared.*

*11.14(9) - A trader can change the status of an ICP across which the unmetered load is shared to inactive status, as referred to in clause 19 of Schedule 11.1. In that case, the trader is not required to give written notice to the distributor of the change. The amount of electricity attributable to that ICP becomes UFE.*

#### Audit observation

I reviewed the processes to identify shared unmetered load.

The registry list was reviewed and found Powershop has 56 ICPs with shared unmetered load. 55 had distributor unmetered load details populated in the required format and these were checked against Powershop's daily unmetered kWh.

#### Audit commentary

Powershop periodically checks the daily kWh figures against the data recorded in the registry by the distributors.

The registry list was reviewed, and I found Powershop's daily unmetered load figure was correct for all 55 ICPs checked where Powershop's field was populated. There are two ICPs where Powershop's field is not populated. ICP 0006987036RND4B had shared unmetered load added on 10/05/18 and ICP 0005049342RN2B9 had shared unmetered load added on 11/01/18.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 5.1 With: Clause 11.14  From: 11-Jan-18 To: 16-Jul-18	2 shared unmetered load ICPs without registry populated or submission occurring. 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 because they mitigate risk to an acceptable level. More frequent monitoring will assist in this area.  There was a minor impact on settlement due to the under submission of 73 kWh, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

## 5.2. Unmetered threshold (Clause 10.14 (2)(b))

### Code reference

Clause 10.14 (2)(b)

### Code related audit information

*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 five ICPs with standard unmetered 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 five ICPs with consumption between 3,000 and 6,000 kWh per annum and they are all approved lighting loads.

### Audit outcome



Compliant

### 5.3. Unmetered threshold exceeded (Clause 10.14 (5))

#### Code reference

*Clause 10.14 (5)*

#### Code related audit information

*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:*
  - o *the date the limit was calculated or estimated to have been exceeded*
  - o *the details of the corrective measures that the MEP 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 five ICPs with standard unmetered 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 five ICPs with consumption between 3,000 and 6,000 kWh per annum and they are all approved lighting loads.

#### Audit outcome

Compliant

### 5.4. Distributed unmetered load (Clause 11 Schedule 15.3, Clause 15.37B)

#### Code reference

*Clause 11 Schedule 15.3, Clause 15.37B*

#### Code related audit information

*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.

**Audit outcome**

Not applicable

## 6. GATHERING RAW METER DATA

### 6.1. Electricity conveyed & notification by embedded generators (Clause 10.13, Clause 10.24 and 15.13)

#### Code reference

*Clause 10.13, Clause 10.24 and Clause 15.13*

#### Code related audit information

*A participant must use the quantity of electricity measured by a metering installation as the raw meter data for the quantity of electricity conveyed through the point of connection.*

*This does not apply if data is estimated or gifted in the case of embedded generation under clause 15.13.*

*A trader must, for each electrically connected ICP that is not also an NSP, and for which it is recorded in the registry as being responsible, ensure that:*

- *there is one or more metering installations*
- *all electricity conveyed is quantified in accordance with the Code*
- *it does not use subtraction to determine submission information for the purposes of Part 15.*

*An embedded generator must give notification to the reconciliation manager for an embedded generating station, if the intention is that the embedded generator will not be receiving payment from the clearing manager or any other person through the point of connection to which the notification relates.*

#### Audit observation

Processes to ensure metering is installed and unmetered load is quantified were examined.

The process to manage distributed generation was examined. The list file as at 29 May 2018 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.

Powershop's records showed 70 remotely disconnected ICPs where meters had been bridged as a means of reconnecting during the audit period.

#### Audit commentary

##### Metering installations installed

Powershop's new connection process includes a check that metering is installed before energisation occurs, or that any unmetered load is quantified.

##### Determining submission information by subtraction

There are no ICPs where subtraction occurs.

##### Distributed generation

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.

79 ICPs had generation listed by the Distributor. Seven of these did not have an injection channel in the meter or a distributed generation profile. A further two ICPs have generation metering installed, but do not have a distributed generation profile. These ICPs are shown in the table below.

ICP	Generation capacity	Fuel Type	Generation metering	Profile	Comments
0000011395HR4A6	1.38	solar	No	RPS	Customer has not had solar since 26/1/18. New meter installed on IN17 since 15/2/18.
0000159351UN210	4.5	solar	No	RPS	PSNZ not aware of solar at property - currently in contact with customer to amend.  No agreement to purchase generated kWh.
0000163273UN9A8	3	solar	No	RPS	Service request in progress to install import/export metering.  No agreement to purchase generated kWh.
0003063704AL3D9	1.72	solar	No	RPS	Customer has not had solar since 27/2/18. New meter installed as UN24/CN15.
0006403914TPA47	5.5	solar	No	RPS	PSNZ not aware of solar at property - currently in contact with customer to amend.  No agreement to purchase generated kWh.
0007163329RND0E	3	solar	No	POD PON	PSNZ not aware of solar at property but CS notes show that the customer did make enquires about solar - currently in contact with customer to get correct metering set up.  No agreement to purchase generated kWh.
0050133330WR9CD	1.6	solar	No	RPS	PSNZ aware of solar but has been set up on incorrect metering - currently in contact with customer to amend. Solar connected on 26/07/17.  No agreement to purchase generated kWh.

ICP	Generation capacity	Fuel Type	Generation metering	Profile	Comments
0000051354MLE44	1.38	solar	Yes	RPS	Customer has not had solar since 15/6/2018. New meter installed as UN24.
0006694055ALC5F	5	solar	Yes	RPS	This has solar metering and does have a profile of RPS PV1. There was a minor delay in correcting the profile after switch in.

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. This area may require further clarification by the Authority, considering the following points:

- distributed generators are participants but not Certified Reconciliation Participants
- clause 10.13(4)(b) allows the embedded generator to notify the RM that they will gift their generation; traders do not have knowledge of these notifications.
- clause 10.24(b) requires the Trader to ensure all electricity conveyed is quantified.

Description	Issue	Remedial action
Quantification of electricity conveyed	Embedded Generators are participants and can connect distributed generation without having an arrangement with a trader to purchase the generated kWh. They can also notify the RM that the kWh will be gifted, and traders do not have knowledge of these arrangements.	Authority to clarify whether traders are non-compliant if Embedded Generators connect distributed generation without an arrangement with the trader.

