

ELECTRICITY INDUSTRY PARTICIPATION CODE  
RECONCILIATION PARTICIPANT AUDIT REPORT



For

PAUA TO THE PEOPLE LIMITED  
HIKO MATERIAL CHANGE

Prepared by: Tara Gannon

Date audit commenced: 18 September 2020

Date audit report completed: 6 November 2020

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## TABLE OF CONTENTS

Executive summary .....	5
Audit summary .....	6
Non-compliances .....	6
Recommendations .....	6
Issues .....	7
1. Administrative.....	8
1.1. Exemptions from Obligations to Comply with Code (Section 11) .....	8
1.2. Structure of Organisation .....	8
1.3. Persons involved in this audit.....	8
1.4. Use of Agents (Clause 15.34).....	8
1.5. Hardware and Software .....	9
1.6. Breaches or Breach Allegations.....	10
1.7. ICP Data .....	10
1.8. Authorisation Received .....	11
1.9. Scope of Audit .....	11
1.10. Summary of previous audit .....	13
1.11. Material Change audit requirement (clause 16A.11).....	16
2. Operational Infrastructure.....	17
2.1. Relevant information (Clause 10.6, 11.2, 15.2).....	17
2.2. Provision of information (Clause 15.35).....	19
2.3. Data transmission (Clause 20 Schedule 15.2) .....	19
2.4. Audit trails (Clause 21 Schedule 15.2).....	20
2.5. Retailer responsibility for electricity conveyed - participant obligations (Clause 10.4)..	20
2.6. Retailer responsibility for electricity conveyed - access to metering installations (Clause 10.7(2),(4),(5) and (6)) .....	21
2.7. Physical location of metering installations (Clause 10.35(1)&(2)).....	21
2.8. Trader contracts to permit assignment by the Authority (Clause 11.15B) .....	22
2.9. Connection of an ICP (Clause 10.32) .....	23
2.10. Temporary Electrical Connection of an ICP (Clause 10.33(1)).....	23
2.11. Electrical Connection of Point of Connection (Clause 10.33A) .....	24
2.12. Arrangements for line function services (Clause 11.16) .....	24
2.13. Arrangements for metering equipment provision (Clause 10.36).....	25
3. Maintaining registry information.....	26
3.1. Obtaining ICP identifiers (Clause 11.3).....	26
3.2. Providing registry information (Clause 11.7(2)).....	26
3.3. Changes to registry information (Clause 10 Schedule 11.1) .....	27
3.4. Trader responsibility for an ICP (Clause 11.18) .....	27
3.5. Provision of information to the registry manager (Clause 9 Schedule 11.1) .....	28
3.6. ANZSIC codes (Clause 9 (1(k) of Schedule 11.1).....	29
3.7. Changes to unmetered load (Clause 9(1)(f) of Schedule 11.1) .....	29
3.8. Management of “active” status (Clause 17 Schedule 11.1).....	30
3.9. Management of “inactive” status (Clause 19 Schedule 11.1).....	31
3.10. ICPs at new or ready status for 24 months (Clause 15 Schedule 11.1).....	31
4. Performing customer and embedded generator switching.....	33

4.1.	Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3)..	33
4.2.	Losing trader response to switch request and event dates - standard switch (Clauses 3 and 4 Schedule 11.3) .....	33
4.3.	Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3)	34
4.4.	Retailers must use same reading - standard switch (Clause 6(1) and 6A Schedule 11.3)	36
4.5.	Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3) .....	37
4.6.	Disputes - standard switch (Clause 7 Schedule 11.3) .....	37
4.7.	Gaining trader informs registry of switch request - switch move (Clause 9 Schedule 11.3) .....	37
4.8.	Losing trader provides information - switch move (Clause 10(1) Schedule 11.3) .....	38
4.9.	Losing trader determines a different date - switch move (Clause 10(2) Schedule 11.3)	39
4.10.	Losing trader must provide final information - switch move (Clause 11 Schedule 11.3)	40
4.11.	Gaining trader changes to switch meter reading - switch move (Clause 12 Schedule 11.3) .....	40
4.12.	Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3) .....	42
4.13.	Losing trader provision of information - gaining trader switch (Clause 15 Schedule 11.3)	43
4.14.	Gaining trader to advise the registry manager - gaining trader switch (Clause 16 Schedule 11.3) .....	43
4.15.	Withdrawal of switch requests (Clauses 17 and 18 Schedule 11.3) .....	44
4.16.	Metering information (Clause 21 Schedule 11.3) .....	45
4.17.	Switch protection (Clause 1(a)&(b) of Part 1 and 11.15AA to 11.15AC of Part 11) .....	45
5.	Maintenance of unmetered load .....	46
5.1.	Maintaining shared unmetered load (Clause 11.14) .....	46
5.2.	Unmetered threshold (Clause 10.14 (2)(b)) .....	46
5.3.	Unmetered threshold exceeded (Clause 10.14 (5)) .....	47
5.4.	Distributed unmetered load (Clause 11 Schedule 15.3, Clause 15.37B) .....	47
6.	Gathering raw meter data .....	49
6.1.	Electricity conveyed & notification by embedded generators (Clause 10.13, Clause 10.24 and 15.13) .....	49
6.2.	Responsibility for metering at GIP (Clause 10.26 (6), (7) and (8)) .....	49
6.3.	Certification of control devices (Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3)	50
6.4.	Reporting of defective metering installations (Clause 10.43(2) and (3)) .....	50
6.5.	Collection of information by certified reconciliation participant (Clause 2 Schedule 15.2)	51
6.6.	Derivation of meter readings (Clause 3(1), 3(2) and 5 Schedule 15.2) .....	52
6.7.	NHH meter reading application (Clause 6 Schedule 15.2) .....	52
6.8.	Interrogate meters once (Clause 7(1) and (2) Schedule 15.2) .....	53
6.9.	NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2) .....	53
6.10.	NHH meters 90% read rate (Clause 9(1) and (2) Schedule 15.2) .....	54
6.11.	NHH meter interrogation log (Clause 10 Schedule 15.2) .....	54
6.12.	HHR data collection (Clause 11(1) Schedule 15.2) .....	55
6.13.	HHR interrogation data requirement (Clause 11(2) Schedule 15.2) .....	55
6.14.	HHR interrogation log requirements (Clause 11(3) Schedule 15.2) .....	56
7.	Storing raw meter data .....	57
7.1.	Trading period duration (Clause 13 Schedule 15.2) .....	57
7.2.	Archiving and storage of raw meter data (Clause 18 Schedule 15.2) .....	57
7.3.	Non metering information collected / archived (Clause 21(5) Schedule 15.2) .....	58

