

ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT

VERITEK

For

PAUA TO THE PEOPLE LIMITED

Prepared by: Tara Gannon

Date audit commenced: 11 December 2018

Date audit report completed: 21 December 2018

Audit report due date: 15 February 2019

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EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Paua to the People Limited (Paua)**, 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 7.1.

Paua supplies HHR AMI customers only, and relies on AMI reads provided by MEPS. Actual AMI data takes precedence in Paua's system, which can lead to agreed switch readings not being applied where they are inconsistent with the actual AMI data. Paua is developing a new system, which will prioritise switch reads and automate the switching process. A material change audit will be conducted for the new system prior to going live. The new system is expected to prevent or reduce recurrence of the switching non-compliances identified during this audit.

Paua's initial submission data is usually highly accurate, because it is based on AMI data. Revision data is not consistently provided unless the difference is considered to be material. This can cause omissions where an ICP switches in at the end of the month and is not included in the initial submission due to timing, or an estimate for missing data is not prepared prior to the initial submission. It can cause over submission where a withdrawal is processed after the initial submission. Revision submissions are now scheduled, and I recommend that revisions should be routinely completed regardless of whether the difference is material.

Improvements were made following the January 2018 audit, and the non-compliances relating to ICP days reporting and meter event reporting have been cleared.

This audit identified 14 non-compliances and makes four recommendations. The audit risk rating is 22, which results in an indicative audit frequency of 12 months. Taking into consideration Paua's comments, and that:

- A number of the non-compliances relate to minor data discrepancies or late updates affecting very small numbers of ICPs.
- Remedial status actions have been identified for all non-compliances and are in the process of being implemented.
- The implementation of Paua's new system is expected to resolve the non-compliances relating to switching and as billed reporting.

I recommend that the next audit period be at least 15 months, pending the outcome of the material change audit for Paua's new billing system.

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	ICP 0000123086TRFBA had an incorrect inactive status date applied.	Strong	Low	1	Identified
Audit trails	2.4	21 Schedule 15.2	System audit trails are not compliant.	Moderate	Low	2	Identified
Changes to registry information	3.3	10 Schedule 11.1	Nine late status updates.	Moderate	Low	2	Identified
Management of "inactive" status	3.9	19 Schedule 11.1	ICP 0000123086TRFBA had an incorrect inactive status date applied.	Strong	Low	1	Identified
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	The "AD" (advanced metering) AN response code was applied for one ICP without advanced metering installed.	Strong	Low	1	Identified
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	Nine late CS files.	Strong	Low	1	Identified
Retailers must use same reading - standard switch	4.4	6(1) and 6A Schedule 11.3	One late AC file. The agreed switch reading was not applied for two transfer switches.	Moderate	Low	2	Identified
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	Switch event dates were earlier than the requested date for one switch.	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	The agreed switch read was not applied for one switch move. One RR request contained requested readings inconsistent with the HHR data.	Moderate	Low	2	Identified
Withdrawal of switch requests	4.15	17 and 18 Schedule 11.3	Four late withdrawal acknowledgements.	Strong	Low	1	Identified
Metering information	4.16	21 Schedule 11.3	One incorrect RR read was provided.	Strong	Low	1	Identified
Electricity supplied information provision to the reconciliation manager	11.3	15.7	The AV120 report does not consistently reflect the quantity billed for the period.	Moderate	Low	2	Identified
HHR aggregates information provision to the reconciliation manager	11.4	15.8	The HHR aggregates file does not contain electricity supplied information. Some submission inaccuracies were identified.	Strong	Low	1	Identified
Creation of submission information	12.2	15.4	Some late revision files were provided. Revisions are only provided where there is a material change to submission data.	Moderate	Low	2	Identified
Accuracy of submission information	12.7	15.12	Some late revision files were provided. Revisions are only provided where there is a material change to submission data. Some incorrect submission data was provided.	Moderate	Low	2	Identified
Future Risk Rating						22	

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
Relevant information	2.1	Distributed generation changes	Include a check for installation type B, generation capacity \neq 0 and fuel type \neq blank in the registry validation, to identify ICPs which may have distributed generation added.
Monitoring of new and ready ICPs	3.10	Monitoring of new and ready ICPs	A Registry List (type P) with proposed trader = GIVE and status = 000 and 999 should be run at least quarterly to identify ICPs which are at new or ready status. Any ICPs on the list should be followed up with the distributor as it is likely GIVE would have been selected in error.
Retailers must use same reading - standard switch	4.4	Replacement of agreed switch reads	Ensure that the agreed switch read is always applied, by not replacing switch reads with AMI data, unless an RR to change the switch read to match the AMI read is accepted.
Electronic meter readings and estimated readings	9.6	Validation of HHR data	I recommend that consumption validations should occur at ICP level to better identify potential issues.

ISSUES

Subject	Section	Description	Issue
Nil		Nil	

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

Current code exemptions were reviewed on the Electricity Authority website.

Audit commentary

There are no exemptions in place that are relevant to the scope of this audit.

1.2. Structure of Organisation

The structure of the organisation was provided.

1.3. Persons involved in this audit

Auditor:

Tara Gannon

Veritek Limited

Electricity Authority Approved Auditor

Paua personnel assisting in this audit were:

Name	Title
Mark Hughes	Managing Director

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

Paua receives HHR data from AMS as an MEP. There are no agents involved in the process.

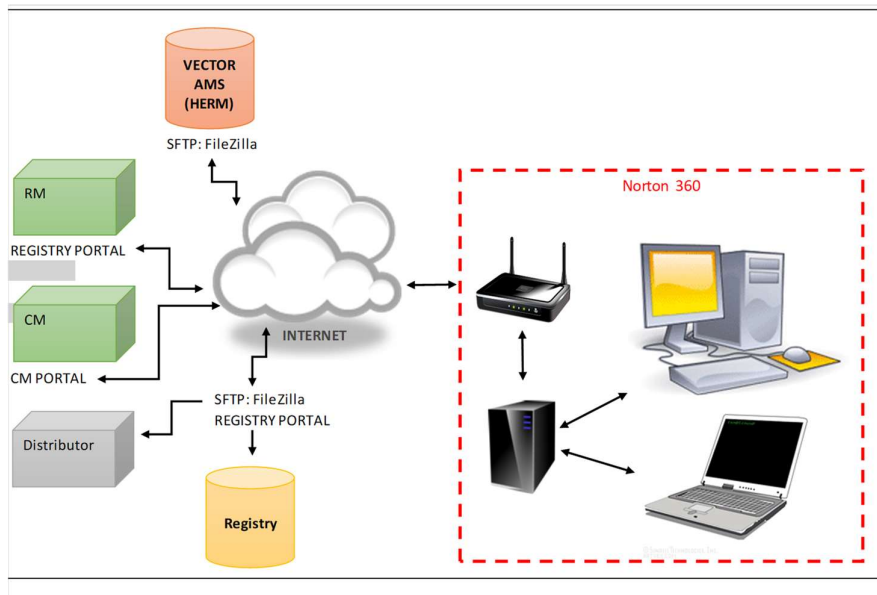
Audit commentary

Not applicable

1.5. Hardware and Software

Paua utilises the following software:

Task	Software	Notes
Security	Norton	Remote server has full security suite protection
SFTP/FTP	FileZilla	
Disaster Recovery	OneDrive	Simultaneous back up of the NAS (RAID1), PC and laptop. Daily and monthly backup to OneDrive.
CRM/Billing	Bespoke .Net Application frontend to SQL Server customer usage tables.	Back up to the Cloud occurs daily.



1.6. Breaches or Breach Allegations

There was one breach allegation recorded by the Electricity Authority between February and October 2018:

Reference	Code	Summary	Severity	Status	Result
1805GIVE1 28/06/18	Part 15 clause 15.4 (2)	Paua provided wash up files so late that the RM could not include them into the regular washup process.	low	closed	early closure

1.7. ICP Data

Paua provided a registry list as at 03/10/18. The active ICPs are summarised by meter category in the table below:

Metering Category	Number of ICPs (Oct 2018)	Number of ICPs (Jan 2018)	Number of ICPs (2016)
1	1,205	920	454
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
9	-	-	-

Status	Number of ICPs (Oct 2018)	Number of ICPs (Jan 2018)	Number of ICPs (2016)
Active (2,0)	1,205	920	454
Inactive – new connection in progress (1,12)	-	-	-
Inactive – electrically disconnected vacant property (1,4)	2	1	1
Inactive – electrically disconnected remotely by AMI meter (1,7)	6	4	1

Status	Number of ICPs (Oct 2018)	Number of ICPs (Jan 2018)	Number of ICPs (2016)
Inactive – electrically disconnected at pole fuse (1,8)	-	1	-
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	-
Inactive – electrically disconnected ready for decommissioning (1,6)	-	-	-
Inactive – reconciled elsewhere (1,5)	-	-	-
Decommissioned (3)	-	-	-

1.8. Authorisation Received

An authorisation letter was provided.

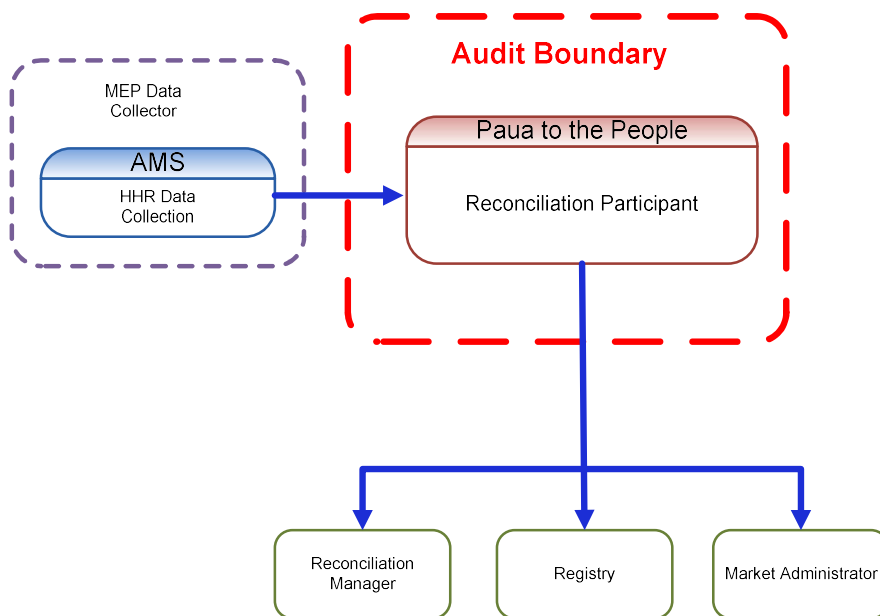
1.9. Scope of Audit

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

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

The audit was carried out at Paua’s premises in Wellington on 11 December 2018.