There are some exceptions to this policy where Powershop has agreed to purchase the generated volumes.

Powershop's 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.

#### Bridged meters

25ICPs had meters bridged during the audit period. The existence of bridged meters is recorded as non-compliance below.

Corrections to capture the bridged consumption are discussed further in **section 12.7**. Estimates are not always conducted for the period of the bridge.

#### **Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 6.1 With: Clause 10.13  From: 01-Jul-17 To: 31-May-18	While meters were bridged, energy was not metered and quantified according to the code for 25 ICPs.  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 recorded as moderate because bridged meters are identified but estimates do not always occur for the bridged period.  There is a minor impact on settlement because estimates are not always conducted 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		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

## 6.2. Responsibility for metering at GIP (Clause 10.26 (6), (7) and (8))

### Code reference

Clause 10.26 (6), (7) and (8)

### Code related audit information

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

The NSP table was reviewed.

### Audit commentary

Review of the NSP table confirmed that Powershop is not responsible for any GIPs. Compliance was not assessed.

### Audit outcome

Not applicable

## 6.3. Certification of control devices (Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3)

### Code reference

*Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3*

### Code related audit information

*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 with history was reviewed for the audit period to confirm the profiles used by Powershop. Powershop uses the POD and PON profiles which require control device certification or AMI metering to be installed.

The registry list was matched with the metering installation details report, to confirm whether AMI or HHR metering was present or control devices (if present) were certified.

### Audit commentary

The registry list showed 2363 active ICPs with profiles which require AMI or HHR metering, or a certified control device. All have HHR or AMI metering installed, and the day/night registers are internal to the meter and no control devices are used in the process.

### Audit outcome

Compliant

## 6.4. Reporting of defective metering installations (Clause 10.43(2) and (3))

### Code reference

*Clause 10.43(2) and (3)*

### Code related audit information

*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

Processes relating to defective metering were examined.

A sample of defective meters were reviewed, to determine whether the MEP was advised, and if appropriate action was taken.

## Audit commentary

Defective meters are typically identified through the meter reading validation process, or from information provided by the meter reader, agent, the MEP, or the customer. Upon identifying a possible defective meter, a field services job is raised to investigate and resolve the defect and a consumption correction is processed if necessary.

I reviewed examples of potential defective meters, including bridged meters and stopped meters. There were no corrections for incorrect multipliers. In all cases a field services job was raised, and the MEP advised.

Corrections are discussed in **section 12.7**.

## Audit outcome

Compliant

### 6.5. Collection of information by certified reconciliation participant (Clause 2 Schedule 15.2)

#### Code reference

*Clause 2 Schedule 15.2*

#### Code related audit information

*Only a certified reconciliation participant may collect raw meter data, unless only the MEP can interrogate the meter, or the MEP has an arrangement which prevents the reconciliation participant from electronically interrogating the meter:*

*2(2) - The reconciliation participant must collect raw meter data used to determine volume information from the services interface or the metering installation or from the MEP.*

*2(3) - The reconciliation participant must ensure the interrogation cycle is such that it does not exceed the maximum interrogation cycle in the registry.*

*2(4) - The reconciliation participant must interrogate the meter at least once every maximum interrogation cycle.*

*2(5) - When electronically interrogating the meter the participant must:*

- a) ensure the system is to within +/- 5 seconds of NZST or NZDST*
- b) compare the meter time to the system time*
- c) determine the time error of the metering installation*
- d) if the error is less than the maximum permitted error, correct the meter's clock*
- e) if the time error is greater than the maximum permitted error then:*
  - i) correct the metering installation's clock*
  - ii) compare the metering installation's time with the system time*
  - iii) correct any affected raw meter data.*
- f) download the event log.*

*2(6) – The interrogation systems must record:*

- the time*
- the date*
- the extent of any change made to the meter clock.*

#### Audit observation

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



Clock synchronisation processes for agents and MEPs were reviewed as part of their own audits. Agents are to advise Powershop of clock synchronisation discrepancies and adjustments. I reviewed a sample of five notifications, confirming that these notifications are being received and actioned by Powershop.

#### Audit commentary

Agents and MEPs collect data and monitor clock synchronisation; this is covered as part of their audits.

#### Audit outcome

Compliant

### 6.6. Derivation of meter readings (Clause 3(1), 3(2) and 5 Schedule 15.2)

#### Code reference

*Clause 3(1), 3(2) and 5 Schedule 15.2*

#### Code related audit information

*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. A sample of five NHH meter readings were checked from the read file to Powershop's systems using the typical case sample methodology.

The process for review of meter condition information provided by Wells was reviewed, including reviewing a sample of events.

Processes for customer and photo reads were reviewed.

#### 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 Wells and they have achieved compliance with points "a" to "e" above. The meter condition notes may not be uploaded where there is a reading as the Wells file only uploads where a reading is not obtained. I recommend Powershop investigates this further and makes changes if required, because there are some events, such as meter damaged or tamper, where a reading will be obtained but further action is required.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 5 Schedule 15.2	Ensure all meter condition notes are loaded and actioned from the Wells file, whether a reading is obtained or not.	No comment	Unknown

The matter of customer provided photo reads was discussed and I provided the Authority's clarification on this matter, which is that photo reads cannot be considered validated reads unless they're validated against another set of validated reads. Powershop confirmed their current processes include the use of meter readings from customer photos as "customer verified", which means they will be used in the submission process. These readings will need to be recorded as "customer unverified" to achieve compliance.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.6 With: Clause 3(2) of schedule 15.2  From: 01-Jun-17 To: 31-May-18	Customer reads from photos used as validation reads in the reconciliation process and in some cases, they are not validated against other reads taken by a meter reader.  Potential impact: Low Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as strong because although validation does not always occur against another set of meter reading values, Powershop has other validations in place and there is no evidence of customer provided photos being less accurate than a meter reading sourced from a manual reading.  There was no impact on settlement, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

## 6.7. NHH meter reading application (Clause 6 Schedule 15.2)

### Code reference

Clause 6 Schedule 15.2

### Code related audit information

*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.