8.	Creating and managing (including validating, estimating, storing, correcting and archiving) volume information.....	59
8.1.	Correction of NHH meter readings (Clause 19(1) Schedule 15.2).....	59
8.2.	Correction of HHR metering information (Clause 19(2) Schedule 15.2).....	59
8.3.	Error and loss compensation arrangements (Clause 19(3) Schedule 15.2) .....	60
8.4.	Correction of HHR and NHH raw meter data (Clause 19(4) and (5) Schedule 15.2) .....	61
9.	Estimating and validating volume information.....	62
9.1.	Identification of readings (Clause 3(3) Schedule 15.2).....	62
9.2.	Derivation of volume information (Clause 3(4) Schedule 15.2) .....	62
9.3.	Meter data used to derive volume information (Clause 3(5) Schedule 15.2).....	63
9.4.	Half hour estimates (Clause 15 Schedule 15.2).....	63
9.5.	NHH metering information data validation (Clause 16 Schedule 15.2) .....	64
9.6.	Electronic meter readings and estimated readings (Clause 17 Schedule 15.2) .....	64
10.	Provision of metering information to the GRID OWNER in accordance with subpart 4 of Part 13 (clause 15.38(1)(f)) .....	66
10.1.	Generators to provide HHR metering information (Clause 13.136) .....	66
10.2.	Unoffered & intermittent generation provision of metering information (Clause 13.137).....	66
10.3.	Loss adjustment of HHR metering information (Clause 13.138).....	67
10.4.	Notification of the provision of HHR metering information (Clause 13.140) .....	67
11.	Provision of submission information for reconciliation.....	68
11.1.	Buying and selling notifications (Clause 15.3) .....	68
11.2.	Calculation of ICP days (Clause 15.6) .....	68
11.3.	Electricity supplied information provision to the reconciliation manager (Clause 15.7) .....	69
11.4.	HHR aggregates information provision to the reconciliation manager (Clause 15.8) ....	69
12.	Submission computation .....	71
12.1.	Daylight saving adjustment (Clause 15.36) .....	71
12.2.	Creation of submission information (Clause 15.4) .....	71
12.3.	Allocation of submission information (Clause 15.5) .....	72
12.4.	Grid owner volumes information (Clause 15.9) .....	73
12.5.	Provision of NSP submission information (Clause 15.10) .....	73
12.6.	Grid connected generation (Clause 15.11).....	74
12.7.	Accuracy of submission information (Clause 15.12) .....	74
12.8.	Permanence of meter readings for reconciliation (Clause 4 Schedule 15.2).....	75
12.9.	Reconciliation participants to prepare information (Clause 2 Schedule 15.3) .....	75
12.10.	Historical estimates and forward estimates (Clause 3 Schedule 15.3).....	76
12.11.	Historical estimate process (Clause 4 and 5 Schedule 15.3) .....	77
12.12.	Forward estimate process (Clause 6 Schedule 15.3) .....	77
12.13.	Compulsory meter reading after profile change (Clause 7 Schedule 15.3).....	78
13.	Submission format and timing .....	79
13.1.	Provision of submission information to the RM (Clause 8 Schedule 15.3) .....	79
13.2.	Reporting resolution (Clause 9 Schedule 15.3) .....	80
13.3.	Historical estimate reporting to RM (Clause 10 Schedule 15.3) .....	80
	Conclusion .....	82
	Participant response .....	83

## EXECUTIVE SUMMARY

**Paua to the People Limited (Paua)** intends to migrate from its existing database to the HIKO database, which has been developed by Paua. HIKO will hold all of Paua's customer, ICP, and meter data. HIKO will import and export registry information including switching files, process metering information, and generate submission files for the reconciliation manager.

HIKO is currently being used for customer management and billing, and Paua continues to use its pre FOXworks system for reconciliation. Switching files are manually processed on the registry.

Clause 8(1) of Schedule 15.1 requires that if a reconciliation participant intends to make a "material" change to any certified facilities, processes or procedures then the changes must be subject to an audit prior to the change taking place. This audit was therefore performed at the request of **Paua** so that it can be supplied to the Electricity Authority to satisfy the requirements of Clause 8(1).

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.2. The test system was examined to determine compliance of the file preparation processes.

There is one technical non-compliance relating to the content of the HHR aggregates file.

I have recommended that some further testing is conducted prior to going live, including on the meter replacement process and the revised CS generation process. I also recommended that ICPs with "new" or "ready" status are periodically reviewed to identify any new ICPs assigned to Paua in error by distributors.

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
HHR aggregates information provision to the reconciliation manager	11.4	15.4	The HHR aggregates file does not contain electricity supplied information.	Strong	Low	1	Identified
Future Risk Rating						1	

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	Meter replacement process testing	I recommend testing the meter replacement process prior to going live.
ICPs at new or ready status for 24 months	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 have been at "new" or "ready" status for more than 18 months and require follow up.
Losing trader must provide final information - standard switch	4.3	Complete more comprehensive testing of the revised CS generation process prior to going live	<p>I recommend that some further testing of the revised CS logic is completed prior to going live, including:</p> <ol style="list-style-type: none"> <li>1. Testing to ensure the last actual read date is correctly recorded where there are actual reads after the period of supply, and where the ICP switched on an actual reading.</li> <li>2. Testing to ensure that the estimated daily kWh is the average daily consumption between the last two actual readings where there are two actual readings available, or consistent with the incoming CS file where there are not two actual readings available. I recommend further testing of scenarios where there are days with missing readings between the last</li> </ol>

Subject	Section	Description	Recommendation
			two actual readings, only one actual reading is present, and no actual readings are present.

#### 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

Any agents used by Paua were identified and their agent reports assessed as a part of this audit.



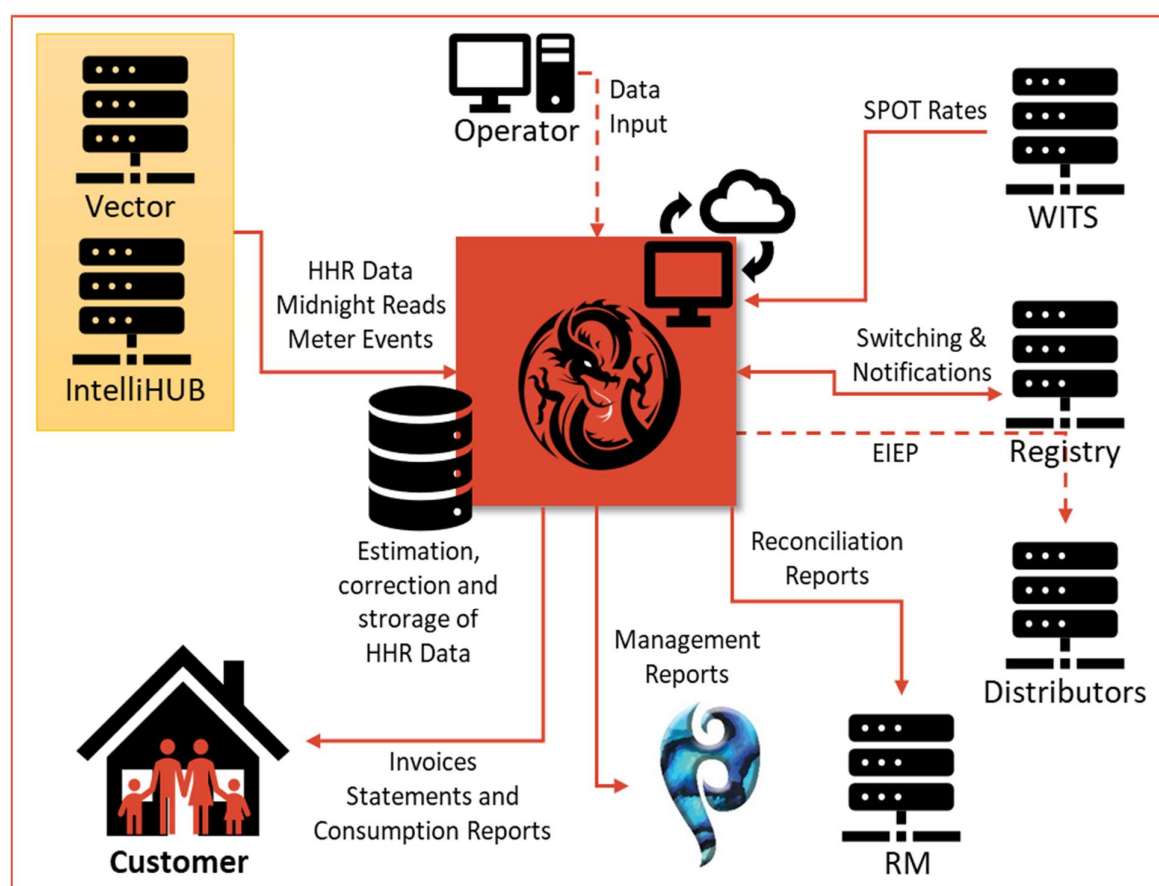
### Audit commentary

Paua receives HHR data from AMS (NGCM) and IntelliHUB Limited (MTRX) as MEPs. MTRX also provides estimates where data is missing and Paua will use these. This data is provided as an agent to Paua, and the IntelliHUB Limited agent report will be submitted with this audit.