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



The table below shows the tasks under clause 15.38 of part 15 for which Paua requires certification. AMS provides AMI data as an MEP, not an agent.

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs Providing AMI data
(a) - Maintaining registry information and performing customer and embedded generator switching		
(b) – Gathering and storing raw meter data		AMS – HHR (AMI)
(c)(iii) - Creation and management of volume information		AMS – HHR (AMI)
(d) – Calculation of ICP days		
(da) - delivery of electricity supplied information under clause 15.7		
(db) - delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8		
(e) – Provision of submission information for reconciliation		

1.10. Summary of previous audit

Paua provided a copy of their previous audit (as Giving Energy) conducted in January 2018 by Tara Gannon of Veritek Limited. The summary tables below show the status of the non-compliances and recommendations raised in the previous audit. Further comment is made in the relevant sections of this report.

Subject	Section	Clause	Non compliance	Status
Relevant information	2.1	10.6, 11.2, 15.2	An incorrect NSP was temporarily recorded for one ICP.	Still existing
			An incorrect status was temporarily recorded for three ICPs.	Still existing
Changes to registry information	3.3	10 Schedule 11.1	Five late status updates.	Still existing
Management of inactive status	3.9	19 Schedule 11.1	One ICP had an incorrect status code applied.	Still existing, one ICP had an incorrect date applied
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	The "AA" (accept and acknowledge) was applied for one ICP with advanced metering installed.	Still existing
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	Two CS files contained incorrect readings.	Cleared, but non-compliance is recorded for some late files
Retailers must use same reading - standard switch	4.4	6(1) and 6A Schedule 11.3	The agreed switch read was not applied for three transfer switches.	Still existing
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	Switch event dates were earlier than the requested date for three switches.	Still existing

Subject	Section	Clause	Non compliance	Status
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	The agreed switch read was not applied for two switch moves. One RR request contained a requested reading inconsistent with the HHR data.	Cleared, these were issued under Clause 12(2) of schedule 11.3 and Paua's RR read should have been applied by both traders. Still existing
Withdrawal of switch requests	4.15	17 and 18 Schedule 11.3	One withdrawal acknowledgement was two business days late.	Still existing
Electronic meter readings and estimated readings	9.6	17 Schedule 15.2	Meter event reports were not reviewed prior to January 2018, but are now reviewed and actioned weekly.	Cleared
Calculation of ICP days	11.2	15.6	One NSP change was not processed from the correct date. Inactive ICP days are included in the ICP days submission.	Cleared
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information. Some data accuracy issues were identified. Paua's records have been updated, and the affected ICPs will be reported correctly on future submissions and revisions.	Still existing Still existing
Allocation of submission information	12.3	15.5	Volumes were temporarily recorded against an incorrect NSP because an NSP change was processed from an incorrect date.	Still existing
Accuracy of submission information	12.7	15.12	Some data accuracy issues were identified. Most have now been resolved.	Still existing

Subject	Section	Clause	Non compliance	Status
Provision of submission information to the RM	13.1	8 Schedule 15.3	Two ICPs temporarily had their data incorrectly aggregated.	Still existing

Subject	Section	Clause	Recommendation	Status
Retailers must use same reading	4.4	Replacement of agreed switch reads	Ensure that the agreed switch read is always applied, by not replacing switch reads with AMI data, unless an RR to change the switch read to match the AMI read is accepted.	Will be implemented as part of new system

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. A registry list report as at 03/10/18 was examined to confirm that all information was correct and not misleading, and to identify any registry discrepancies. The registry validation process was examined in detail in relation to the achievement of this requirement.

Audit commentary

Paua downloads an ICP List monthly and compares the ICP status, network, POC, loss factor, MEP, multiplier, and indicators of unmetered load to the data recorded in its system. Any discrepancies are investigated and corrected. Paua also completes a weekly status check.

Paua does not specifically check for the addition of distributed generation, and I recommend this is added to the registry validation. Paua does not accept customers with distributed generation. If generation capacity is added by the distributor for an existing ICP, Paua will notify the reconciliation manager that the energy is to be gifted.

Description	Recommendation	Audited party comment	Remedial action
Distributed generation changes	Include a check for installation type B, generation capacity \neq 0 and fuel type \neq blank in the registry validation, to identify ICPs which may have distributed generation added.	<p>Our new billing system will check for variances to the data held on the Registry for our ICPs daily so that we remain 100% in-sync. Any variation between the customer record and Registry will be flagged to an operator to fix within 24 hours.</p> <p>In addition, once we migrate to the new billing system, we will have the capability to bill and report on embedded generation so will be able to manage embedded generation for an ICP correctly.</p>	Identified

The registry list was reviewed, and found:

Issue	Oct 2018 Qty	Jan 2018 Qty	Comments
Blank ANZSIC codes	0	0	Compliant.
ANZSIC "T99" series	0	0	Compliant.
UML load = zero	0	0	Compliant, no unmetered load was identified.
Incorrect UML load	0	0	Compliant, no unmetered load was identified.
Shared unmetered load incorrect	0	0	Compliant, no unmetered load was identified.
ICPs with Distributor unmetered load populated but retail unmetered load is blank and UML flag = N	0	0	Compliant, no unmetered load was identified.
No MEP recorded or nominated and UML= "N"	0	0	Compliant, all ICPs have NGCM as MEP.
Active Category 9 and UML "N"	0	0	Compliant, all ICPs have metering category 1.
Incorrect profile	0	0	Compliant, all ICPs have HHR profile.
Incorrect submission type	0	0	Compliant, all ICPs have HHR submission type.
Incorrect status or status date	1	1	One ICP had an incorrect inactive status date applied. Refer to section 3.9 .

The four data discrepancies identified in the January 2018 audit have been resolved.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 10.6, 11.2, 15.2 From: 05-Jun-18 To: 10-Jun-18	ICP 0000123086TRFBA had an incorrect inactive status date applied. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1

Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong as they are sufficient to prevent the risk of incorrect data most of the time. The risk rating is low because only one ICP as affected, and it was a manual processing error.		
Actions taken to resolve the issue		Completion date	Remedial action status
The 5 days of missing data (6/6/2018 to 10/6/2018) have been added to our consumption database and will be included in future submissions. We propose to submit revised submission back to early 2018 once we have moved to our new billing system.		March 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Our new billing system will check for variances to the data held on the Registry for our ICPs daily so that we remain 100% in-sync. Any variation between the status of the ICP between the customer record and Registry will be flagged to an operator to fix within 24 hours. Because the Start and End dates will be in-sync it will highlight any inaccurate start dates and therefore any missing data.		February 2019	

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.

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

HHR AMI data is provided by AMS via SFTP.

To confirm the process, I traced volumes for one month for two HHR ICPs from the source data to Paua's system and the HHR aggregates submissions.

Audit commentary

Read and volume data is received from AMS via SFTP.

I traced volumes for July 2018 for two AMS ICPs from the source data to Paua's system and the HHR aggregates submission. The volumes matched the source data.

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

Audit trails were discussed and reviewed.

Audit commentary

Audit trails for meter reading and volume data are not available in Paua's system.

Read and volume data is imported into the system from HERM files provided by AMS and estimation files created by Paua. These source files are all available on Paua's network. Where data is estimated, workings files are retained with the source data.

Paua intends to ensure that compliant audit trails are available for their new system.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.4 With: Clause 21 Schedule 15.2 From: 01-Feb-18 To: 11-Dec-18	System audit trails are not compliant. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as moderate and the impact as low, because it is possible to trace information in the system to its source, and information on data modifications is available.		
Actions taken to resolve the issue		Completion date	Remedial action status
As part of the migration to our new billing system we propose to reload all data from raw AMS raw data files. Missing data estimates and HHR data modified to fit agreed switch reads will be reloaded with an appropriate audit trail.		February 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Our new Billing system will have comprehensive audit trails for all data sources, data modifications (including estimates) and operator ID.		February 2019	

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 Pua's current terms and conditions.

Audit commentary

Pua's Terms and Conditions include consent to access for authorised parties for the duration of the contract.

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 Pua's current terms and conditions.

Audit commentary

Pua's Terms and Conditions include consent to access for authorised parties for the duration of the contract. Pua confirmed that they have been able to arrange access for other parties when requested.

Audit outcome

Compliant

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:

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

Audit observation

The physical meter location point is not specifically mentioned in the terms and conditions, but the existing practices in the electricity industry achieve compliance.

Review of a registry list as at 03/10/18 confirmed that Paua do not supply any ICPs with metering category 2 or above.

Audit commentary

Paua only supplies ICPs with metering category 1, and does not deal with any installations with loss compensation.

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 Paua's current terms and conditions.

Audit commentary

Paua'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 1 or more metering installations for the point of connection.*

Audit observation

The new connection process was discussed.

The registry list as at 3/10/2018 and event detail report from 01/02/18 to 03/10/18 were examined to determine whether any new connections were completed during the audit period.

Audit commentary

Review of the registry list and event detail report confirmed that Paua has not completed any new connections during the audit period.

Paua does not intend to handle new connections, and ICPs must be connected before they will be accepted by Paua.

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 discussed.

The registry list as at 3/10/2018 and event detail report from 01/02/18 to 03/10/18 were examined to determine whether any new connections were completed during the audit period.

Audit commentary

No new connections were completed during the audit period, and no temporary connections were identified.

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 and reconnection processes were discussed.

The registry list as at 3/10/2018 and event detail report from 01/02/18 to 03/10/18 were examined to determine whether any new connections or reconnections were completed during the audit period.

Audit commentary

No new connections and 12 reconnections were completed during the audit period. The reconnected ICPs all had certified meters installed and Paua listed as the responsible retailer at the time of reconnection.

No bridged meters were identified during the audit period.

Audit outcome

Compliant

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, along with the application process.

The registry list as at 03/10/18 was examined to confirm the networks Paua trades on.

Audit commentary

Paua only trades on the Wellington Electricity network, and has a Use of System Agreement with Wellington Electricity.