### Audit commentary

A walkthrough of the different meter reading scenarios found some minor issues where Powershop will need to make changes to be fully compliant. The scenarios are as follows:

1. AMI reads from NGCM taken at midnight are date stamped with the next day's date but are applied by Powershop at 00:00 on that day, so this is compliant because 24:00 on 29/05/18 is the same point in time as 00:00 on 30/05/18.
2. AMI reads from SMCO are date stamped with the midnight date. So, a reading taken at 24:00 on 29/05/18 is date stamped as 29/05/18, but Powershop applies this read at 00:00 on 29/05/18, which is not compliant. Powershop's system then estimates for 24 hours to the end of 29/05/18 which incorrectly adds one day of consumption. An example is ICP 0000814122NV9BB, which switched out on 27/06/18. A reading was supplied by SMCO date stamped 26/06/18 (taken at 24:00 on 26/06/18). Powershop's system applied the read to the beginning of 26/06/18 and estimated consumption for one additional day.
3. AMI reads from ARCM are not midnight reads and are estimated to the end of the day by the number of hours left in the day. So, if consumption is 20 kWh per day and a reading is taken at 12:00 on a given day, the system will add 10 kWh to the reading. Whilst this is accurate, it is technically not compliant.
4. NHH manual meter readings from Wells are treated the same as ARCM readings and are estimated to the end of the day. Once again, whilst this is accurate, it is technically not compliant.

Non-compliance is recorded because not all meter readings are correctly applied.

### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.7 With: Clause 6 Schedule 15.2  From: 01-Jun-17 To: 31-May-18	Not all meter readings are correctly applied.  Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.</p> <p>The impact on settlement and participants is minor, therefore the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

#### 6.8. Interrogate meters once (Clause 7(1) and (2) Schedule 15.2)

##### Code reference

*Clause 7(1) and (2) Schedule 15.2*

##### Code related audit information

*Each reconciliation participant must ensure that a validated meter reading is 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, and used to create volume information.*

*This may be a validated meter reading at the time the ICP is switched to, or from, the reconciliation participant.*

*If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 7(1).*

##### Audit observation

The process to manage missed reads was examined.

A report of ICPs unread during the period of supply was reviewed to determine the action taken to obtain a read, and whether exceptional circumstances existed.

##### 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. 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.

A report of 70 ICPs unread during the period of supply where the period of supply ended between September 2017 and March 2018 was reviewed. The ten examples over 150 days are compliant but those showing as less than 150 days are not compliant.

Period of supply	1-29 days	30-59 days	60-89	90-149 days	150 days +
Count of ICPs	27	10	11	12	10

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.8 With: Clause 7(1) and (2) Schedule 15.2  From: 01-Jun-17 To: 31-May-18	No process for getting meter readings during the period of supply, where the period of supply is less than 150 days.  Potential impact: Low  Actual impact: Low  Audit history: Multiple times  Controls: Weak  Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	A process is not in place for those ICPs with Powershop for a short period. If the period is longer the controls are strong.  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		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

## 6.9. NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2)

### Code reference

Clause 8(1) and (2) Schedule 15.2

### Code related audit information

*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. A monthly report for May 2018 was provided.

The report was reviewed to confirm that it met the meter reading frequency report requirements and was submitted on time.

#### Audit commentary

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 12 months	NSPs <100% read	ICPs unread for 12 months	Overall percentage read
May 2018	212	68	219	99.5%

As discussed in **section 6.8**, there are processes in place monitor read attainment, and attempt to resolve issues preventing read attainment.

I reviewed ten ICPs not read in the previous 12 months determine whether exceptional circumstances exist, and if Powershop had used their best endeavours to obtain readings. In all cases there had been multiple visits and emails sent in an attempt to get meter readings.

Powershop confirmed there were no examples of late files.

#### Audit outcome

Compliant

### 6.10. NHH meters 90% read rate (Clause 9(1) and (2) Schedule 15.2)

#### Code reference

*Clause 9(1) and (2) Schedule 15.2*

#### Code related audit information

*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 4 months for 90% of the non half hour metered ICPs.*

*A report is to be sent to the Authority 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. The monthly report for May 2018 was provided.

A sample of ten ICPs not read in the previous four months were reviewed to determine whether exceptional circumstances existed and if Powershop had used their best endeavours to obtain readings.

#### Audit commentary

The monthly meter reading report provided was reviewed.

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	ICPs unread for 4 months	Overall percentage read
May 2018	235	11	765	98.7%

As discussed in **section 6.8**, there are processes in place monitor read attainment, and attempt to resolve issues preventing read attainment.

I reviewed 10 ICPs not read in the previous four months determine whether exceptional circumstances exist, and if Powershop had used their best endeavours to obtain readings.

#### Audit outcome

Compliant

### 6.11. NHH meter interrogation log (Clause 10 Schedule 15.2)

#### Code reference

*Clause 10 Schedule 15.2*

#### Code related audit information

*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.

#### Audit outcome

Compliant

### 6.12. HHR data collection (Clause 11(1) Schedule 15.2)

#### Code reference

*Clause 11(1) Schedule 15.2*

#### Code related audit information

*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

Review of a registry list as at 29 May 2018 confirmed that Powershop has not supplied any ICPs with submission type HHR.

#### Audit commentary

Compliance with these clauses was not assessed, because Powershop does not deal with HHR readings.

#### Audit outcome

Not applicable

### 6.13. HHR interrogation data requirement (Clause 11(2) Schedule 15.2)

#### Code reference

*Clause 11(2) Schedule 15.2*

#### Code related audit information

*The following information is collected during each interrogation:*

*11(2)(a) - the unique identifier of the data storage device*

*11(2)(b) - the time from the data storage device at the commencement of the download unless the time is within specification and the interrogation log automatically records the time of interrogation*

*11(2)(c) - the metering information, which represents the quantity of electricity conveyed at the point of connection, including the date and time stamp or index marker for each half hour period. This may be limited to the metering information accumulated since the last interrogation*

*11(2)(d) - the event log, which may be limited to the events information accumulated since the last interrogation*

*11(2)(e) - an interrogation log generated by the interrogation software to record details of all interrogations.*

*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

Review of a registry list as at 29 May 2018 confirmed that Powershop has not supplied any ICPs with submission type HHR.

#### Audit commentary

Compliance with these clauses was not assessed, because Powershop does not deal with HHR readings.