### 1.5. Hardware and Software

Paua intends to migrate from its existing database to the HIKO database, which has been developed by Paua. HIKO will hold all of Paua's customer, ICP, and meter data. HIKO will import and export registry information including switching files, process metering information, and generate submission files for the reconciliation manager.

HIKO will interact with other systems and participants as shown below:



Paua utilises the following software:

Task	Software	Notes
Security	Norton	Remote server has full security suite protection.
SFTP	winSCP	
Disaster Recovery	OneDrive	Simultaneous back up of the NAS (RAID1), PC and laptop. Weekly backup to OneDrive.

Task	Software	Notes
CRM/Billing	HIKO application and SQL Server database	<p>The database is backed up weekly. Backups will be completed nightly when activity increases.</p> <p>Access to HIKO is restricted using Windows authentication.</p> <p>Paua confirmed that the disaster recovery and system restore processes have been tested.</p>

#### 1.6. Breaches or Breach Allegations

There was one breach allegation recorded by the Electricity Authority between April 2020 and September 2020:

Reference	Code	Summary	Severity	Status	Result
2005GIVE1	Part 15 clause 15.4(2)	On business day 13, the reconciliation manager noticed GIVE had yet to submit any revised data for washups.	low	closed	early closure

This is discussed in **section 12.2**.

#### 1.7. ICP Data

Paua's active ICPs are summarised by meter category in the table below:

Metering Category	Number of ICPs (Sep 2020)	Number of ICPs (Apr 2020)	Number of ICPs (Oct 2018)	Number of ICPs (Jan 2018)
1	519	577	1,205	920
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
9	-	-	-	-

Paua's ICPs are summarised by status in the table below:

Status	Number of ICPs (Sep 2020)	Number of ICPs (Apr 2020)	Number of ICPs (Oct 2018)	Number of ICPs (Jan 2018)
Active (2,0)	517	576	1,205	920
Inactive – new connection in progress (1,12)	-	-	-	-

Status	Number of ICPs (Sep 2020)	Number of ICPs (Apr 2020)	Number of ICPs (Oct 2018)	Number of ICPs (Jan 2018)
Inactive – electrically disconnected vacant property (1,4)	1	-	2	1
Inactive – electrically disconnected remotely by AMI meter (1,7)	1	1	6	4
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 email was provided.

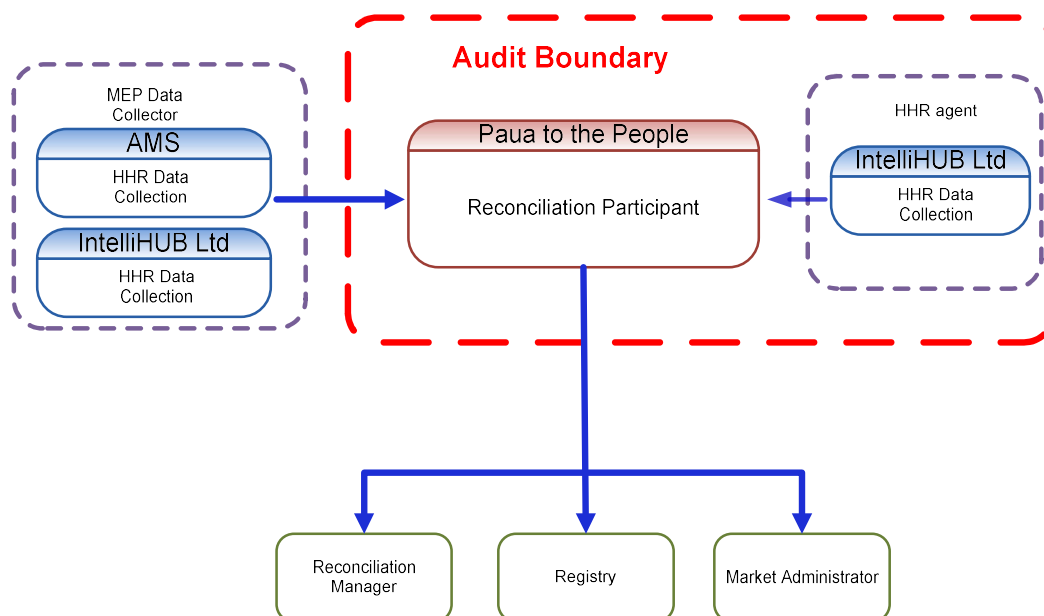
#### 1.9. Scope of Audit

Paua intends to migrate from its existing database to the HIKO database, which has been developed by Paua. HIKO will hold all of Paua's customer, ICP, and meter data. HIKO will import and export registry information including switching files, process metering information, and generate submission files for the reconciliation manager.

HIKO is currently being used for customer management and billing, and Paua continues to use its pre FOXworks system for reconciliation. Switching files are manually processed on the registry.

Clause 8(1) of Schedule 15.1 requires that if a reconciliation participant intends to make a "material" change to any certified facilities, processes or procedures then the changes must be subject to an audit prior to the change taking place. This audit was therefore performed at the request of **Paua** so that it can be supplied to the Electricity Authority to satisfy the requirements of Clause 8(1).

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.2.  
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 and IntelliHUB Ltd (MTRX) provide AMI data as MEPS. IntelliHUB Ltd also provides estimated data as an agent to Paua, and their audit report is expected to be submitted with this audit report.

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) MTRX- HHR (AMI)
(c)(iii) - Creation and management of volume information	MTRX- estimation of missing HHR data	AMS – HHR (AMI) MTRX- 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		

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs Providing AMI data
(e) – Provision of submission information for reconciliation		

#### 1.10. Summary of previous audit

Paua provided a copy of their previous audit conducted in May 2020 by Rebecca Elliot 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.

#### Table of non-compliance

Subject	Section	Clause	Non compliance	Status
Material audit change request	1.11	16A.11	Material change audit not undertaken for system change that affected Paua's ability to comply with the code.	Cleared.
Relevant information	2.1	10.6, 11.2, 15.2	ICP 0000123086TRFBA had an incorrect inactive status date not corrected from the last audit.  CS file content incorrect for one ICP.  Four RR requests contained requested readings inconsistent with the HHR data.  Some revision files were not provided within the 14-month revision period resulting in corrections not being settled in the market.  Three ICPs submitted against the incorrect NSP.	The non-compliances are cleared, or expected to be cleared with the implementation of HIKO.
Provision of information	2.2	15.35	Information was not provided as required by the code to meet the revision cycle causing corrections to not be settled to the market.	Cleared, data for all revisions is expected to be provided for HIKO
Changes to registry information	3.3	10 Schedule 11.1	Ten late status updates.	Expected to be cleared with the implementation of HIKO.
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	Six late AN files.	Expected to be cleared with the implementation of HIKO.