Before an application is accepted, ICPs are checked on the registry to confirm the network is Wellington Electricity.

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 can be created or switched in was checked.

The registry list as at 03/10/18 was examined to confirm the MEPs for Paua's ICPs.

Audit commentary

All current Paua ICPs have AMS meters. Paua demonstrated that an arrangement is in place with AMS. Before an application is accepted, ICPs are checked on the registry to confirm the MEP is AMS.

During the audit period one ICP was supplied for one day with a Metrix meter. Arrangements were in place with Metrix, but Paua decided to switch out the ICP because further work was required before Metrix's file formats could be processed in their system.

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 connection process was discussed.

The registry list as at 03/10/2018 and event detail report from 01/02/18 to 03/10/18 were examined to determine whether any new connections were completed during the audit period.

Audit commentary

Paua does not intend to handle new connections. Review of the registry list and event detail report confirmed that Paua has not completed any new connections during the audit period.

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, disconnection, reconnection, MEP nomination, and switching processes were examined. This clause links directly to **sections 3.3** below, where findings on the timeliness of updates are recorded.

The event detail report for 01/02/18 to 03/10/18 was analysed in relation to updating of the registry.

Audit commentary

Paua's processes are designed to ensure that trader 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**. In this section I have examined the event detail report for 01/02/18 to 03/10/18 to confirm the timeliness of status and trader registry information updates.

All late updates were reviewed to determine why they were delayed.

Audit commentary

The event detail report was examined to confirm whether the registry is notified within five business days when information referred to in clause 9 of schedule 11.1 changes.

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Status updates						
Change to active (2,0)	2017	5	5	-	1	100.0%
	Jan 2018	11	8	3	35	72.7%
	Oct 2018	12	9	3	3.4	75.0%
Change to electrically disconnected vacant property (1,4)	Jan 2018	2	-	2	73	0.0%
	Oct 2018	2	1	1	7	50.0%

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Change to electrically disconnected remotely by AMI meter (1,7)	Jan 2018	15	15	-	1	100.0%
	Oct 2018	12	7	5	13	58.3%
Change to electrically disconnected at pole fuse (1,8)	Jan 2018	1	1	-	1	100.0%
	Oct 2018	-	-	-	-	-
Change to electrically disconnected at meter box switch (1,11)	Jan 2018	2	2	-	5	100.0%
	Oct 2018	-	-	-	-	-
Trader updates						
MEP nominations	Oct 2018	-	-	-	-	-
Trader updates (excluding MEP nominations and NT updates)	Oct 2018	-	-	-	-	-

The table above records that the Registry was not updated within five business days for:

- three of the 12 ICPs where the status had been updated to active;
- six of the 14 ICPs where the status had been updated to inactive.

All late status changes were reviewed. Late updates occurred for several reasons, including:

- a correction to status for an ICP which switched in with active status, but was disconnected;
- delays in receiving and processing disconnection and reconnection paperwork, status changes are processed when paperwork is received, and expected status changes are also checked for and updated at month end;
- status changes to inactive are sometimes delayed because Puaa waits to determine whether the ICP will be reconnected soon after disconnection.

The late updates are recorded as non-compliance below.

No MEP nominations, or trader updates other than NT updates occurred during the period. Puaa ensures that AMS is the MEP before switching ICPs in.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.3 With: Clause 10 Schedule 11.1 From: 23-Feb-18 To: 02-Oct-18	Nine late status updates. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are adequate to ensure that the registry is updated on time most of the time, but there is room for improvement. The risk is low as a small number of updates were affected.		
Actions taken to resolve the issue		Completion date	Remedial action status
The changes in status were picked up at the month end check of variances between the Registry and our systems which ensured that the reporting was correct even though the status change took more than 5 business days. No further action required.		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Our new billing system will check for variances to the data held on the Registry for our ICPs daily so that we remain 100% in-sync. Any variation between the status of the ICP between the customer record and Registry will be flagged to an operator to fix within 24 hours.		February 2019	

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)):*

- *arrange for a final interrogation to take place prior to or upon meter removal (clause 11.18(3)(a)); and*
- *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

Paua does not complete new connections. The registry list as at 03/10/18 and event detail report for 01/02/18 to 03/10/18 were examined to identify:

- any active ICPs that do not have an MEP recorded; and
- all MEP nominations.

ICP Decommissioning

The process for the decommissioning of ICPs was examined. Review of the event detail report for 01/02/18 to 03/10/18 confirmed that no ICPs were decommissioned during the audit period.

Audit commentary

Retailers Responsibility to Nominate and Record MEP in the Registry

Review of the registry list and event detail report confirmed all active ICPs have a valid MEP recorded in the registry, and no MEP nominations were made. Paua ensures that AMS is recorded as the MEP prior to switch in.

ICP Decommissioning

Review of the event detail report confirmed that no ICPs were decommissioned during the audit period. Paua is aware of their responsibility to notify the MEP where an ICP is decommissioned, and to obtain a final reading.

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 5 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 discussed.

The registry list as at 3/10/2018 and event detail report from 01/02/18 to 03/10/18 were examined to determine whether any new connections were completed during the audit period.

Audit commentary

Review of the registry list and event detail report confirmed that Paua has not completed any new connections during the audit period.

Paua does not intend to handle new connections, and ICPs must be connected before they will be accepted by Paua.

Audit outcome

Compliant

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 03/10/18 was reviewed to check ANZSIC codes were valid.

I checked a diverse sample of ten active ICPs (including all non-domestic ANZSIC codes) against Google street view data to confirm the correct ANZSIC code.

Audit commentary

ANZSIC codes are set based on information provided on the customer application.

Review of the registry list found all ICPs had a valid ANZSIC code. The sample of ten ANZSIC codes checked were found to be correct.

Audit outcome

Compliant

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 registry list for 01/02/18 to 03/10/18 was examined to identify any ICPs where:

- unmetered load is identified by the Distributor, but none is recorded by Paua
- unmetered load is present, but Paua's unmetered load figure doesn't match with the Distributor's figure.

Audit commentary

Paua only accepts applications from customers who do not have unmetered load connected. Review of the registry list confirmed that no unmetered load is recorded by the distributor or trader for any Paua ICP. Changes to unmetered load details are identified as part of the registry validation discussed in **section 2.1**.

Paua is developing procedures for unmetered load, in case any ICPs with unmetered load are supplied in the future.

Audit outcome

Compliant

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 process for status changes to "active" was discussed.

The event detail report for 01/02/18 to 03/10/18 was reviewed to identify all status changes to “active” during the audit period. A typical sample of five reconnected ICPs were checked using the typical characteristics methodology.

Processes to ensure there is only one active party per ICP, and that all active ICPs have an MEP were confirmed.

The findings in relation to the timeliness of updates to registry is recorded in **section 3.3**.

Audit commentary

Paua’s system will not allow more than one party per ICP, nor will it allow an ICP to be set up without both a meter and MEP.

Status changes are processed manually on the registry once paperwork is received. Weekly and monthly status matches between the registry and Paua’s system are completed as described in **section 2.1**. At month end, any ICPs where status changes are expected are checked to confirm whether their current status is still valid.

Paua has not completed any new connections. 12 ICPs had status changes to “active” during the audit period; all had final certified metering installations in place. I reviewed the status codes and reconnection dates for the sample of five reconnections, and confirmed that they had been applied appropriately.

Late registry updates to active are recorded as a non-compliance in **section 3.3**.

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

The process for status changes to inactive was discussed.

The event detail report for 01/02/18 to 03/10/18 was reviewed to identify all status changes to inactive during the audit period.

A typical sample of five ICPs at each inactive status (or all ICPs if less than five were available) were checked using the typical characteristics methodology.

The findings in relation to the timeliness of updates to registry is recorded in **section 3.3**.

Audit commentary

Status changes are processed manually on the registry once paperwork is received. Weekly and monthly status matches between the registry and Paua’s system are completed as described in **section 2.1**. At month end, any ICPs where status changes are expected are checked to confirm whether their current status is still valid.

14 ICPs were disconnected during the audit period. I reviewed the reason codes and disconnection dates for the sample of seven disconnections:

- for six disconnections, the dates and codes applied were correct;
- ICP 0000123086TRFBA was disconnected on 11/06/18, but the registry and Paua’s system recorded the disconnection on 05/06/18. Paua intends to update their system and the registry to reflect the correct date, and revised submission data will be provided.

Late registry updates are recorded as a non-compliance in **section 3.3**.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.9 With: Clause 19 Schedule 11.1 From: 05-Jun-18 To: 10-Jun-18	ICP 0000123086TRFBA had an incorrect inactive status date applied. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong as they are sufficient to prevent the risk of incorrect status dates or codes being applied most of the time. The risk rating is low as only one ICP was affected, and it was a manual processing error.		
Actions taken to resolve the issue		Completion date	Remedial action status
The 5 days of missing data (6/6/2018 to 10/6/2018) have been added to our consumption database and will be included in future submissions. We propose to submit revised submission back to early 2018 once we have moved to our new billing system.		March 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Our new billing system will check for variances to the data held on the Registry for our ICPs daily so that we remain 100% in-sync. Any variation between the status of the ICP between the customer record and Registry will be flagged to an operator to fix within 24 hours.		February 2019	

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 what process is in place to manage and respond to requests for information on ICPs at "new" or "ready" status, and how ICPs at "new" or "ready" status are monitored.

A registry list for 01/08/2016 to 03/10/2018 with Paua as the proposed trader and "new" or "ready" status was reviewed, to identify any ICPs at "new" or "ready" status for more than two years.

Audit commentary

Review of the registry list confirmed that no ICPs have had "new" or "ready" status.

Paua has not completed any new connections, and does not intend to. Paua intends to deal with any queries about "new" or "ready" ICPs from distributors on a case by case basis, and it is unlikely any of these requests will be received.

There is no regular monitoring of ICPs at "new" or "ready" status. I recommend that ICPs with "new" or "ready" status should be monitored periodically.

Description	Recommendation	Audited party comment	Remedial action
Monitoring of new and ready ICPs	A Registry List (type P) with proposed trader = GIVE and status = 000 and 999 should be run at least quarterly to identify ICPs which are at new or ready status. Any ICPs on the list should be followed up with the distributor as it is likely GIVE would have been selected in error.	Our new billing system will check for variances to the data held on the Registry for our ICPs daily so that we remain 100% in-sync. This is one of the attributes that we will check daily. Any variation between the customer record and Registry will be flagged to an operator to contact the appropriate distributor to request they fix the error.	Identified

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 2 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 Paua deem all conditions to be met.