#### Audit outcome

Not applicable



#### 6.14. HHR interrogation log requirements (Clause 11(3) Schedule 15.2)

##### Code reference

*Clause 11(3) Schedule 15.2*

##### Code related audit information

*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

Review of a registry list as at 29 May 2018 confirmed that Powershop has not supplied any ICPs with submission type HHR.

##### Audit commentary

Compliance with these clauses was not assessed, because Powershop does not deal with HHR readings.

##### Audit outcome

Not applicable

## 7. STORING RAW METER DATA

### 7.1. Trading period duration (Clause 13 Schedule 15.2)

#### Code reference

*Clause 13 Schedule 15.2*

#### Code related audit information

*The trading period duration, normally 30 minutes, must be within  $\pm 0.1\%$  ( $\pm 2$  seconds).*

#### Audit observation

Review of a registry list as at 29 May 2018 confirmed that Powershop has not supplied any ICPs with submission type HHR.

#### Audit commentary

Compliance with these clauses was not assessed, because Powershop does not deal with HHR readings.

#### Audit outcome

Not applicable

### 7.2. Archiving and storage of raw meter data (Clause 18 Schedule 15.2)

#### Code reference

*Clause 18 Schedule 15.2*

#### Code related audit information

*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

Compliance with this clause has been demonstrated by the MEPs and agents.

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.

#### Audit outcome

Compliant

### 7.3. Non-metering information collected / archived (Clause 21(5) Schedule 15.2)

#### Code reference

*Clause 21(5) Schedule 15.2*

#### Code related audit information

*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.

#### Audit outcome

Compliant

## 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)

#### Code reference

Clause 19(1) Schedule 15.2

#### Code related audit information

*If errors are detected during validation of non-half hour meter readings, one of the following must be undertaken:*

*19(1)(a) - confirmation of the original meter reading by carrying out another meter reading*

*19(1)(b) - replacement of the original meter reading by another meter reading (even if the replacement meter reading may be at a different date)*

*19(1)(c) - 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

Processes for correction of NHH meter readings were reviewed. Five examples of changed meter readings were reviewed. This included checking that updated consumption data flowed through to revision reconciliation submissions.

#### 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 and is labelled as an estimate in Powershop's system.

#### Audit outcome

Compliant

### 8.2. Correction of HHR metering information (Clause 19(2) Schedule 15.2)

#### Code reference

Clause 19(2) Schedule 15.2

#### Code related audit information

*If errors are detected during validation of half hour metering information the correction must be as follows:*

*19(2)(a) - if a check meter or data storage device is installed at the metering installation, data from this source may be substituted*

*19(2)(b) - 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

Review of a registry list as at 29 May 2018 confirmed that Powershop has not supplied any ICPs with submission type HHR.

#### Audit commentary

Compliance with these clauses was not assessed, because Powershop does not deal with HHR readings.

#### Audit outcome

Not applicable

### 8.3. Error and loss compensation arrangements (Clause 19(3) Schedule 15.2)

#### Code reference

*Clause 19(3) Schedule 15.2*

#### Code related audit information

*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.

#### Audit outcome

Compliant

### 8.4. Correction of HHR and NHH raw meter data (Clause 22(1) and (2) Schedule 15.2)

#### Code reference

*Clause 22(1) and (2) Schedule 15.2*

#### Code related audit information

*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 **sections 8.1**, which confirmed that raw meter data is not overwritten as part of the correction process. Audit trails are discussed in **section 2.4**.

Raw meter data retention for MEPs and agents was reviewed as part of their own audits.

**Audit commentary**

Compliance with this clause has been demonstrated by Powershop's MEPs and agents.

I reviewed journals for corrections and noted that they were compliant with the requirements of this clause.

**Audit outcome**

Compliant

## 9. ESTIMATING AND VALIDATING VOLUME INFORMATION

### 9.1. Identification of readings (Clause 3(3) Schedule 15.2)

#### Code reference

*Clause 3(3) Schedule 15.2*

#### Code related audit information

*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

A sample of reads and volumes were traced from the source files to Powershop's systems in **section 2.3**.

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

Readings are clearly identified as required by this clause.

#### Audit outcome

Compliant

### 9.2. Derivation of volume information (Clause 3(4) Schedule 15.2)

#### Code reference

*Clause 3(4) Schedule 15.2*

#### Code related audit information

*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 **sections 11 and 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.

#### Audit outcome

Compliant

### 9.3. Meter data used to derive volume information (Clause 3(5) Schedule 15.2)

#### Code reference

Clause 3(5) Schedule 15.2

#### Code related audit information

*All meter data that is used to 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 **sections 11** and **12**, to confirm that volume was based on readings as required.

NHH data is collected by MEPs and agents. Compliance was assessed as part of their MEP and agent audits.

#### Audit commentary

The MEPs retain the raw, unrounded data. Compliance with this clause has been demonstrated by Powershop's agents and MEPs as part of their own audits.

Manual meter readings do not record decimal places and are not rounded or truncated on import into Powershop's systems. AMI data is rounded at the time submission files are prepared.

#### Audit outcome

Compliant

### 9.4. Half hour estimates (Clause 15 Schedule 15.2)

#### Code reference

Clause 15 Schedule 15.2

#### Code related audit information

*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

Review of a registry list as at 29 May 2018 confirmed that Powershop has not supplied any ICPs with submission type HHR.

#### Audit commentary

Compliance with these clauses was not assessed, because Powershop does not deal with HHR readings.

#### Audit outcome

Not applicable



## 9.5. NHH metering information data validation (Clause 16 Schedule 15.2)

### Code reference

Clause 16 Schedule 15.2

### Code related audit information

*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 0 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. Whilst there are strong controls in place to identify issues, these are not always corrected, as recorded in **section 12.7**.

### Audit outcome

Compliant

## 9.6. Electronic meter readings and estimated readings (Clause 17 Schedule 15.2)

### Code reference

Clause 17 Schedule 15.2

### Code related audit information

*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 reviewed and observed the AMI data validation processes, including checking a sample of data validations.

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.