Subject	Section	Clause	Non compliance	Status
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	58 late CS files. CS file content incorrect for one ICP.	Expected to be cleared with the implementation of HIKO.
Retailers must use same reading - standard switch	4.4	6(1) and 6A Schedule 11.3	One late RR file.	Expected to be cleared with the implementation of HIKO.
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	Two incorrect AN codes send – AD was sent when the PD code was more accurate. No AN file sent for 175 AN switches.	Expected to be cleared with the implementation of HIKO.
Losing trader must provide final information - switch move	4.10	11 Schedule 11.3	CS file content incorrect for three ICPs (one ICP had both the incorrect average daily consumption and an incorrect estimate) checked.	Expected to be cleared with the implementation of HIKO.
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	Four RR requests contained requested readings inconsistent with the HHR data.	Expected to be cleared with the implementation of HIKO.
Withdrawal of switch requests	4.15	17 and 18 Schedule 11.3	One incorrect NW code. One late withdrawal acknowledgement.	Expected to be cleared with the implementation of HIKO.
Metering information	4.16	21 Schedule 11.3	Two CS files with incorrect estimated reads. Four incorrect RR reads were provided.	Expected to be cleared with the implementation of HIKO.
Correction of HHR metering information	8.2	19(2) of Schedule 15.2	Corrections not materially similar to the period with missing data.	Expected to be cleared with the implementation of HIKO.
HHR Estimation	9.4	15 of Schedule 15.2	Estimations did not meet reasonable endeavours.	Expected to be cleared with the implementation of HIKO.

Subject	Section	Clause	Non compliance	Status
ICP days	11.2	15.6	Inaccurate ICP days were reported for a small number of ICPs due to NSP changes not being processed correctly.	Cleared.
HHR aggregates information provision to the reconciliation manager	11.4	15.8	The HHR aggregates file does not contain electricity supplied information.  Three ICPs reconciled to the incorrect NSP.  Some submission inaccuracies were identified which have not been submitted within the 14-month revision cycle resulting in corrections not being settled to the market.	Still existing.  Cleared.  Cleared, data for all revisions is expected to be provided for HIKO
Creation of submission information	12.2	15.4	One late submission file was provided in June 2019 for May 2019 Ri.  Revisions not routinely being submitted.  Some submission inaccuracies were identified which have not been submitted within the 14-month revision cycle resulting in corrections not being settled to the market.	Expected to be cleared with the implementation of HIKO.
Allocation of submission information	12.3	15.5	Three ICPs submitted against the incorrect NSP.	Cleared.
Accuracy of submission information	12.7	15.12	Some late revision files were provided.  Some revision files were not provided within the 14-month revision period resulting in corrections not being settled in the market.  Some incorrect submission data was provided.	Expected to be cleared with the implementation of HIKO.
Provision of submission information to the RM	13.1	8 Schedule 15.3	Three ICPs reconciled to the incorrect NSP.	Cleared.

**Table of Recommendations**

Subject	Section	Clause	Recommendation	Status
Relevant information	2.1	Unmetered load changes	Include a check for unmetered load recorded by the Distributor.	Adopted.
Calculation of ICP days	11.2	ICP Missing	Review ICP missing report regularly.	Adopted.

#### 1.11. Material Change audit requirement (clause 16A.11)

##### Code reference

Clause 16A.11

##### Code related audit information

*Audit required if participant makes material change*

*(1) If there is a material change to any of a participant's systems or processes that are the subject of regular audits under clause 10.17A, 11.8B, 11.10, 15.37A or 15.37B, the participant must arrange for an additional audit, which must be completed in accordance with this Part no later than 5 business days before the change is implemented.*

*(2) For the purposes of sub-clause (1), a material change to a system or process is a change that is likely to affect the ability of the participant to comply with any relevant provision of this Code.*

##### Audit commentary

HIKO is currently being used for customer management and billing which are outside the scope of this audit. Paua continues to use its pre FOXworks system for reconciliation, which has previously been audited. Switching files are manually processed on the registry.

Once the material change audit is complete, Paua will use HIKO for customer management, registry management, switching, billing, and reconciliation.

##### Audit outcome

Compliant



## 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 using HIKO was examined. I considered whether the new system or processes were likely to result in incorrect or misleading information. I viewed process documentation and test results.

#### Audit commentary

Most trader maintained information is recorded only on the registry. All ICPs in HIKO will have HHR profile and submission type, no unmetered load is expected to be supplied, and Paua only accepts ICPs with AMS or Metrix as the MEP. HIKO has fields for status and ANSZIC code which users can modify.

Status and ANSZIC values are changed in HIKO, and the event date is populated as the day the change took effect. The updates are exported to a network folder which is synchronised with the registry.

A daily ICP list with history (including all data from January 2015 onwards) will be downloaded from the registry and imported into HIKO. This will be used to determine aggregation factors for reconciliation reports, whether the ICP is active and expected to be included in reconciliation reports and receive metering data, and any changes to the ICP attributes. Changes to attributes are reported to the operator for investigation in the Action Hub, and will include changes to distributor unmetered load details.

Notification and acknowledgement files will not be reviewed, discrepancies will be identified through the daily ICP list validation.

#### Accuracy of registry data

The registry list was reviewed, and found:

Issue	Sep 2020 Qty	Oct 2018 Qty	Jan 2018 Qty	Comments
Blank ANSZIC codes	0	0	0	Compliant.
ANZSIC "T99" series	0	0	0	Compliant.
UML load = zero	0	0	0	Compliant, no unmetered load was identified.

Issue	Sep 2020 Qty	Oct 2018 Qty	Jan 2018 Qty	Comments
Incorrect UML load	0	0	0	Compliant, no unmetered load was identified.
Shared unmetered load incorrect	0	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	0	Compliant, no unmetered load was identified.
No MEP recorded or nominated and UML= "N"	0	0	0	Compliant, all ICPs have an MEP.
Active Category 9 and UML "N"	0	0	0	Compliant, all ICPs have metering category 1.
Incorrect profile	0	0	0	Compliant, all ICPs have HHR profile.
Incorrect submission type	0	0	0	Compliant, all ICPs have HHR submission type.
Incorrect status or status date	0	1	1	Compliant

#### Submission accuracy

Paua confirmed that meter replacements will be processed manually in HIKO. Paua will be notified of changes through receipt of job completion paperwork, and through their registry validation process. Test results were not provided for the meter replacement process and I recommend testing is completed before going live.

Description	Recommendation	Audited party comment	Remedial action
Meter replacement process testing	I recommend testing the meter replacement process prior to going live.	HIKO will re-test this functionality before we go live. We will also build an alert to recognise when a Meter Serial Number has changed so that we can ensure a smooth transition between the meters. This should also be in place before we go live.	Identified

The previous audit found that the automated estimation process was inserting a flat interval pattern which did not match the midnight read in all instances. HIKO's process will ensure that interval data and midnight readings are consistent when creating estimates.

The previous audit found that revision submissions were not consistently provided. All revisions will be generated from HIKO, which will contain data from January 2015 onwards.

#### Audit outcome

Compliant

## 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.

### Audit commentary

File timeliness depends on people and processes and will be checked during the first audit after go-live.

The previous audit found that revision submissions were not consistently provided. All revisions will be generated from HIKO, which will contain data from January 2015 onwards.