A typical sample of five ICPs were checked to confirm that they were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

Paua'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.

Switch type is selected based on information provided by the customer on application. The customer is asked if they have recently moved into the property and their move in date as part of the application process. If they have not recently moved in, a transfer switch is requested.

The five NT files checked were sent within two business days of pre-conditions being cleared, and the correct switch type was selected.

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 01/02/18 to 03/10/18 was reviewed to:

- identify AN files issued by Paua during the period; and
- assess compliance with the setting of event dates requirement.

All AN response codes were reviewed to determine whether the codes had been correctly applied.

The switch breach report was examined for the audit period.

Audit commentary

AN timeliness

The switch breach report recorded five late AN files for transfer switches. All were checked and found not to be genuinely late.

AN content

Event dates set by the losing trader must be no more than 10 business days after receipt of an NT file. Over a 12 month period 50% of event dates must be within five business days. The event detail report was examined; there were no ICPs with switch dates greater than 10 business days, and 97.5% of switches had a proposed event date within five business days.

Total transfer switches	Total over 10 business days	Total within 10 business days	Total within 5 business days	% within 5 business days
118	0	118	115	97.5%

The January 2018 audit found some AN files had the AA (accept and acknowledge) code applied, when they should have had AD (advanced metering). I reviewed all transfer AN codes against the registry list information and found AD was applied for all transfer switches. In one case the incorrect response code was applied; 0000156037TRCD4 did not have an AMI meter but AD was applied. This is recorded as non-compliance below. The ICP switched out effective from the switch in date, which removed Paua's period of supply.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: Clauses 3 and 4 Schedule 11.3 From: 30-Sep-18 To: 30-Sep-18	The "AD" (advanced metering) AN response code was applied for one ICP without advanced metering installed. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong, and the risk is assessed as low. Only one exception was identified, and it was due to human error.		
Actions taken to resolve the issue		Completion date	Remedial action status
This was an operator data entry error.		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Our new billing system will automate AN switches ensuring that all are completed immediately the NT is received. Automation will also avoid data entry errors as it will apply the correct AN Code for the situation.		February 2019	

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 the period for 01/02/18 to 03/10/18 was reviewed to identify CS files issued by Paua. 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; and
- accuracy of average daily consumption (which is based on the last week’s consumption).

I checked the average daily consumption for all transfer CS files and did not identify any with daily consumption that was negative, zero or over 200 kWh per day.

The process to manage the sending of the CS file within five business days of the event date was examined, and the switch breach history report was reviewed to identify late CS files.

Audit commentary

CS timeliness

The switch breach report recorded 17 late transfer CS files. All were checked, and I found nine were genuinely sent late. One delay was caused by a backdated NT, and the other eight were between one and three business days late due to a delay in processing the files. Six of the eight occurred early in the audit period, during February 2018.

Paua intends to implement a new system which will automate the CS process, and help to ensure that CS files are consistently sent on time.

CS content

CS files are manually created on the registry using information from Paua’s system.

The Registry Functional Specification v22.21 states that average daily consumption within the CS file should be the average kWh per day for the last read period. Because Paua receives daily readings, estimated daily consumption is calculated as the average daily consumption over the last week that the ICP was supplied. While this is not technically consumption for the last read to read period, it provides a reasonable indication of the average daily consumption.

The content of five transfer CS files was examined, and found to be correct.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.3 With: Clause 5 Schedule 11.3 From: 03-Feb-18 To: 03-Oct-18	Nine late CS files. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1
Audit risk rating	Rationale for audit risk rating
Low	Controls are rated as strong as they are sufficient to ensure CS data is on time most of the time. One delay was caused by a backdated NT, and the other eight were between one and three business days late due to a delay in processing the files.

Actions taken to resolve the issue	Completion date	Remedial action status
CS switches have already been completed for all ICP concerned.	Completed	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
<p>We recently changed our switching policy and now complete the CS for the proposed date as soon as data is available for that date. Generally, this means that the CS is completed without the need to do an AN switch. Any MI switches are completed as soon as MEP data is available.</p> <p>Our new billing system will automate the CS switches. Paua will accept the proposed switch date from the gaining retailer unless it is an MI switch and the date does not match a leaving date we have from our customer. Where MI switch proposed dates are incompatible, they will be flagged to an operator to fix the last date of supply.</p> <p>The CS will be automatically completed as soon as actual data is received from the MEP for the last date of supply. ICP where no reads have been received but the CS is due will be flagged to an operator to review to either request data from the MEP or estimate the closing read and complete the CS.</p>	February 2019	

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 change requests was examined.

The event detail report for 01/02/18 to 03/10/18 was reviewed to identify all read change requests and acknowledgements during the audit period.

- Four RR files were issued to Paua by other traders for transfer switches. Three were accepted and one was rejected. I reviewed the rejected file to confirm the reasons for rejection were valid and confirm that Paua’s system reflected the outcome of the RR process, and the accepted files to confirm that Paua’s system reflected the outcome of the RR process.
- 93 RR files were issued by Paua for transfer switches. 90 were accepted and three were rejected. I reviewed six RR files issued by Paua including the three rejected files and three accepted files to confirm that the requests were supported by at least two actual readings, that the content of the files was accurate, and that Paua’s system reflected the outcome of the read change process.

The switch breach history report was reviewed to identify late RR and AC files.

Audit commentary

Application of CS readings

Paua only supplies ICPs with AMS advanced meters. Switch reads are compared to AMI readings received from AMS for new switch ins at least twice per week. Where the switch event reading differs from the AMI data, Paua issues a read change request as soon as possible. These read change requests normally meet the requirements of 6(2) and (3) Schedule 11.3, and are required to be accepted by the losing retailer.

Where a read change issued by Paua is rejected, Paua applies the agreed switch reading and estimates interval data. If actual AMI data is received later, this estimated data will be replaced and the agreed switch reading will not be applied. I repeat the last audit’s recommendation to ensure that agreed switch readings take precedence over AMI data. Paua intends to incorporate this change into their new system.

Description	Recommendation	Audited party comment	Remedial action
Replacement of agreed switch reads	Ensure that the agreed switch read is always applied, by not replacing switch reads with AMI data, unless an RR to change the switch read to match the AMI read is accepted.	Our current billing system allows the actual read to overwrite the agreed read so to minimise Paua supply an actual read for every CS where the read is different to the actual read by more than 1 kWh. Over the year we had three actual reads rejected. Going forward Paua’s new billing system to allow an operator to add (with appropriate audit trail) modified HHR data to an ICP that will sit alongside the actual data rather than be overwritten by the it. This will allow Paua to use the modified data for AV -090 and AV-140 reports and actual data for billing.	Identified

To confirm the process for CS readings where no RR was issued, I checked a sample of five transfer CS files with estimated readings where no RR had been issued. I found that the correct readings were applied.

RR

Paua does not always have the first “midnight reading” for time of switch in, but this is calculated by subtracting 48 half hour values from the midnight reading for the end of the first day. I consider this meets the requirement to “provide the losing trader with a switch event meter reading obtained from an interrogation of a certified metering installation ...”.

I checked the content of six read change requests for transfer switches and found it was accurate. All requests were appropriately supported by AMI data.

A sample of six read change requests issued by Paua for transfer switches were reviewed, including three rejected by the other retailer, and three accepted by the other retailer.

- All three accepted RRs and one invalidly rejected RR had the correct readings recorded in Paua’s system.
- For the two rejected RRs, actual AMI data had replaced the agreed switch readings. In total, the AMI data was 26 kWh higher than the agreed switch readings for the affected ICPs. This is recorded as non-compliance below.

Non-compliances identified in the previous audit were followed up:

- ICP 0000076842TR96A did not have the agreed switch reading applied, because the data was replaced with actual AMI data. The reads have not been corrected and the consumption has not been washed up, as the impact was only 4 kWh of under submission.
- ICP 0000084370TRBC5’s RR contained the reads for the day before the expected date. The reads have not been corrected and the consumption has not been washed up, as the impact was only 43 kWh of under submission.

AC

To confirm that Paua’s system reflected the outcome of the RR process, I checked:

- The only AC where Paua had rejected the other trader’s RR for a transfer switch, and found the RR was validly rejected, and the correct readings were recorded.
- All four ACs where Paua had accepted the other trader’s RR for a transfer switch, and found the correct reads were applied.

Timeliness of RR and AC files

The switch breach history report was examined, one late AC file was identified for a transfer switch. The file was delayed while Paua waited to receive AMI data to confirm whether the RR should be accepted or rejected. No late RR files were identified.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.4</p> <p>With: Clause 6(1) and 6A Schedule 11.3</p> <p>From: 18-Feb-18</p> <p>To: 09-Jun-18</p>	<p>One late AC file.</p> <p>The agreed switch reading was not applied for two transfer switches.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Twice</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
<p>Low</p>	<p>The controls are assessed to be moderate overall, because most of the time Paua will apply the same reading as the other trader. Where actual AMI readings are available but differ from the agreed switch reading, it is likely that Paua will not apply the agreed switch reading.</p> <p>The breach risk rating is low, as the total under reported was 26 kWh.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Following migration to the new billing system Paua will add new modified HHR data for the two ICP concerned which will sit alongside (rather than be over-written) by the actual data. Paua will then create submissions to align the reconciliation reports to the agreed reads.</p>		<p>March 2019</p>	<p>Identified</p>
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Paua will continue to maximise the use of actual reads for switches. To this end the new billing system will automate the RR switches (if there is a variance to the read supplied in the CS) sending them as soon as data is received by the MEP. A dashboard will also identify any AC rejections so that we can negotiate with the losing trader or add modified reads to align to an erroneous agreed read.</p> <p>Our new billing system will allow an operator to add new modified HHR data for the two ICP concerned which will sit alongside (rather than be over-written) by the actual data.</p> <p>The modified data will only be used for reconciliation reporting.</p>		<p>August 2018</p> <p>February 2019</p>	

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 event detail report for the period from 01/12/17-25/09/18 was reviewed to identify all read change requests and acknowledgements where clause 6(2) and (3) of schedule 11.3 applied.

Audit commentary

Other retailers cannot issue read change requests to Paua under clause 6(2) and (3) of schedule 11.3 because Paua is a HHR only trader.