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

### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.6 With: Clause 17 Schedule 15.2  From: 01-Jun-17 To: 30-Jun-18	Event information not provided by ARC innovations.  Potential impact: Medium Actual impact: Unknown  Audit history: Once Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	<p>The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.</p> <p>The impact on settlement and participants is unknown but other validations are in place, therefore the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
No comment		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

## 10. PROVISION OF METERING INFORMATION TO THE PRICING MANAGER IN ACCORDANCE WITH SUBPART 4 OF PART 13 (CLAUSE 15.38(1)(F))

### 10.1. Generators to provide HHR metering information (Clause 13.136)

#### Code reference

Clause 13.136

#### Code related audit information

*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

The NSP table on the registry was reviewed.

#### Audit commentary

Powershop is not responsible for any NSPs. No information is provided to the pricing manager in accordance with this clause.

#### Audit outcome

Not applicable

### 10.2. Unoffered & intermittent generation provision of metering information (Clause 13.137)

#### Code reference

Clause 13.137

#### Code related audit information

*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

The NSP table on the registry was reviewed.

#### Audit commentary

Powershop is not responsible for any NSPs. No information is provided to the pricing manager in accordance with this clause.

#### Audit outcome

Not applicable

### 10.3. Loss adjustment of HHR metering information (Clause 13.138)

#### Code reference

*Clause 13.138*

#### Code related audit information

*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

The NSP table on the registry was reviewed.

#### Audit commentary

Powershop is not responsible for any NSPs. No information is provided to the pricing manager in accordance with this clause.

#### Audit outcome

Not applicable

### 10.4. Notification of the provision of HHR metering information (Clause 13.140)

#### Code reference

*Clause 13.140*

#### Code related audit information

*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

The NSP table on the registry was reviewed.

#### Audit commentary

Powershop is not responsible for any NSPs. No information is provided to the pricing manager in accordance with this clause.

#### Audit outcome

Not applicable

## 11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

### 11.1. Buying and selling notifications (Clause 15.3)

#### Code reference

Clause 15.3

#### Code related audit information

*Unless an embedded generator has given a notification in respect of the point of connection under clause 15.3, a trader must give notice to 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.

#### Audit outcome

Compliant

### 11.2. Calculation of ICP days (Clause 15.6)

#### Code reference

Clause 15.6

#### Code related audit information

*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.*

*The ICP days information must be calculated using the data contained in the retailer or direct purchaser's reconciliation system when it aggregates volume information for ICPs into submission information.*

#### Audit observation

The process for the calculation of ICP days was examined by checking for variances for eight months of GR100 reports.

#### Audit commentary

The following table shows the ICP days difference between Powershop's database and the RM return file (GR100) for all available revisions for eight 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.

Month	Ri	R1	R3	R7	R14
Oct 2016	0.01%	0.00%	-0.01%	0.00%	0.00%
Nov 2016	0.01%	0.00%	0.00%	0.00%	0.00%
Dec 2016	0.03%	-0.02%	-0.01%	0.00%	0.00%
Jun 2017	0.00%	0.01%	0.00%	0.00%	-
Jul 2017	0.01%	0.00%	0.00%	0.00%	-
Sep 2017	0.03%	0.00%	0.00%	0.00%	-
Oct 2017	0.04%	0.01%	0.00%	0.00%	-
Nov 2017	0.05%	0.00%	-	-	-

#### Audit outcome

Compliant

### 11.3. Electricity supplied information provision to the reconciliation manager (Clause 15.7)

#### Code reference

Clause 15.7

#### Code related audit information

*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

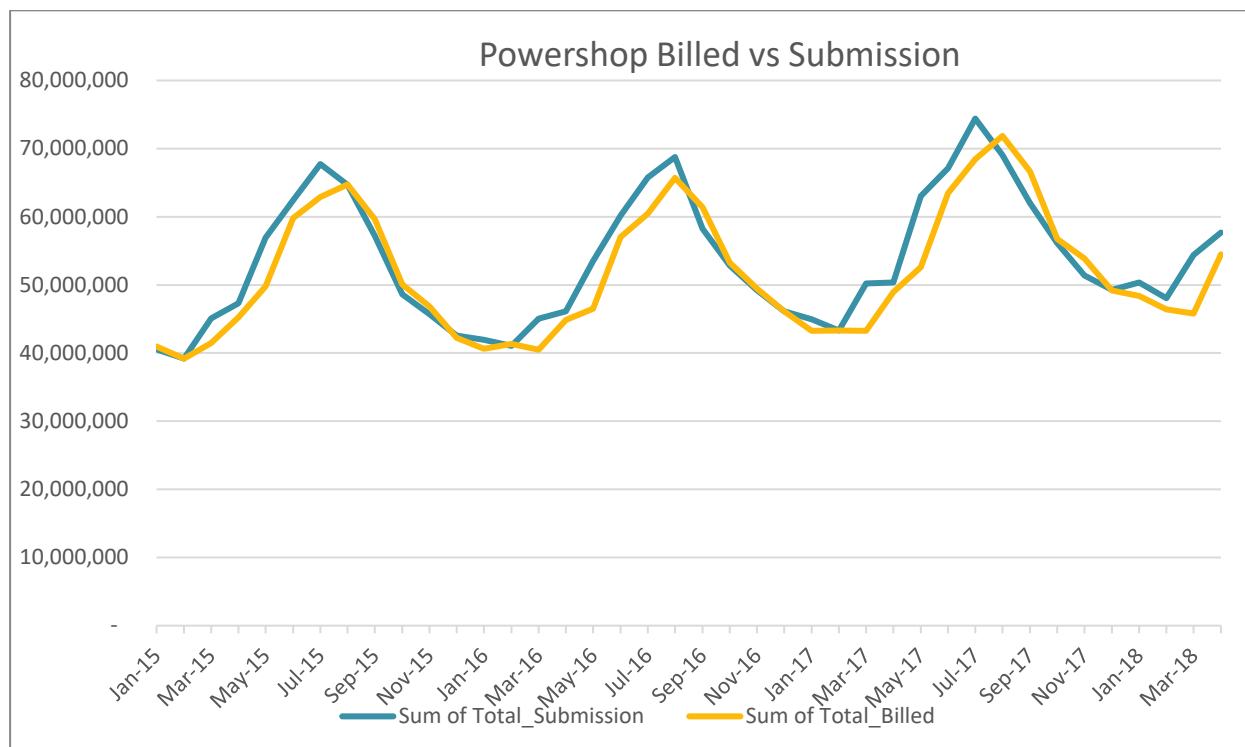
The process for the calculation of electricity supplied was examined by checking five NSPs with a small number of ICPs to confirm the AV120 billed calculation was correct.