### 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

Data transmission processes were discussed, and Paua's documentation and test results were reviewed.

HHR AMI data is provided by AMS and Intellihub via SFTP.

### Audit commentary

Read and volume data is received from AMS and Intellihub via SFTP daily, and will be uploaded into HIKO.

Data completeness and quality will be assessed on import based on the number of intervals data is received for and whether midnight reads have been received. Any missing data will be estimated as described in **section 9.4**. If data is estimated and more accurate data is received from the MEP, the estimates will be replaced.

### 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 for the person who performed the activity (clause 21(4)(c)).*

### Audit observation

Audit trails were and reviewed.

### Audit commentary

Audit trails were reviewed and the logs include the activity identifier, date, time, and an operator identifier.

There are only two operator identifiers at present, one for the system and one for the user. Paua intends to create logins and passwords at a later date when there are more users. Currently, there is only one user and the audit trail operator information is compliant.

### Audit outcome

Compliant

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

### Code reference

*Clause 10.4*

### Code related audit information

*If a participant must obtain a consumer's consent, approval, or authorisation, the participant must ensure it:*

- *extends to the full term of the arrangement*
- *covers any participants who may need to rely on that consent.*

### Audit observation

I reviewed Paua's current terms and conditions.

### Audit commentary

Paua'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 Paua's current terms and conditions.

### Audit commentary

Paua's Terms and Conditions include consent to access for authorised parties for the duration of the contract. Compliance with these clauses is unlikely to be affected by the change of system.

### 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 22/09/20 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**

Paua will not create new connections.

#### **Audit commentary**

Paua will not create new connections.

#### **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 a MEP to temporarily electrically connect a point of connection, only if:*

- *for a point of connection to the grid – the grid owner has approved the connection*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection.*
- *for a point of connection that is an ICP, but is not as NSP:*
- *the reconciliation participant is recorded in the registry as the trader responsible for the ICP*
- *if the ICP has metered load, 1 or more certified metering installations are in place*
- *if the ICP has not previously been electrically connected, the relevant distributor has given written approval of the temporary electrical connection.*

#### Audit observation

Paua will not create new connections.

#### Audit commentary

Paua will not create new connections.

#### 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:*

- *for a point of connection to the grid – the grid owner has approved the connection*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection.*
- *for a point of connection that is an ICP, but is not as NSP:*
  - *the reconciliation participant is recorded in the registry as the trader responsible for the ICP*
  - *if the ICP has metered load, 1 or more certified metering installations are in place*
  - *if the ICP has not previously been electrically connected, the relevant distributor has given written approval of the temporary electrical connection.*

#### Audit observation

Paua will not create new connections. The reconnection process was examined to determine whether it was likely to result in any non-compliance.

#### Audit commentary

Paua's May 2020 audit confirmed that all reconnected ICPs had certified meters installed and Paua listed as the responsible retailer at the time of reconnection.

Paua intends to notify the MEP of any meters which require recertification as part of the reconnection process.

Paua does not normally allow meters to be bridged, and no bridged meters were identified during the May 2020 audit.

#### 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

Paua intends to operate on networks covered by their existing agreements.

### 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

Paua intends to supply ICPs with either AMS (NGCM) meters or IntelliHUB Limited (MTRX) meters covered by their existing arrangements.

### Audit commentary

All current Paua ICPs have either AMS (NGCM) meters (513 ICPs) or IntelliHUB Limited (MTRX) meters (four ICPs). Paua demonstrated that an arrangement is in place with both MEPs.

Before an application is accepted, ICPs are checked on the registry to confirm the MEP is either NGCM or MTRX.

### 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

Paua will not create new connections.

##### Audit commentary

Paua will not create new connections.

##### 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

Paua will not create new connections. Trader and status update processes were discussed, and process and testing documentation was reviewed.

### Audit commentary

Paua's processes are designed to ensure that trader information is populated as required by this clause.

Once the MEP confirms the disconnection of an ICP, an Operator will initiate a ticket to update the registry. The ticket will have an event date of the date of disconnection but will be submitted the day following the event to allow for the ticket to be cancelled if the ICP is reconnected on the event date.

Once the MEP confirms the reconnection of an ICP, an Operator will initiate a ticket to update the Registry. The ticket will have an event date of the date of reconnection and will be submitted immediately.

Trader updates, including any ANZSIC code corrections required will be processed manually on the registry as soon as the correct event attributes are confirmed.

### 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

Timeliness of registry updates relies on processes, which will be checked during the first audit after go-live.

### Audit commentary

Status updates will be generated from HIKO, and trader updates will be manually processed on the registry.

Timeliness of registry updates relies on processes, which will be checked during the first audit after go-live.

### Audit outcome

Unable to determine

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

### Code reference

*Clause 11.18*

### Code related audit information

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

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

- *another trader is recorded in the registry as accepting responsibility for the ICP (clause 11.18(2)(a)); or*

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

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

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

#### Audit observation

I checked the intended processes in relation to this clause.

#### Audit commentary

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

Review of the registry list and audit compliance reports confirmed all active ICPs have a valid MEP recorded in the registry.

Paua ensures that ICPs have AMS (NGCM) or IntelliHUB Limited (MTRX) as an MEP before they switch in, and MEP changes are not expected. If MEP nominations are required in the future, they will be manually processed on the registry.

##### ICP Decommissioning

Paua is aware of their responsibility to notify the MEP where an ICP is decommissioned, and to obtain a final reading. Final interrogations will occur for decommissioned ICPs because data will be provided daily.

#### 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**

Timeliness of registry updates relies on processes, which will be checked during the first audit after go-live.

#### **Audit commentary**

Paua will not create new connections.

Status updates will be generated from HIKO, and trader updates will be manually processed on the registry.

Timeliness of registry updates relies on processes, which will be checked during the first audit after go-live.

#### **Audit outcome**

Unable to determine

### **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.

#### **Audit commentary**

ANZSIC codes are set based on information provided on the customer application, and appropriate processes are in place to ensure that ANZSIC codes are recorded correctly.

Trader updates (including ANZSIC code corrections) will be processed manually on the registry.

#### **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

Paua will not deal with unmetered load.

#### 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 will be identified as part of the registry validation process discussed in **section 2.1**.

#### 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 be 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

Paua will not deal with new connections. The reconnection process was discussed, and testing and process documentation was reviewed.

#### Audit commentary

Paua will update the ICP status to active once confirmation of reconnection is received from the MEP. The status update will be generated from HIKO, and event dates will be set as the date that the reconnection occurred.

HIKO 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.

Paua is aware of the requirement to ensure that status updates are processed within five business days of the event date, and intends to process updates on time.

#### 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 disconnection process was discussed, and testing and process documentation was reviewed.

#### Audit commentary

Paua will update the ICP status to inactive once confirmation of disconnection is received from the MEP. The status update will be generated from HIKO, and the disconnection reason code will be selected from a drop down box. Event dates will be set as the date that the disconnection occurred.

Paua is aware of the requirement to ensure that status updates are processed within five business days of the event date, and intends to process updates on time.

Vacant and disconnected ICPs will continue to receive readings, if provided by the MEP.

#### Audit outcome

Compliant

### 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

Paua will not deal with new connections. Any ICPs at new or ready status with Paua as the expected trader are likely to have been assigned to Paua in error by the distributor.