Paua issued 149 read change requests where clause 6(2) and (3) of schedule 11.3 applied. Three were invalidly rejected by other traders, but one was accepted on reissue.

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

Audit commentary

Paua 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 Paua deem all conditions to be met.

A typical sample of five ICPs were checked to confirm that they were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

Paua’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.

Switch type is selected based on information provided by the customer on application. The customer is asked if they have recently moved into the property and their move in date as part of the application process

The five NT files checked were sent within two business days of pre-conditions being cleared, and the correct switch type was selected.

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

- 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 01/02/18 to 03/10/18 was reviewed to:

- identify AN files issued by Paua during the period; and
- assess compliance with the setting of event dates requirement.

All AN response codes were reviewed to determine whether they had been correctly applied.

The switch breach report was examined for the audit period.

Audit commentary

AN timeliness

The switch breach report recorded two late AN files for transfer switches. Both were checked and found not to be genuinely late.

AN content

All 124 switch move AN files were examined on the event detail report.

- All ANs had proposed event dates less than 10 business days after receipt of the NT.
- The AN for ICP 0000123560TR18A had a proposed event date before the gaining trader's proposed date. The customer moved in on 06/02/18 and the gaining trader requested a switch move event date of 08/02/18. Paua applied the earlier date to align with the correct move in date, and remove their period of supply. The other trader agreed to this and the switch was completed without a withdrawal being requested.

I reviewed all AN codes against the registry list information. I specifically checked whether the AA code was only used when none of the other codes were relevant. The correct AN codes were applied for all switch moves.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.8 With: Clause 10(1) Schedule 11.3 From: 06-Feb-18 To: 06-Feb-18	Switch event dates were earlier than the requested date for one switch. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1
Audit risk rating	Rationale for audit risk rating
Low	Controls are rated as strong. One instance of an early event date was identified, and the early date was for a valid reason. The impact is assessed as low, because the difference was two days and resulted in Paua's period of supply being removed.

Actions taken to resolve the issue	Completion date	Remedial action status
The breach was to clear Paua to the People from any supply as the customer changed their mind during the switch process and we were unable to get the gaining retailer to specify the correct date of supply.	Completed	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
The new billing system will automate AN and CS to switch the customer on the proposed switch date ensuring that reporting matches the expected days of supply.	February 2019	

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

An event detail report for 01/02/18 to 03/10/18 was reviewed to:

- identify AN files issued by Paua during the period; and
- assess compliance with the setting of event dates requirement.

Audit commentary

Switches were completed as required by this clause.

For one switch move, the proposed event date was before the losing trader's proposed date. This is recorded as non-compliance in **section 4.8**. The switch was completed using Paua's proposed event date, and a valid switch response code and final information were provided.

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 the period for 01/02/18 to 03/10/18 was reviewed to identify CS files issued by Paua. 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; and
- accuracy of average daily consumption (which is based on the last week's consumption).

I checked the average daily consumption for all switch move CS files and did not identify any with daily consumption that was negative or over 200 kWh per day. One CS file had daily average consumption of zero, and was checked.

The process to manage the sending of the CS file within five business days of the event date was examined, and the switch breach history report was reviewed to identify late CS files.

Audit commentary

CS timeliness

The switch breach report recorded 25 late CS files for switch moves. All were checked and found not to be genuinely late.

CS content

CS files are manually created on the registry using information from Paua's system.

The Registry Functional Specification v22.21 states that average daily consumption within the CS file should be the average kWh per day for the last read period. Because Paua receives daily readings, estimated daily consumption is calculated as the average daily consumption over the last week where the ICP was occupied in Paua's system. While this is not technically consumption for the last read to read period, it provides a reasonable indication of the average daily consumption. I identified one CS file contained an estimated daily kWh of zero, which I confirmed was correct.

The content of five switch move CS files was examined, and found to be correct.

Audit outcome

Compliant

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 change requests was examined.

The event detail report for 01/02/18 to 03/10/18 was reviewed to identify all read change requests and acknowledgements during the audit period.

- Four RR files were issued to Paua by other traders for switch moves. Three were accepted and one was rejected. I reviewed all four files to confirm that Paua's system reflected the outcome of the RR process, and the rejected file to confirm the reasons for rejection were valid.
- 93 RR files were issued by Paua for switch moves. 84 were accepted and nine were rejected. I reviewed ten RR files issued by Paua, including the all rejected files and one accepted file to confirm that the requests were supported by at least two actual readings, that the content of the files was accurate, and that Paua's system reflected the outcome of the read change process.

The switch breach history report was reviewed to identify late RR and AC files.

Audit commentary

The read recording and read renegotiation processes are the same for transfer switches and switch moves. These processes are discussed in **section 4.4**. In this section I have documented testing completed for switch moves to confirm the process and controls.

Application of CS readings

To confirm the process for CS readings where no RR was issued, I checked a sample of five switch move CS files with estimated readings where no RR had been issued. I found that the correct readings were applied.

RR

I checked the content of ten read change requests for switch moves and found it was accurate for nine requests. One RR request contained incorrect reads due to a data entry error, and was rejected by the other trader. All requests were appropriately supported by AMI data.

A sample of ten read change requests issued by Paua for switch moves relating to six ICPs were reviewed, including all files rejected by the other retailer, and one accepted by the other retailer.

- The accepted RR had the correct readings recorded in Paua's system.
- Eight of the rejected RRs had the correct reading recorded, including five validly rejected RR, one invalidly rejected RR, and two RRs where the difference was less than 200 kWh and the other trader had been notified of the gaining trader read. For the other rejected RR, the agreed switch reading was not recorded in Paua's system. In total, the AMI data was 481 kWh higher than the agreed switch readings for the affected ICPs. This is recorded as non-compliance below.

Non-compliances identified in the previous audit were followed up, and found to be compliant because the read Paua provided was within 200 kWh of the switch event read.

AC

To confirm that Paua's system recorded the correct outcome of the RR process, I checked:

- the only AC where Paua had rejected the other trader's RR for a switch move, and found the correct reads were applied and the RR was validly rejected;
- all three ACs where Paua had accepted the other trader's RR for a switch move, and found the correct reads were applied.

Timeliness of RR and AC files

The switch breach history report was examined, and one late AC file was identified for a switch move. The file was delayed while Paua waited for AMI data to confirm whether the RR should be accepted or rejected. No late RR files were identified.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.11 With: Clause 12 Schedule 11.3 From: 18-Feb-18 To: 17-Jul-18	The agreed switch read was not applied for one switch move. One RR request contained requested readings inconsistent with the HHR data. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are assessed to be moderate overall, because most of the time Paua will apply the same reading as the other trader. Where actual AMI readings are available but differ from the agreed switch reading, it is likely that Paua will not apply the agreed switch reading.</p> <p>The breach risk rating is low, as the total under reported was 481 kWh. The RR containing an incorrect reading was rejected.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Following migration to the new billing system Paua will add new modified HHR data for the ICP concerned which will sit alongside (rather than be over-written) by the actual data. Paua will then create submissions back to October 2017 to align the reconciliation reports to the agreed reads.</p>		March 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>The current billing system supports using actual data for RR switches and in 12 months only one ICP did not use the actual read. In this case the losing trader supplied an actual read that was almost 6 months before the switch date. Unfortunately, the MEP supplied actual data outside the 5-day threshold. Since this event Paua has upgraded our system to make AC rejections more visible to an operator.</p> <p>Going forward, Paua will continue to maximise the use of actual reads for switches. To this end the new billing system will automate the RR switches (if there is a variance to the read supplied in the CS) sending them as soon as data is received by the MEP. A dashboard will also identify any AC rejections so that we can negotiate with the losing trader or add modified reads to align to an erroneous agreed read.</p> <p>Our new billing system will also allow an operator to add new modified HHR data for the two ICP concerned which will sit alongside (rather than be over-written) by the actual data, to be used for reconciliation reporting.</p>		<p>August 2018</p> <p>February 2019</p>	

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

An event detail report for 01/02/18 to 03/10/18 was reviewed to determine whether any HH switches occurred during the period.

Audit commentary

No HH switches occurred 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

An event detail report for 01/02/18 to 03/10/18 was reviewed to determine whether any HH switches occurred during the period.

Audit commentary

No HH switches occurred 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

An event detail report for An event detail report for 01/02/18 to 03/10/18 was reviewed to determine whether any HH switches occurred during the period.

Audit commentary

No HH switches occurred 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)):*

- *the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and*
- *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 event detail report for 01/02/18 to 03/10/18 was reviewed to:

- identify all switch withdrawal requests (NWs) issued by Paua, the content of a sample of at least two ICPs for each withdrawal code (or all if less than two were available) were checked using the typical sampling methodology, as well as all withdrawal requests rejected by other traders;
- identify all switch withdrawal acknowledgements (AWs) issued by Paua - all eight AW rejections were reviewed;
- confirm timeliness of withdrawal requests, as this is not currently being identified in the switch breach report.

The switch breach report was checked for any late NW and AW files.

Audit commentary

29 NWs were issued by Paua, and five of those were rejected by the other trader. A sample of 11 RRs were checked, including all rejected files, and I found that they had correct withdrawal reasons recorded.

85 AW files were sent by Paua, and eight of those rejected the other trader's NW. The NW rejections were all checked and found to be valid.

The switch breach report recorded:

- six late AW files, four were genuinely late and were delayed while Paua obtained confirmation that the customer wished to switch out - all were one or two business days late;
- seven late NW files, but none were genuine, analysis of the event detail report confirmed no NWs were issued more than two calendar months after the switch date.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.15 With: Clauses 17 and 18 Schedule 11.3 From: 26-Jan-18 To: 23-Aug-18	Four late withdrawal acknowledgements. Potential impact: Low Actual impact: Low Audit history: Three times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong as they are sufficient to mitigate risk most of the time. Four AWs were sent one to two business days late.		
Actions taken to resolve the issue		Completion date	Remedial action status
No corrective action can be taken.		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
The new billing system will have a dashboard for all switching activity for GIVE. This will automatically update each day so potential breaches on responses can be avoided. In future if Paua to the People have not received a confirmation from customers we will complete the AW within the guidelines.		Early February 2019	

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.

Audit commentary

All meter readings used in the switching process are validated meter readings or permanent estimates.

I identified one RR file which contained incorrect readings, as discussed in **section 4.11**.