GR130 reports for January 2016 onwards were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

### Audit commentary

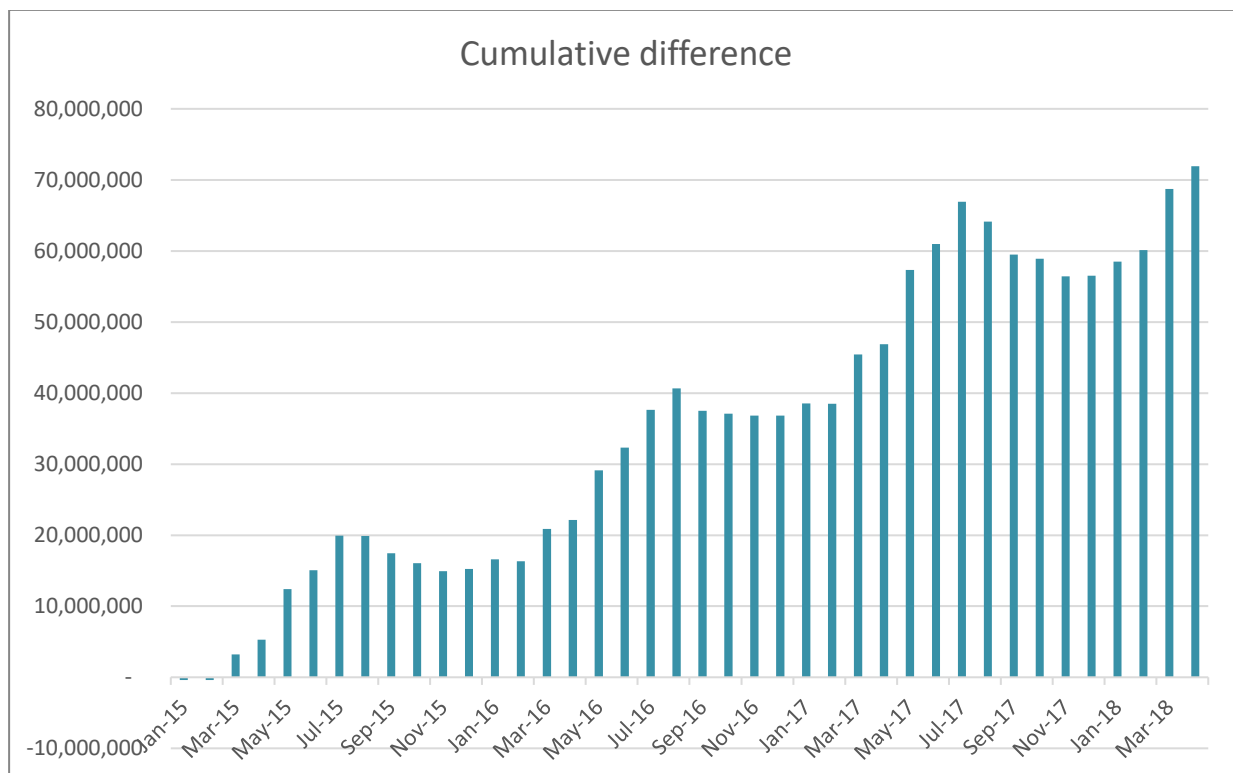
The accuracy of the NHH and HHR electricity supplied information was checked by examining five NSPs with a small volume and checking all invoices in Powershop's system. Compliance is confirmed.

The graph below shows that the submitted information is higher than the billed total. In the year ended April 2018 submitted data was 3.7% higher than the billed, and the two years ended April 2018 submitted data was 3.8% higher. Over a three year period from January 2015, the difference is 3.5%. The difference between billed and submitted data appears to be increasing over time. 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%, preferably less than 0.5%.



I asked Powershop to examine this difference to find the issue or issues leading to this variance, but they were unable to find the reason. As the graph above shows, submission is higher than billed for the period March to July every year by between 8% and 10%, but the numbers are similar for the rest of the year. The information above leads me to conclude there is an error in either the electricity supplied or the AV080 files, but until the error is found I cannot record non-compliance. The total difference since January 2015 is 71,909,612 kWh which is a significant number. The graph below shows the trend I mentioned above where the months leading into winter have a higher percentage difference than other months. Whilst I cannot determine where the error is, I have recorded non-compliance in **section 2.1** regarding the requirement to provide complete and accurate information.





I repeat last year's recommendation to examine this variance to determine the source of the inaccuracy with electricity supplied or submission data.

Description	Recommendation	Audited party comment	Remedial action
<b>Regarding:</b> Clause 15.7 of part 15	Check the difference between electricity supplied and submission totals to identify the source of the discrepancy.	No comment	Investigating

#### Audit outcome

Compliant

#### 11.4. HHR aggregates information provision to the reconciliation manager (Clause 15.8)

##### Code reference

Clause 15.8

##### Code related audit information

*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**

Review of a registry list as at 29 May 2018 confirmed that Powershop has not supplied any ICPs with submission type HHR.

**Audit commentary**

Compliance with these clauses was not assessed, because Powershop does not deal with HHR readings.

**Audit outcome**

Not applicable

## 12. SUBMISSION COMPUTATION

### 12.1. Daylight saving adjustment (Clause 15.36)

#### Code reference

Clause 15.36

#### Code related audit information

*The reconciliation participant must provide submission information to the reconciliation manager that is adjusted for NZDT using 1 of the techniques set out in clause 15.36(3) specified by the Authority.*

#### Audit observation

Review of a registry list as at 29 May 2018 confirmed that Powershop has not supplied any ICPs with submission type HHR.

#### Audit commentary

Compliance with these clauses was not assessed, because Powershop does not deal with HHR readings.

#### Audit outcome

Not applicable

### 12.2. Creation of submission information (Clause 15.4)

#### Code reference

Clause 15.4

#### Code related audit information

*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

The process to create submissions was reviewed.

A sample of NHH ICPs were checked to make sure they are handled correctly, including ICPs with standard or shared unmetered load, ICPs with distributed generation, disconnected ICPs with consumption, and vacant ICPs with consumption.

Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late.