#### Audit commentary

Traders are normally advised of new ICPs assigned to them through registry notification files. Paua does not intend to review these, and ICPs at “new” and “ready” status will not be included in the registry list validation because Paua will be recorded as the proposed trader rather than trader. The registry list validation will identify any ICPs not recorded in Paua’s database. These will be displayed in the Action Hub as an “unknown ICP” for investigation.

If emails are received from distributors querying the status of new or ready ICPs they will be actioned.

I recommend that monitoring is completed to ensure that any new ICPs assigned to Paua in error are identified and followed up.

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 have been at “new” or “ready” status for more than 18 months and require follow up.	HIKO will (before it goes live) check daily for any ICP where we are identified as Proposed Trader and raise an action to be cleared by an operator.	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 two business days after the arrangement comes into effect and include in its advice to the registry manager that the switch type is TR and one or more profile codes associated with that ICP.*

#### Audit observation

Paua's documentation and test results were reviewed.

#### Audit commentary

Paua's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files will be sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind.

The information required to create the NT will be manually entered into HIKO on receipt of a customer 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 will be requested.

NT files will be generated by HIKO, and uploaded to the registry each evening.

I viewed test results which confirmed that the NT information matched the details held in HIKO and were successfully uploaded to the test registry.

#### 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 may disregard every event date established by the losing trader for an ICP for which when the losing trader received notice from the registry manager under clause 22(a) the losing trader had been responsible for less than 2 months.*

#### **Audit observation**

Paua's documentation and test results were reviewed.

#### **Audit commentary**

When an NT is received from the registry, HIKO will automatically create an AN unless the proposed transfer date is more than nine business days after NT receipt. If the proposed transfer date is more than nine business days after NT receipt, a withdrawal notice will be issued with date failure as the reason code.

If the proposed event date is within Paua's acceptable range, the switch event date is set to match the gaining trader's proposed event date, unless it is blank or backdated, in which case it is set to the contract end date + one day or if there is no contract end date, tomorrow. Response codes will be selected according to a hierarchy, which should ensure that the correct response codes are applied.

Timeliness of AN files will also be monitored using the switch breach report, which will be imported into HIKO.

I viewed test results which confirmed that the AN information matched the details held in HIKO and were successfully uploaded to the test registry, and how timeliness of files will be monitored.

#### **Audit outcome**

Compliant

### **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**

Paua's documentation and test results were reviewed.

### Audit commentary

All ICPs switched in will have AMI meters, and are expected to switch in and out on validated readings.

HIKO will automatically create a CS file as soon as a midnight reading is received or estimated for the day before the switch event date.

- The read quality indicator is used to determine whether reads should be classified as estimate or actual, and determine the last actual read date during the period of supply.
- The average daily kWh will be based on the average daily consumption between the last two actual readings received prior to switch out.
- The key held indicator is determined from information obtained from the customer on application and stored in HIKO.

There were some refinements to HIKO's switching logic during this audit and I recommend that some further testing of the CS average daily kWh is completed prior to going live to ensure future compliance.

Description	Recommendation	Audited party comment	Remedial action
Complete more comprehensive testing of the revised CS generation process prior to going live	<p>I recommend that some further testing of the revised CS logic is completed prior to going live, including:</p> <ol style="list-style-type: none"><li>1. Testing to ensure the last actual read date is correctly recorded where there are actual reads after the period of supply, and where the ICP switched on an actual reading.</li><li>2. Testing to ensure that the estimated daily kWh is the average daily consumption between the last two actual readings where there are two actual readings available, or consistent with the incoming CS file where there are not two actual readings available. I recommend further testing of scenarios where there are days with missing readings between the last two actual readings, only one actual reading is present, and no actual readings are present.</li></ol>	We agree and are continuing to test HIKO with different scenarios to ensure accuracy before we go live.	Identified

Timeliness of CS files will also be monitored using the switch breach report, which will be imported into HIKO.

I viewed test results which confirmed that the CS information matched the details held in HIKO, and were successfully uploaded to the test registry.

### Audit outcome

Compliant

#### 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 4 calendar months of the registry manager giving the gaining trader written notice of having received information about the switch completion, provide to the losing trader a changed switch event meter reading supported by 2 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

Paua's documentation and test results were reviewed.

##### Audit commentary

All ICPs switched in will have AMI meters, and are expected to switch in and out on validated readings.

HIKO will compare the losing trader's closing read with the actual midnight read as soon as it is received by calculating the difference between the midnight reading on Paua's first day of supply and the sum of the intervals for the first day of supply.

Where the CS read differs from the calculated opening reading HIKO will automatically send an RR file, because the CS read appears to be incorrect. 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. I viewed test results which confirmed that the RR information matched the details held in HIKO and were successfully uploaded to the test registry.

Any ACs accepting Paua's proposed change are automatically processed by HIKO, and ACs rejecting the proposed change are directed to an operator who will either reissue the RR or manually change the opening read. Test results were provided to confirm the adjustment process, which is documented in **section 8.2**.

RRs issued by other traders will be directed to an operator, who will review the request and accept or reject it. HIKO will generate the AC file which contains the operator response the evening after it is added. Timeliness of AC files will also be monitored using the switch breach report, which will be imported into HIKO.

##### Audit outcome

Compliant

#### 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

Paua's documentation and test results were reviewed.

##### Audit commentary

Paua is a HHR only trader, and will not receive any read change requests where clause 6(2) and (3) of schedule 11.3 applies.

Paua will issue RRs where clause 6(2) and (3) of schedule 11.3 applies, and the other trader is expected to accept these.

##### 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

Documentation was examined.

##### Audit commentary

Paua intends to resolve any disputed reads through the RR process where possible.

##### 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

Paua’s documentation and test results were reviewed.

### Audit commentary

Paua’s processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files will be sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind.

The information required to create the NT will be manually entered into HIKO on receipt of a customer 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.

NT files will be generated by HIKO, and uploaded to the registry each evening.

I viewed test results which confirmed that the NT information matched the details held in HIKO and were successfully uploaded to the test registry.

### 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:*
  - *confirmation of the switch event date; and*
  - *a valid switch response code; and*
  - *final information as required under clause 11; or*

- 10(1)(b) *If the losing trader does not accept the event date proposed by the gaining trader, the losing trader must acknowledge the switch request to the registry manager and determine a different event date that—*
  - o *is not earlier than the gaining trader's proposed event date, and*
  - o *is no later than 10 business days after the date the losing trader receives notice; or*
- 10(1)(c) *request that the switch be withdrawn in accordance with clause 17.*

#### **Audit observation**

Paua's documentation and test results were reviewed.

#### **Audit commentary**

When an NT is received from the registry, HIKO will automatically create an AN unless the proposed transfer date is more than four business days after NT receipt. If the proposed transfer date is more than four business days after NT receipt, a withdrawal notice will be issued with date failure as the reason code.

If the proposed event date is within Paua's acceptable range, the switch event date is set to match the gaining trader's proposed event date, unless it is blank or backdated, in which case it is set to the contract end date + one day or if there is no contract end date, tomorrow. Response codes will be selected according to a hierarchy, which should ensure that the correct response codes are applied.

Timeliness of AN and CS files will also be monitored using the switch breach report, which will be imported into HIKO.

I viewed test results which confirmed that the AN information matched the details held in HIKO and were successfully uploaded to the test registry, and how timeliness of files will be monitored.

#### **Audit outcome**

Compliant

### **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, then within 10 business days of receiving notice 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**

Paua's documentation and test results were reviewed.

#### **Audit commentary**

Switches are expected to be completed in accordance with this clause.

#### **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

Paua's documentation and test results were reviewed.