Paua’s policy regarding the management of meter reading expenses is compliant.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.16 With: Clause 21 Schedule 11.3 From: 27-May-18 To: 27-May-18	One incorrect RR read was provided. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as strong, as they are sufficient to ensure that the correct read is applied most of the time. The manual processes to create RR files can result in occasional data entry errors. The audit risk rating is low, because most reads provided are correctly applied. The RR containing an incorrect reading was rejected.		
Actions taken to resolve the issue		Completion date	Remedial action status
The RR Read was a data entry error and was correctly rejected by the losing trader.		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
The new system will automate the RR process so will eliminate the possibility of data entry errors. Where actual data is unavailable we accept the CS final read.		February 2019	

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.

Win-back processes were examined to determine whether they are compliant. The event detail report for 01/02/18 to 03/10/18 was analysed to identify all withdrawn switches with a CX code applied prior to the switch completion date for any switch save protected retailer.

Audit commentary

Paua has been a save protected retailer since 15/01/2015.

Paua emails the customers for ICPs requested by another retailer only to confirm that the switch request is valid, and if they have any comments on why they decided to switch. No win-back activity is initiated with lost customers.

The event detail report identified nine CX coded switch withdrawal requests; eight were sent after the switch event date and one was sent on the switch event date. The withdrawal request sent on the switch event date was at the request of another retailer to remove Paua's period of supply.

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

The process to identify and monitor unmetered load was discussed. The registry list for 01/02/18 to 03/10/18 was reviewed to identify all unmetered load.

Audit commentary

Paua does not supply any ICPs with shared unmetered load, and does not intend to. No ICPs with unmetered load were identified on the registry list.

Processes to prevent ICPs with unmetered load from switching in, and to monitor existing ICPs for addition of unmetered load are discussed in **section 3.7**.

Audit outcome

Compliant

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

The registry list for 01/02/18 to 03/10/18 was reviewed to identify all ICPs with unmetered load during the period, and assess compliance.

Audit commentary

Paua has not supplied any ICPs with unmetered load.

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

The registry list for 01/02/18 to 03/10/18 was reviewed to identify all ICPs with unmetered load during the period, and assess compliance.

Audit commentary

Paua has not supplied any ICPs with unmetered load.

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

The registry list for 01/02/18 to 03/10/18 was reviewed to identify all ICPs with unmetered load during the period, and assess compliance.

Audit commentary

Paua has not supplied any ICPs with distributed unmetered load, and does not intend to.

Audit outcome

Compliant

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 for distributed generation were reviewed. The registry list for 01/02/18 to 03/10/18 was reviewed to confirm whether Paua had supplied any ICPs with generation during the audit period.

Audit commentary

Metering installations installed

All active ICPs have an MEP, and at least one meter channel. No submission information is determined using subtraction.

No new connections were completed during the audit period.

Distributed Generation

Paua normally declines applications to supply customers with distributed generation.

ICP 1001153549CKC64 had distributed generation, and was supplied from 25/09/17 until it switched out on 24/05/18 because the customer agreed to gift their generated energy. During the previous audit, Paua confirmed that they had notified the reconciliation manager that they did not expect payment from the clearing manager for any electricity generated.

Bridged meters

Paua did not identify any examples of bridged meters during the audit period.

Audit outcome

Compliant

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 to confirm whether Paua is responsible for any GIPs.

Audit commentary

Review of the NSP table confirmed that Paua is not responsible for any GIPs.

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

The registry list for 01/02/18 to 03/10/18 was reviewed, to identify any ICPs with profiles that require certification of the control device.

Audit commentary

Examination of the list file found that Paua has only used the HHR profile, and control devices are not used for reconciliation purposes.

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.

Examples 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 MEP or customer. Upon identifying a possible defective meter, Paua raises a field services job to investigate.

Paua provided seven examples of potential defective meters during the audit period. All related to communication issues, and the MEP had either been notified, or notified Paua of the issue.

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

HHR AMI data is provided by AMS as an MEP. Interrogation requirements and clock synchronisation was reviewed as part of their MEP audit.

Audit commentary

Fulfilment of the interrogation systems requirements was examined as part of AMS' MEP audit, and found to be compliant.

Paua had not received notification of any clock synchronisation events outside the maximum permissible errors during the audit period.

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. No manual, customer, or photo reads are received.

Audit commentary

AMI data is provided by AMS as an MEP. Validated readings are derived from actual meter readings.

Audit outcome

Compliant

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR. Review of switch reads in **sections 4.3** and **4.10** confirmed that they are applied from the correct time.

Audit outcome

Compliant

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR, and this clause does not apply.

Audit outcome

Not applicable

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR, and this clause does not apply.

Audit outcome

Not applicable

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR, and this clause does not apply.

Audit outcome

Not applicable

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR, and this clause does not apply.

Audit outcome

Not applicable

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

HHR data is collected by AMS as a MEP, and compliance was assessed as part of their MEP audit.

Audit commentary

AMS is responsible for HHR data collection, and compliance is recorded in their audit report.

Audit outcome

Compliant

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

HHR data is collected by AMS as a MEP, and compliance was assessed as part of their MEP audit.

Audit commentary

AMS is responsible for HHR data collection, and compliance is recorded in their audit report.

Audit outcome

Compliant

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

HHR data is collected by AMS as a MEP, and compliance was assessed as part of their MEP audit.

Audit commentary

AMS is responsible for HHR interrogation log requirements, and compliance is recorded in their audit report.

Audit outcome

Compliant

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 $\pm 0.1\%$ (± 2 seconds).

Audit observation

Trading period duration was reviewed as part of AMS' MEP audit.

Audit commentary

Compliance with this clause is recorded in AMS' audit report. Clock synchronisation is discussed further in **section 6.5**.

Audit outcome

Compliant

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

Raw meter data is retained by AMS as a MEP, and compliance is assessed as part of their MEP audit.

Processes to archive and store raw meter data were reviewed.

Audit commentary

Compliance with this clause is recorded in AMS' audit report.

Access to modify readings is restricted through log on privileges, and audit trails are discussed in **section 2.4**.

Paua intends to retain meter reading data for over 48 months. I viewed the earliest meter readings recorded in Paua's system, which matched the switch in date for their earliest customer on 23/01/2015.

I traced volumes for one month for two AMS HHR ICPs from the source data to Paua's system and the HHR aggregates submissions for July 2018. The reads and volumes matched the source data. This confirmed that the reads had not been modified.

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

No non metering information is collected by Paua.

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR, and this clause does not apply.

Audit outcome

Not applicable

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

Processes for correction of HHR meter readings were reviewed.

Audit commentary

No examples of corrections were identified during the audit period, but estimates were created where data was missing. The estimation process is discussed in **section 9.4**.

If actual data becomes available after data has been estimated, it is automatically imported into Paua's system. Duplicate readings for the same trading period are detected through read reconciliations, completed weekly, monthly (for the previous month), and periodically for periods more than one month ago. If there is a duplicate for a trading period, the estimated readings are removed.

Where an NT request has been received for an ICP, Paua continues to import read data. Once the switch is completed, an end date is recorded. Paua identifies reads after the end date through the read reconciliation process, and then removes them. The raw reading data is retained.

Audit outcome

Compliant

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

The registry list for 01/02/18 to 03/10/18 was reviewed to identify any ICPs which require loss compensation.

Audit commentary

Paua has only supplied ICPs with metering category 1, and has not completed any new connections. No ICPs have required loss compensation.

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 **section 8.2**, which confirmed that raw meter data is not overwritten as part of the correction process.

Raw meter data is collected by AMS, and data retention was reviewed as part of their MEP audit.

Audit commentary

Raw meter data is held by the MEP. Pua only corrects working data. Audit trails are discussed in **section 2.4**.

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

The event detail report for 01/02/18 to 03/10/18 was reviewed to identify all CS and RR files provided to other participants during the audit period. The accuracy of readings provided in a sample of CS and RR files was checked 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 **sections 8.2 and 9.4.**

Audit commentary

Review of CS and RR content confirmed that switch reads were correctly labelled. Readings are clearly identified in Paua's systems.

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

Processes for derivation of volumes were discussed and observed.

Audit commentary

All reads are received from the MEP from the services interface, or via the switching process. Paua does not complete any manual readings, or accept customer or photo readings.

Where AMI readings are received, volumes are sourced from the AMI metering information. Where an estimated or switch reading is used, the HHR volumes are derived from actual readings or estimates.

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.

HHR data is collected by AMS as a MEP. Compliance was assessed as part of their MEP audit.

Audit commentary

AMS is responsible for HHR data collection, and this is reviewed as part of their audit. The MEP retains raw, unrounded data.

Meter reading data is recorded in Paua's system at 3 decimal places.

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

The HHR estimate process was examined, and a typical sample of five estimates were reviewed.

Audit commentary

Where actual data is unavailable by the time of submission, Paua generates estimates. Estimates are used mainly where there is a gap in data, such as a period of communications failure where data cannot be retrieved. If actual data becomes available later, it is loaded into the system, and the estimates are removed through the read reconciliation process described in **section 8.2**.

The process for estimation of missing data is set out below:

- once loaded, the files are checked for missing data;
- where missing data is detected an estimate is calculated and manually inserted (the estimate is calculated based on the best information available, and considers the surrounding data and similar periods);

- a record of any estimates made is maintained in the same location as the raw data files on the Paua Server; and
- by the 3rd business day of the following month a collation of the daily and HERM (Daily and Half Hour) metering data is transferred to the appropriate MySQL tables (part of the Paua CRM).

I reviewed five examples of estimates and found that Paua used reasonable endeavours to ensure that submitted information was within the percentage specified by the Authority in all cases.

Audit outcome

Compliant

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR, and this clause does not apply.

Audit outcome

Not applicable

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 0 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 the HHR data validation process, including meter event logs, and volume validation processes.

Validation of electronic readings was also reviewed as part of the AMS MEP audit.

Audit commentary

Electronic meter reading information is provided by AMS as an MEP, and data validation was reviewed as part of their MEP audit. Meters are interrogated regularly, and there is little risk that data can be overwritten. Data is held for a longer period at the meter and can be re-interrogated later if required.

Paua conducts checks for missing and invalid data.

Zero consumption usually occurs when the meter has been switched off, and is identified through the missing data processes.

Paua checks that consumption is in line with expected patterns at price plan level, as part of their weekly billing validations. Because AMI data is received for all ICPs and small number of customers supplied, this is usually sufficient to identify major anomalies, but I recommend that consumption should also be validated at ICP level.