#### Audit commentary

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

Powershop prepares reconciliation submissions using reconciliation consumption generated by their system. A sample of NHH ICPs were checked to make sure they are handled correctly, including vacant

ICPs with consumption, disconnected ICPs with consumption, and ICPs with standard or shared unmetered load:

- a sample of the ICPs with vacant consumption were checked and found to be correctly reported
- a sample of ICPs with consumption while disconnected were checked; consumption during the disconnected period was not reported for nine of ten ICPs
- ICPs with distributed generation were checked and found to be correctly reported where Powershop had agreed to purchase the generated kWh
- ICPs with unmetered volumes were checked, including standard unmetered and shared unmetered; correct consumption was submitted
- Consumption for bridged or faulty metering is not always submitted, as recorded in **section 12.7**.

When consumption is revised it is correctly submitted.

Further information on calculation of historic estimate is recorded in **section 12.11**, the correction process is documented in **section 12.7**, and aggregation of the AV080 report was found to be compliant in **section 12.3**.

Data is reviewed prior to submission as discussed in **section 12.3**.

#### Audit outcome

Compliant

### 12.3. Allocation of submission information (Clause 15.5)

#### Code reference

Clause 15.5

#### Code related audit information

*In preparing and submitting submission information, the reconciliation participant must allocate volume information for each ICP to the NSP indicated by the data held in 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 in **section 2.1**.

The processes to ensure that submissions are accurate were discussed and observed, including review of reports used in the process.

The process for aggregating the AV080 was examined by checking five NSPs with a small number of ICPs. The GR170 to AV080 files for six months and revisions were compared, 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.

The process walkthrough confirmed there were no issues related to not zeroing redundant combinations. Review of GR170 and AV080 files for six months and revisions confirmed that zeroing occurs as required.

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.

#### **Audit outcome**

Compliant

### **12.4. Grid owner volumes information (Clause 15.9)**

#### **Code reference**

*Clause 15.9*

#### **Code related audit information**

*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**

The NSP table on the registry and registry list were reviewed.

#### **Audit commentary**

Powershop is not responsible for any GIPs; compliance was not assessed.

#### **Audit outcome**

Not applicable

### **12.5. Provision of NSP submission information (Clause 15.10)**

#### **Code reference**

*Clause 15.10*

#### **Code related audit information**

*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**

The registry list and NSP table were reviewed.

#### **Audit commentary**

Powershop is not a local or embedded network owner; compliance was not assessed.

## Audit outcome

Not applicable

## 12.6. Grid connected generation (Clause 15.11)

### Code reference

Clause 15.11

### Code related audit information

*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

The registry list and NSP table were reviewed.

### Audit commentary

Powershop is not a grid connected generator; compliance was not assessed.

## Audit outcome

Not applicable

## 12.7. Accuracy of submission information (Clause 15.12)

### Code reference

Clause 15.12

### Code related audit information

*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

Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late.

Corrections were evaluated to ensure corrected consumption flowed through to the relevant revision files.

### Audit commentary

Review of alleged breaches confirmed that no reconciliation submissions were made late.

As recorded in **section 6.1**, 14 of 20 bridged meter events did not have any correction conducted for the period the meter was bridged.

There were 17 recorded faulty metering examples. Corrections were not conducted for two of these examples.

This clause requires corrected information to be submitted and in these cases the information was not corrected, therefore compliance is confirmed with this clause, but non-compliance exists for not quantifying electricity conveyed and for not conducting corrections, which is recorded in **Sections 6.1 and 2.1**.

#### Audit outcome

Compliant

### 12.8. Permanence of meter readings for reconciliation (Clause 4 Schedule 15.2)

#### Code reference

Clause 4 Schedule 15.2

#### Code related audit information

*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

One AV080 14-month revision was reviewed to identify any forward estimate still existing.

#### Audit commentary

Powershop does not have a process for the replacement of estimates with permanent estimates at the 14-month revision. A review of AV080 14-month revisions for January 2017 showed 79,622.02 kWh (0.18%) of forward estimate remained at the time of the 14-month revision. The analysis of some specific ICPs where HE was not 100% identified three issues, as follows:

- if no shape file is available, Powershop's system labels the consumption as FE instead of HE, the calculation is correct; it's just a labelling issue
- one example was found where a meter was changed; a meter reading was available, and it was used, but the consumption was incorrectly labelled as FE
- ICPs without meter readings at the 14-month revision are genuinely estimated.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.8 With: Clause 4 of Schedule 15.2  From: 01-Jan-17 To: 31-Jan-17	Some estimates not replaced at R14. Some 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 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
A system fix has been sized by Powershop's system provider and it is more than would be considered reasonable given the absence of any impact. The RM has advised Powershop that they do not even utilize the HE data therefore the impact should be "none" rather than low. The absence of an impact level of "none" being available to auditors is farcical.		NA	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

## 12.9. Reconciliation participants to prepare information (Clause 2 Schedule 15.3)

### Code reference

Clause 2 Schedule 15.3

### Code related audit information

*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)):*
  - a) *half hour volume information for the ICP; or*
  - b) *non half hour volumes information calculated under clauses 4 to 6 (as applicable).*
  - c) *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 in 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)):*
    - a) *for each ICP, the compensation factor that is recorded in the registry (clause 2(3)(a))*
    - b) *for each NSP the compensation factor that is recorded in the metering installations most recent certification report (clause 2(3)(b)).*

#### Audit observation

Aggregation and content of reconciliation submissions was reviewed, and the registry list as at 29 May 2018 was reviewed.

#### Audit commentary

Compliance with this clause was assessed:

- there are no ICPs with meter category 3 or higher
- unmetered load submissions were checked in **section 12.2** and found to be correct
- ICPs with certified control devices were checked in **section 6.3**
- no loss or compensation arrangements are required
- aggregation of the AV080 reports is compliant.

Two issues were found with the completeness of submission information. Consumption information for ICPs with a de-energised status is not always submitted and submission did not occur for two unmetered load ICPs.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.9 With: Clause 2 Schedule 15.3 From: 01-Jul-17 To: 30-Jun-18	Submission information not reported for some inactive ICPs. Submission did not occur for two unmetered ICPs Potential impact: Medium Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as moderate because submission information is correct for most scenarios. The impact on settlement is minor because of the low number of ICPs and the small amount of consumption. The audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status

Powershop does not agree with this non-compliance as it believes compliance of Clause 2 of Schedule 15.3 should be limited to whether volumes are not being included that do exist rather than volumes that do not exist (e.g. missing volumes from bridged or faulty meters identified in Section 6.1).	NA	Disputed
<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
No comment	NA	

## 12.10. Historical estimates and forward estimates (Clause 3 Schedule 15.3)

### Code reference

Clause 3 Schedule 15.3

### Code related audit information

*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

Eight AV080 submissions for revisions 3 to 14 were reviewed, 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 12.12**.