##### Audit commentary

All ICPs switched in will have AMI meters, and are expected to switch in and out on validated readings.

HIKO will automatically create a CS file as soon as a midnight reading is received or estimated for the day before the switch event date.

- The read quality indicator is used to determine whether reads should be classified as estimate or actual, and determine the last actual read date.
- The average daily kWh will be based on the average daily consumption between the last two actual readings received prior to switch out.
- The key held indicator is determined from information obtained from the customer on application and stored in HIKO.

There were some refinements to HIKO's switching logic during this audit and I recommend in **section 4.3** that some further testing of the CS average daily kWh is completed prior to going live to ensure future compliance.

Timeliness of CS files will also be monitored using the switch breach report, which will be imported into HIKO.

I viewed test results which confirmed that the CS information matched the details held in HIKO, and were successfully uploaded to the test registry.

##### 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 4 calendar months of the date the registry manager gives the gaining trader written notice of having received information about the switch completion, must provide to the losing trader a changed validated meter reading or a permanent estimate supported by 2 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**

Paua's documentation and test results were reviewed.

#### **Audit commentary**

All ICPs switched in will have AMI meters, and are expected to switch in and out on validated readings.

HIKO will compare the losing trader's closing read with the actual midnight read as soon as it is received by calculating the difference between the midnight reading on Paua's first day of supply and the sum of the intervals for the first day of supply.

Where the CS read differs from the calculated opening reading HIKO will automatically send an RR file, because the CS read appears to be incorrect. 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. I viewed test results which confirmed that the RR information matched the details held in HIKO and were successfully uploaded to the test registry.

Any ACs accepting Paua's proposed change are automatically processed by HIKO, and ACs rejecting the proposed change are directed to an operator who will either reissue the RR or manually change the opening read. Test results were provided to confirm the adjustment process, which is documented in **section 8.2**.

RRs issued by other traders will be directed to an operator, who will review the request and accept or reject it. HIKO will generate the AC file which contains the operator response the evening after it is added. Timeliness of AC files will also be monitored using the switch breach report, which will be imported into HIKO.

## Audit outcome

Compliant

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

#### Code reference

Clause 14 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 at an ICP at which the losing trader trades electricity with the customer or embedded generator, and one of the following applies at the ICP:*

- *the gaining trader will trade electricity through a half hour metering installation that is a category 3 or higher metering installation; or*
- *the gaining trader will trade electricity through a non-AMI half hour metering installation and the losing trader trades electricity through a non-AMI non half hour metering installation; or*
- *the gaining trader will trade electricity through a non-AMI non half hour metering installation and the losing trader trades electricity through a non-AMI half hour metering installation.*

*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

Paua will not deal with any HH switches.

#### Audit commentary

Paua will not deal with any HH switches.

#### Audit outcome

Not applicable

#### 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

Paua will not deal with any HH switches.

##### Audit commentary

Paua will not deal with any HH switches.

##### Audit outcome

Not applicable

#### 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

Paua will not deal with any HH switches.

##### Audit commentary

Paua will not deal with any HH switches.

##### Audit outcome

Compliant

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

##### Code reference

*Clauses 17 and 18 Schedule 11.3*

##### Code related audit information

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

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

- *for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*
  - o *the participant identifier of the trader making the withdrawal request (clause 18(c)(i));*
  - and*
  - o *the withdrawal advisory code published by the Authority (clause 18(c)(ii))*
- *within five business days after receiving notice from the registry manager of a switch, the trader receiving the withdrawal must advise the registry manager that the switch withdrawal request is accepted or rejected. A switch withdrawal request must not become effective until accepted by the trader who received the withdrawal (clause 18(d)).*
- *on receipt of a rejection notice from the registry manager, in accordance with clause 18(d), a trader may re-submit the switch withdrawal request for an ICP in accordance with clause 18(c). All switch withdrawal requests must be resolved within 10 business days after the date of the initial switch withdrawal request (clause 18(e)).*
- *if the trader requests that a switch request be withdrawn, and the resolution of that switch withdrawal request results in the switch proceeding, within two business days after receiving notice from the registry manager in accordance with clause 22(b), the losing trader must comply with clauses 3,5,10 and 11 (whichever is appropriate) and the gaining trader must comply with clause 16 (clause 18(f)).*

##### Audit observation

Paua's documentation and test results were reviewed.

##### Audit commentary

HIKO will automatically generate NWs for date failure where:

- a transfer switch proposed transfer date is more than nine business days after NT receipt, or
- a switch move proposed transfer date is more than four business days after NT receipt.

Otherwise, HIKO will create a NW file once the operator has selected an NW code from the drop down list, which includes the required codes. Paua's documentation confirmed that NWs are required to be created within two months of the switch being completed and their NW code application policy should ensure that the correct codes are applied.

NWs issued by other traders will be directed to an operator, who will review the request and accept or reject it. HIKO will generate the AW file which contains the operator response the evening after it is added. Timeliness of AW files will also be monitored using the switch breach report, which will be imported into HIKO.

##### Audit outcome

Compliant

#### 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

Documentation was checked.

##### Audit commentary

Paua's metering information processes are compliant.

##### Audit outcome

Compliant

#### 4.17. Switch protection (Clause 1(a)&(b) of Part 1 and 11.15AA to 11.15AC of Part 11)

##### Code reference

Clauses 1(a)&(b) of Part 1 & 11.15AA to 11.15AC of Part 11

##### Code related audit information

*A losing retailer (including any party acting on behalf of the retailer) must not initiate contact to save or win back any customer who is switching away or has switched away for 180 days from the date of the switch.*

*The losing retailer may contact the customer for certain administrative reasons and may make a counteroffer only if the customer initiated contact with the losing retailer and invited the losing retailer to make a counteroffer.*

*The losing retailer must not use the customer contact details to enable any other retailer (other than the gaining retailer) to contact the customer.*

##### Audit observation

Paua will not complete win-back activity.

##### Audit commentary

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.

##### 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

Paua will not deal with unmetered load.

#### Audit commentary

Paua will not deal with unmetered load.

#### 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

Paua will not deal with unmetered load.

#### Audit commentary

Paua will not deal 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 trader proposes to take or is taking to reduce the unmetered load.*

#### Audit observation

Paua will not deal with unmetered load.

#### Audit commentary

Paua will not deal 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**

Paua will not deal with unmetered load.

**Audit commentary**

Paua will not deal with unmetered load.

**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

Paua's documentation and test results were reviewed.

#### Audit commentary

Paua will only deal with ICPs where AMI metering is installed, and does not intend to supply ICPs with distributed generation. No submission information will be determined using subtraction. Review of the registry list as at 22/09/20 did not identify any ICPs with generation or NHH non AMI meters.

Paua will complete reconnections remotely wherever possible, and does not intend to bridge meters to reconnect.

#### 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**

Paua does not have responsibility for any GIPs.

#### **Audit commentary**

Paua does not have responsibility 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**

Paua will not use any profiles requiring control devices.

#### **Audit commentary**

Examination of the list file as at 22/09/20 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 to identify defective meters and notify the MEP were reviewed.

### 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.

Reporting is in place to identify meters which have not communicated for more than 14 days, so that the operator can raise a communications fault.

### 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

Paua will not collect data. HHR AMI data will be provided by AMS (NGCM) and IntelliHB Limited (MTRX) as MEPs.

### Audit commentary

Paua will not collect data. HHR AMI data will be provided by AMS (NGCM) and IntelliHB Limited (MTRX) as MEPs.