Description	Recommendation	Audited party comment	Remedial action
Validation of HHR data	I recommend that consumption validations should occur at ICP level to better identify potential issues.	With the new billing system, we will compare the average daily consumption for every ICP for the period with the ICP's average daily consumption the previous period We also compare the consumption of customers 7 days prior to a meter event with the 7 days following the event to identify any with abnormal consumption following the meter event.	Identified

Paua receives meter event reports from AMS, which are loaded into their system and reviewed weekly. Paua works through the events and checks data before and after the event occurred to determine whether action is required. I stepped through this process for the November 2018 events.

Audit outcome

Compliant

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

Paua 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

Paua 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

Paua 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

Paua 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 period from 01/02/18 to 03/10/18 to confirm the profiles used.

Audit commentary

Paua only uses the HHR profile; buying and selling notifications are not required.

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 the ICP days submitted for August 2018 against the active ICP days recorded on the registry list for seven NSPs.

I reviewed variances for 13 months of GR100 reports.

Audit commentary

The process for the calculation of ICP days was examined by checking seven NSPs on the August 2018 ICP days submission, including three NSPs with some inactive days during the period. I found that ICP aggregation was correct for all NSPs checked.

The following table shows the ICP days difference between Paua’s database and the RM return file (GR100) for all available revisions for 13 months. Negative percentage figures indicate that the Paua’s ICP days are higher than those contained on the registry, and positive percentage figures indicate that the Paua’s ICP days are lower than those contained on the Registry. The differences appear small and reasonable.

Month	Ri	R1	R3	R7	R14
Aug 2017	-0.43%	-0.41%	-0.41%	-0.14%	-
Sep 2017	-0.41%	-0.41%	-0.28%	-0.17%	-
Oct 2017	-0.49%	-0.52%	-0.35%	-0.14%	-
Nov 2017	-0.44%	-0.27%	-0.17%	-0.17%	-
Dec 2017	-0.59%	-0.39%	-0.27%	-0.27%	-
Jan 2018	0.02%	-0.06%	-0.06%	-0.06%	-
Feb 2018	-0.07%	-0.05%	-0.06%	-0.06%	-
Mar 2018	0.06%	-0.04%	0.02%	-	-
Apr 2018	0.09%	0.13%	0.20%	-	-
May 2018	-0.09%	-0.09%	-0.09%	-	-
Jun 2018	0.26%	0.23%	0.00%	-	-
Jul 2018	0.24%	0.23%	-	-	-
Aug 2018	0.37%	0.35%	-	-	-

I checked six NSP level differences between the retailer and registry days and found that they all related to switch timing.

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.

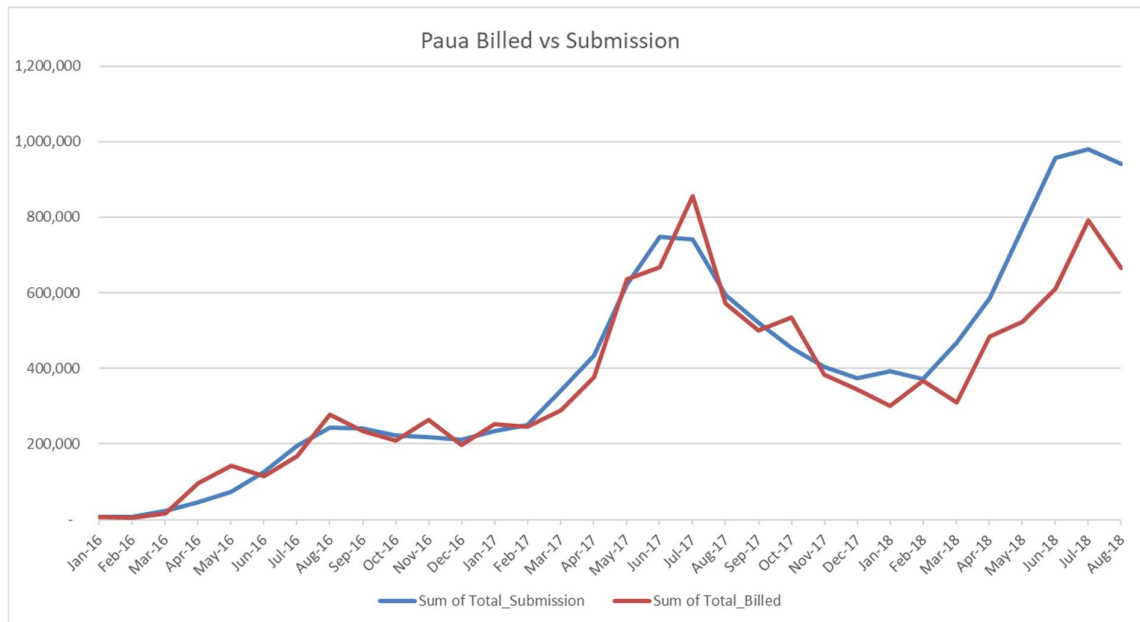
Audit observation

The process for the calculation of as billed volumes was examined.

GR130 reports for January 2016 to August 2018 were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

Audit commentary

The difference between the billed and submitted data has increased dramatically during the audit period, and was 24% for the year ended August 2018 (billed lower than submission), compared to 1.97% for the year ended Oct 2017.



Paua's customers are billed based on the same volumes as those used for reconciliation submissions. It is expected that billed and submitted data would be closely related, with some timing differences related to Paua's weekly billing cycle and customer acquisitions.

While the differences between billed and submitted data are not currently being reviewed, Paua believes the as billed report is inaccurate. It appears some billed consumption is being excluded following modification of the as billed report in early 2018. This is recorded as non-compliance below.

Paua intends to create a new, compliant as billed report as part of their new system.

Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 11.3 With: Clause 15.7 From: 01-Feb-18 To: 11-Dec-18	The AV120 report does not consistently reflect the quantity billed for the period. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2	
Audit risk rating	Rationale for audit risk rating	
Low	Controls are rated as moderate. There appear to be some issues with the report logic which are causing discrepancies. The impact is assessed to be low, because there is no impact on settlement.	
Actions taken to resolve the issue	Completion date	Remedial action status
We will redo submissions going back to early 2018 once Paua to the People has been moved to the new billing system.	Late February 2019	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
The new billing system will correct the current under-reporting error on AV120.	Early February 2019	

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

I confirmed that the process for the calculation and aggregation of HHR data is correct, by matching HHR aggregates information with the HHR volumes data for four submissions.

The GR090 ICP Missing files were examined for August 2017 to August 2018. An extreme case sample of the 12 ICPs with the most frequent ICP missing differences were reviewed.

Audit commentary

Paua's HHR aggregates report contains submission information, not electricity supplied information as specified under clause 15.8. Although the reports Paua produces are consistent with the Reconciliation Manager Functional Specification, this is recorded as non-compliance below.

I checked that the process for the calculation and aggregation of HHR data is correct, by:

- matching HHR aggregates information with the HHR volumes data for four submissions and compliance was confirmed, only very small rounding differences (0.4-15 kWh) were present;
- tracing volumes for July 2018 for a sample of two HHR ICPs from the source data to the HHR aggregates submissions, and found the volumes reported matched the source files.

I also reviewed Paua's volumes and aggregates for September and October 2018 for reasonableness, and did not find any evidence of under submission of volumes for these months.

The GR090 ICP Missing files were examined for all revisions for August 2017 to August 2018. An extreme case sample of the 12 ICPs with the most frequent ICP missing differences were reviewed and found to be caused by:

- backdated status updates, switches, or withdrawals - late switching files are discussed in **section 4** and late status updates are discussed in **section 3**;
- wash ups not consistently being provided unless there is a material difference which can cause omissions where an ICP switches in at the end of the month and is not included in the initial submission due to timing, or an estimate for missing data is not prepared prior to the initial submission, it can also cause over submission where a withdrawal is processed after the initial submission.

The three submission accuracy errors identified in the previous audit were rechecked:

Jan 2018 error	Dec 2018 findings
Injection volumes for 1001153549CKC64 were incorrectly classified as flow direction X for some submissions. Notification that energy was to be gifted was provided to the reconciliation manager.	Cleared. I confirmed that the ICP switched out in May 2018, and injection volumes were omitted for revision submissions.
An NSP change from HAY0331 to HAY0111 effective 10/10/17 for ICP 1001147041CK514 was not processed from the correct date, which resulted in volumes and aggregates being temporarily reported against an incorrect NSP.	Still existing. Paua's system has been corrected, but revision consumption has not been provided and the error remains. Revised data is expected to be provided once Paua migrates to their new billing system.
ICP 0000008330TRDC5 was moved to inactive status on 27/04/2017 in error, when it should have remained at active status.	Cleared.

	ICP 000008330TRDC5 has been corrected to active status, and has been included in revision submissions.
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Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.4 With: Clause 15.8 From: 01-Feb-18 To: 11-Dec 18	<p>The HHR aggregates file does not contain electricity supplied information.</p> <p>Some submission inaccuracies were identified:</p> <ul style="list-style-type: none"> ICPs 000008330TRDC5, 0000149021TR677 were missed from some submissions because their meters were not communicating and estimate data was not prepared in time for the initial submission. Revisions were not provided. ICPs 0000031564TRF4D, 0000179359TR311 and 0000055969TR8C2 were missed for the first part month they were supplied by Paua due to switch timing. Revisions were not provided. 000006150TR0F2 was withdrawn after the October 2017 initial submission but remained in revisions because revision data was not provided. <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Twice</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The issue relating to content of the aggregates file is an error in the code, Paua is providing submission information as expected.</p> <p>Paua has now scheduled revision submissions. The impact of the errors is expected to be low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
The Paua to the People HHR data warehouse will be reloaded from raw AMA files and as part of the loading process are enriched with a number of attributes (to match the Registry) like POC. Once the dataset has been completed with all missing data (based on registry held status start and end dates) we will resubmit reconciliation reports going back to September 2017.		March 2019	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
<p>Our new billing system will check for variances to the data held on the Registry for our ICPs daily so that we remain 100% in-sync. Any variation between start and end dates will be identified immediately and flagged to an operator to fix within 24 hours of the variance occurring.</p>	<p>February 2019</p>	

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 one of the techniques set out in clause 15.36(3) specified by the Authority.

Audit observation

Data processes for AMS were reviewed as part of their MEP audit. Submissions for periods with daylight savings changes were reviewed.