### 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.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.10 With: Clause 3 of schedule 15.3  From: 01-Jun-17 To: 30-Jun-18	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		
<b>Low</b>	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. There is no impact on settlement, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
A system fix has been sized by Powershop's system provider and it is more than would be considered reasonable given the absence of any impact. The RM has advised Powershop that they do not even utilize the HE data therefore the impact should be "none" rather than low. The absence of an impact level of "none" being available to auditors is farcical.		NA	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

## 12.11. Historical estimate process (Clause 4 and 5 Schedule 15.3)

### Code reference

Clause 4 and 5 Schedule 15.3

### Code related audit information

*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

Powershop provided examples of historic estimate calculations, which were reviewed. The check of calculations included confirming that readings and Seasonal Adjusted Shape Values (SASV) were applied correctly.

### 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. These were the only scenarios present.

Test	Scenario	Test expectation	Compliance
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

### Audit outcome

Compliant

## 12.12. Forward estimate process (Clause 6 Schedule 15.3)

### Code reference

Clause 6 Schedule 15.3

### Code related audit information

*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)
- daily consumption from the switch in CS file; or
- 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 nine 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
Sep 2016	0	0	0	0	127
Oct 2016	0	0	0	0	131
Nov 2016	0	0	0	0	132
Jun 2017	0	0	0	-	147
Jul 2017	0	0	0	-	151
Aug 2017	0	0	0	-	157
Sep 2017	0	0	-	-	160

Oct 2017	0	0	-	-	162
Nov 2017	0	0	-	-	164

#### Total Variation between Revisions

Month	Revision 1	Revision 3	Revision 7	Revision 14
Sep 2016	0.61%	1.13%	1.14%	1.16%
Oct 2016	0.98%	1.71%	1.81%	1.90%
Nov 2016	0.94%	1.38%	1.65%	1.70%
Jun 2017	0.28%	0.48%	0.44%	-
Jul 2017	-0.36%	-0.24%	-0.41%	-
Aug 2017	0.78%	1.05%	1.14%	-
Sep 2017	0.46%	0.88%	-	-
Oct 2017	0.39%	0.97%	-	-
Nov 2017	0.39%	0.97%	-	-

#### Audit outcome

Compliant

### 12.13. Compulsory meter reading after profile change (Clause 7 Schedule 15.3)

#### Code reference

Clause 7 Schedule 15.3

#### Code related audit information

*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

The event detail report for December 2017 to May 2018 was reviewed and identified 34 ICPs which had a change of profile.

A diverse sample of ten ICPs with profile changes were reviewed to confirm that there was an actual reading on the day of the profile change.

#### **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. All of the examples checked had a meter reading either from a meter change or from AMI metering.

#### **Audit outcome**

Compliant

## 13. SUBMISSION FORMAT AND TIMING

### 13.1. Provision of submission information to the RM (Clause 8 Schedule 15.3)

#### Code reference

*Clause 8 Schedule 15.3*

#### Code related audit information

*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 discussed in **section 12.2**.

Processes to ensure that information used to aggregate the reconciliation reports is consistent with the registry were reviewed in **section 2.1**.

Zeroing in the AV080 submission is discussed in **section 12.3** and was found to be compliant.

#### Audit commentary

Submission information is provided to the reconciliation manager in the appropriate format and is aggregated to the following level:

- NSP code
- reconciliation type
- profile
- loss category code
- flow direction
- dedicated NSP
- consumption period.

#### Audit outcome

Compliant

### 13.2. Reporting resolution (Clause 9 Schedule 15.3)

#### Code reference

*Clause 9 Schedule 15.3*

#### Code related audit information

*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

I reviewed the rounding of data on the AV080 and reports as part of the aggregation checks.

#### Audit commentary

Review of eight AV080 non half hour volumes reports confirmed that submission data is rounded to two decimal places.

#### Audit outcome

Compliant

### 13.3. Historical estimate reporting to RM (Clause 10 Schedule 15.3)

#### Code reference

*Clause 10 Schedule 15.3*

#### Code related audit information

*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 eight months of AV080 reports 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 proportion of HE in the revision files was checked for nine separate months, and the table below shows that compliance has not been achieved in all instances.

The overall percentages of historic estimate are high.

#### Quantity of NSPs where revision targets were met.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Nov 2016	210	-	-	212
Dec 2016	211	-	-	212
Jan 2017		212	142	214

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Feb 2017	-	212	-	215
Mar 2017	-	214	-	218
Oct 2017	244	-	-	251
Nov 2017	243	-	-	252
Dec 2017	248	-	-	255

The table below shows that the percentage HE at a summary level is below the required targets. For the September 2016 14-month revision, exceptional circumstances prevented readings from being attained.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Nov 2016	99.74%	-	-
Dec 2016	99.72%	-	-
Jan 2017	-	99.60%	99.82%
Feb 2017	-	99.51%	-
Mar 2017	-	99.56%	-
Oct 2017	99.34%	-	-
Nov 2017	99.25%	-	-
Dec 2017	99.20%	-	-

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 13.3 With: Clause 10 of Schedule 15.3 From: Nov-Dec 16, Jan-Mar 17, Oct-Dec 17	Historic estimate thresholds were not met for some revisions. 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	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		NA	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment		NA	

## CONCLUSION

The audit found 25 non-compliance issues, which is an increase from the previous audit. Some of the issues found have an impact on settlement or on other participants. The main issues identified are as follows:

- some read change requests from other traders were incorrectly rejected
- the daily kWh figures were incorrect in some CS files
- some meter readings are not correctly applied to the end of the day
- submission did not occur for some bridged meters, faulty meters, inactive ICPs with consumption and unmetered load ICPs
- some estimates were not replaced by the 14-month revision.

## PARTICIPANT RESPONSE