Audit commentary

Daylight savings processes for AMS were reviewed as part of their audit, and found to be compliant.

The “trading period run on” technique is used for daylight saving adjustment. This was confirmed by checking submission data for the beginning and end of daylight savings. The correct number of trading periods were recorded.

Audit outcome

Compliant

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

HHR submissions were checked in **section 11.4**, and correction processes were checked in **section 8.2**.

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

Audit commentary

The accuracy of the HHR aggregates and HHR volumes files is discussed in **section 11.4**.

Revision files are provided where data has changed materially since the previous revision. The code does not provide for a materiality limit, only that revised submission data should be provided where it has been obtained.

As described in **section 1.6**, an alleged breach was recorded for late submission of revision information. Steps have been taken to prevent recurrence, and the revision due date has been added to the monthly checklist.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.2 With: Clause 15.4 From: 28-Jun-18 To: 28-Jun-18	Some late revision files were provided. Revisions are only provided where there is a material change to submission data. 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 revision submissions are normally provided as required, but there is some room for improvement. The audit risk rating is assessed to be low, consistent with the Authority's findings on the alleged breach.		
Actions taken to resolve the issue		Completion date	Remedial action status
Revised submissions going back to October 2017 will be submitted in late February following migration to the new billing system.		March 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
The new billing system will automatically generate reconciliation reports (using the agreed reads). The system will check for any variance to the previous submitted report and alert an operator that reconciliation reports need to be uploaded to the RM Portal.		February 2019	

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.

Audit commentary

Paua has validation processes to ensure that aggregation factors and volumes reported are correct.

- Aggregation factor validation processes are discussed in **section 2.1**.
- Volume validation processes are discussed in **section 9.6**.

The previous audit identified an NSP change from HAY0331 to HAY0111 for ICP 1001147041CK514 which was not processed from the correct date, resulting in volumes and aggregates being reported against an incorrect NSP for some days in October and November 2017. Paua's system has been corrected, but revision consumption has not been provided and the error remains. This is recorded as non-compliance in **section 12.7**.

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

Review of the NSP table confirmed that Paua is not a grid owner.

Audit commentary

Review of the NSP table confirmed that Paua is not a grid owner, and is not required to submit grid owner volume information.

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

A registry list was reviewed to confirm Paua does not own any local or embedded networks.

Audit commentary

Paua is not required to provide NSP submission information.

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

Paua is not a grid connected generator, therefore 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

Processes to ensure the accuracy of submission information were reviewed, and the submission data itself was reviewed in **sections 11.2, 11.3 and 11.4**.

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

Audit commentary

HHR estimates are replaced with actual data where it is available, but revisions are not consistently submitted. There was one breach allegation recorded by the Electricity Authority between February and October 2018:

Reference	Code	Summary	Severity	Status	Result
1805GIVE1 28/06/18	Part 15 clause 15.4 (2)	Paua provided wash up files so late that the RM could not include them into the regular washup process.	low	closed	early closure

The following submission accuracy issues were identified:

As described in **section 11.4**, revisions are not provided unless there is a material change.

- ICPs 0000008330TRDC5, 0000149021TR677 were missed from some submissions because their meters were not communicating and estimate data was not prepared in time for the initial submission. Revisions were not provided.
- ICPs 0000031564TRF4D, 0000179359TR311 and 0000055969TR8C2 were missed for the first part month they were supplied by Paua due to switch timing. Revisions were not provided.
- 0000006150TR0F2 was withdrawn after the October 2017 initial submission, but revision data was not provided.
- The previous audit identified an NSP change from HAY0331 to HAY0111 for ICP 1001147041CK514 which was not processed from the correct date, resulting in volumes and aggregates being reported against an incorrect NSP for some days in October and November 2017. Paua's system has been corrected, but revision consumption has not been provided and the error remains.

As discussed in **sections 4.4 and 4.11**, where actual AMI data was available and different to the switch event reading, the agreed switch event reading was not applied.

- The agreed switch reading was not applied for two transfer switches. The total under reported was 26 kWh.

- The agreed switch read was not applied for one switch move. The total under reported was 481 kWh.

One ICP had an incorrect inactive date, resulting in some ICP days and consumption being omitted. ICP 0000123086TRFBA was disconnected on 11/06/18 but was recorded as disconnected in Paua’s system and on the registry on 05/06/18. Paua intends to update their system and the registry to reflect the correct date, and revised submission data will be provided.

Non-compliances identified during the previous audit were followed up.

- The non-compliance for incorrect recording of injection volumes for 1001153549CKC64 has been cleared, and the non-compliance for aggregating consumption against the incorrect NSP for 1001147041CK514 still remains because revision data has not been submitted.
- The non-compliances for not applying the agreed switch reading for three transfer switches and two switch moves still remain.
- Inactive ICP days are correctly excluded from the ICP days submission.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.7 With: Clause 15.12 From: 01-Feb-18 To: 11-Dec-18	Some late revision files were provided. Revisions are only provided where there is a material change to submission data. Some incorrect submission data was provided. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate because revision submissions are normally provided as required, but there is some room for improvement. The audit risk rating is assessed to be low, consistent with the Authority’s findings on the alleged breach. The impact of the incorrect data is assessed to be low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Revised submissions going back to October 2017 will be submitted in late February following migration to the new billing system.		March 2019	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
The new billing system will automatically generate reconciliation reports (using the agreed reads). The system will check for any variance to the previous submitted report and alert an operator that reconciliation reports need to be uploaded to the RM Portal.	February 2019	

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

Estimates are only applied where actual readings are not available, or estimate readings have been applied for switching purposes.

Due to the nature of the AMI read process it is highly unlikely reads that have not been able to be retrieved for the previous 14 months, would be retrieved after more than 14 months. Paua could not recall any ICPs where readings became available after revision 14; therefore all estimates were effectively permanent by revision 14.

Audit outcome

Compliant

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.

Audit commentary

Compliance with this clause was assessed:

- all Paua's ICPs have metering category 1, and are submitted as HHR;
- no ICPs with unmetered load are supplied;
- no profiles requiring a certified control device are used;
- no loss or compensation arrangements are required; and
- aggregation of the AV090 and AV140 reports is compliant.

Audit outcome

Compliant

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR, and this clause does not apply.

Audit outcome

Not applicable

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR, and this clause does not apply.

Audit outcome

Not applicable

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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR, and this clause does not apply.

Audit outcome

Not applicable

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 registry list for 01/02/18 to 03/10/18 was reviewed to identify all ICPs which had a profile change.

Audit commentary

No profile changes occurred during the period.

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

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

Aggregation of HHR volumes is discussed in **section 11.4**.

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; and
- consumption period.

Non-compliances identified during the previous audit were followed up. The non-compliance for incorrect recording of injection volumes for 1001153549CKC64 has been cleared, and the non-compliance for aggregating consumption against the incorrect NSP for 1001147041CK514 still remains because revision data has not been submitted. This is recorded as non-compliance in **section 12.7**.

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 four AV090 half hour volumes reports and four AV140 half hour aggregates reports to confirm how rounding occurs.

Audit commentary

Review of four AV090 and four AV140 reports confirmed that submission information is appropriately 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

Review of the registry list for 01/02/18 to 03/10/18 confirmed that all active ICPs had submission type HHR, and HHR or AMI metering installed.

Audit commentary

All ICPs have submission type HHR, and this clause does not apply.

Audit outcome

Not applicable

CONCLUSION

Paua supplies HHR AMI customers only, and relies on AMI reads provided by MEPS. Actual AMI data takes precedence in Paua's system, which can lead to agreed switch readings not being applied where they are inconsistent with the actual AMI data. Paua is developing a new system, which will prioritise switch reads and automate the switching process. A material change audit will be conducted for the new system prior to going live. The new system is expected to prevent or reduce recurrence of the switching non-compliances identified during this audit.

Paua's initial submission data is usually highly accurate, because it is based on AMI data. Revision data is not consistently provided unless the difference is considered to be material. This can cause omissions where an ICP switches in at the end of the month and is not included in the initial submission due to timing, or an estimate for missing data is not prepared prior to the initial submission. It can cause over submission where a withdrawal is processed after the initial submission. Revision submissions are now scheduled, and I recommend that revisions should be routinely completed regardless of whether the difference is material.

Improvements were made following the January 2018 audit, and the non-compliances relating to ICP days reporting and meter event reporting have been cleared.

This audit identified 14 non-compliances and makes four recommendations. The audit risk rating is 22, which results in an indicative audit frequency of 12 months. Taking into consideration Paua's comments, and that:

- A number of the non-compliances relate to minor data discrepancies or late updates affecting very small numbers of ICPs.
- Remedial status actions have been identified for all non-compliances and are in the process of being implemented.
- The implementation of Paua's new system is expected to resolve the non-compliances relating to switching and as billed reporting.

I recommend that the next audit period be at least 15 months, pending the outcome of the material change audit for Paua's new billing system.

PARTICIPANT RESPONSE

Paua to the People have continued to improve compliance over the past year. Once again, our compliance issues are largely several small operator errors caused by our billing system's largely manual procedures and processes. Of note is that seven of our breaches had only a single instance over the 12 months and these breaches generated 10 Breach Risk Rating points.

Going forward

In 2019 Paua to the People will be moving to a new purpose-built Billing System that is essentially a more robust and automated version of our current Billing and Customer Management System. Additional capability is being added to the new Billing System to address all current compliance issues and the recommendations made in this audit. A material change audit will be conducted for the new system before it goes live.

Specifically, the new system will improve compliance through;

- Automation of many of our manual processes which will ensure;
 - switches are completed on time
 - Remove data entry errors
 - Ensure that we only switch eligible ICP
- Increased visibility and automated alerts (eg. switching, status changes, unmetered supply) to ensure action is taken in a timelier fashion (variances identified daily)
- Daily syncing of ICP attributes to the Registry will;
 - Ensure our reporting is more accurate and that updates by other participants will be picked up and addressed sooner
 - Pick up variances between our system and the Registry;
 - Ensure that 100% of missing data is identified
- Fix the bug in the AV-120 report
- The ability to add modified HHR data to sit alongside actual HHR data to allow us to report using the agreed rather than actual opening read (where necessary) and bill using actual data
- Improved & automated formulation of reconciliation reports. The system will also identify when revisions are required and facilitate easier report compilation and submission
- Introduction of compliant and robust audit trails
- Additional verification checks for billing (at individual ICP level)