## 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

Paua will not collect data. HHR AMI data will be provided by AMS (NGCM) and IntelliHB Limited (MTRX) as MEPS.

#### Audit commentary

Paua will not collect data. HHR AMI data will be provided by AMS (NGCM) and IntelliHB Limited (MTRX) as MEPS.

## 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

Paua's documentation and test results were reviewed.

#### Audit commentary

All ICPs have submission type HHR. **Sections 4.3** and **4.10** confirmed that switch event readings will be 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

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

#### 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

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

#### 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

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

#### 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

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

#### 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 AMI data is provided by AMS (NGCM) and IntelliHUB Limited (MTRX) as MEPs, and compliance was assessed as part of their MEP audits.

##### Audit commentary

AMS (NGCM) and IntelliHUB Limited (MTRX) are responsible for HHR data collection, and compliance is recorded in their audit reports.

##### 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 AMI data is provided by AMS (NGCM) and IntelliHUB Limited (MTRX) as MEPs.

#### Audit commentary

MEPs are responsible for meeting the meter interrogation data requirements, and this is reviewed as part of their audits.

#### 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 AMI data is provided by AMS (NGCM) and IntelliHUB Limited (MTRX) as MEPs.

#### Audit commentary

MEPs are responsible for meeting the meter interrogation data requirements, and this is reviewed as part of their audits.

#### 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  $\pm 0.1\%$  ( $\pm 2$  seconds).*

#### Audit observation

Trading period duration was reviewed as part of AMS (NGCM) and IntelliHUB Limited (MTRX) MEP audits.

#### Audit commentary

MEPs are responsible for trading period duration, and compliance is recorded in their audit reports.

#### 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 (NGCM) and IntelliHUB Limited (MTRX) as MEPs, and compliance is assessed as part of their MEP audits.

Processes to archive and store raw meter data were reviewed.

#### Audit commentary

Compliance with this clause is recorded in the MEP's 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.

#### 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

Paua will not deal with any non metering information.

#### Audit commentary

Paua will not deal with any non metering information.

#### Audit outcome

Compliant

## 8. CREATING AND MANAGING (INCLUDING VALIDATING, ESTIMATING, STORING, CORRECTING AND ARCHIVING) VOLUME INFORMATION

### 8.1. Correction of NHH meter readings (Clause 19(1) Schedule 15.2)

#### Code reference

*Clause 19(1) Schedule 15.2*

#### Code related audit information

*If a reconciliation participant detects errors while validating non-half hour meter readings, the reconciliation participant must:*

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

*19(1)(b) – replace the original meter reading the second meter reading (even if the second meter reading is at a different date)*

*19(1A) if a reconciliation participant detects errors while validating non half hour meter readings, but the reconciliation participant cannot confirm the original meter reading or replace it with a meter reading from another interrogation, the reconciliation participant must:*

- substitute the original meter reading with an estimated reading that is marked as an estimate; and*
- subsequently replace the estimated reading in accordance with clause 4(2).*

#### Audit observation

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

#### 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 a reconciliation participant detects errors while validating half hour meter readings, the reconciliation participant must correct the meter readings as follows:*

*19(2)(a) - if the relevant metering installation has a check meter or data storage device, substitute the original meter reading with data from the check meter or data storage device; or*

*19(2)(b) - if the relevant metering installation does not have a check meter or data storage device, substitute the original meter reading with data from another period provided:*

- i. The total of all substituted intervals matches the total consumption recorded on a meter, if available; and*
- ii. The reconciliation participant considers the pattern of consumption to be materially similar to the period in error.*

### Audit observation

Paua's documentation and test results were reviewed.

### Audit commentary

If an agreed switch reading differs from the actual data received from the MEP, the midnight reading is entered with the lowest read quality value (10) to ensure that it is retained and not overwritten with actual data, and the trading period values will be estimated to ensure that they are consistent with the difference between the agreed switch reading and next actual reading.

If errors are found when validating HHR readings, such as a stopped or faulty meter, consumption can be estimated. The estimated data would be entered with the lowest read quality value (10) to ensure that it is retained and not overwritten with actual data.

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

1. HIKO imports the meter reading and interval data and assigns a read quality flag. The flag indicates whether midnight readings and some or all interval data is present, and if a reading has been modified to match an agreed switch reading.
2. HIKO compares the HHR data imported to the daily registry list to identify ICPs where HHR data is expected, and identify missing trading period data.
3. Where midnight readings and/or interval data is missing, HIKO's daily estimation process creates estimated midnight readings and/or interval data.
4. HIKO's deduplication process identifies meters with multiple readings/volumes for the ICP meter trading period combination and removes the values with the highest data quality flag (i.e. the poorest quality data).
5. HIKO checks that the midnight reading = the next day's midnight reading – the next day's trading period volumes. If there is a difference, HIKO will recalculate the estimates midnight reading and any estimated intervals and spread the difference pro-rata based on the previous estimated values.

The estimation methodology ensures that estimates are based on midnight reads if they are available and consumption is profiled between trading periods based on a similar period with actual data. If no history is available, Paua intends to request consumption history from the previous trader and use it to calculate an estimate.

If actual data is received following estimation it will be imported, and retained through the deduplication process.

Test results confirmed that the estimation and correction processes are operating as described in the supplied documentation.

### 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

*A reconciliation participant may use error compensation and loss compensation as part of the process of determining accurate data. Whichever methodology is used, the reconciliation participant must document the compensation process and comply with audit trail requirements set out in the Code.*

#### Audit observation

Review of a registry list as at 22/09/20 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

### 8.4. Correction of HHR and NHH raw meter data (Clause 19(4) and (5) Schedule 15.2)

#### Code reference

*Clause 19(4) and (5) 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. The journal must contain the following:*

*19(5)(a)- the date of the correction or alteration*

*19(5)(b)- the time of the correction or alteration*

*19(5)(c)- the operator identifier for the person within the reconciliation participant who made the correction or alteration*

*19(5)(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*

*19(5)(e)- the technique used to arrive at the corrected data*

*19(5)(f)- the reason for the correction or alteration.*

#### Audit observation

Paua's documentation and test results were reviewed.

#### Audit commentary

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

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

HIKO creates a compliant correction journal when data is corrected. The journal does not contain the time of the correction, which is recorded as non-compliance 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

Paua's documentation and test results were reviewed.

#### Audit commentary

Readings are appropriately labelled with a data quality flag which indicates whether they are actual, estimated, or agreed switch readings where actual readings have been replaced with agreed switch readings.

Estimates are identifiable at trading period level.

#### 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

Paua's documentation and test results were reviewed.

#### Audit commentary

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

HHR AMI data is provided by AMS (NGCM) and IntelliHUB Limited (MTRX) as MEPs. Compliance was assessed as part of their MEP audits.

#### Audit commentary

HHR AMI data is provided by AMS (NGCM) and IntelliHUB Limited (MTRX) 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 three 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

Paua's documentation and test results were reviewed.

#### Audit commentary

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

1. HIKO imports the meter reading and interval data and assigns a read quality flag. The flag indicates whether midnight readings and some or all interval data is present, and if a reading has been modified to match an agreed switch reading.
2. HIKO compares the HHR data imported to the daily registry list to identify ICPs where HHR data is expected, and identify missing trading period data.
3. Where midnight readings and/or interval data is missing, HIKO's daily estimation process creates estimated midnight readings and/or interval data.
4. HIKO's deduplication process identifies meters with multiple readings/volumes for the ICP meter trading period combination and removes the values with the highest data quality flag (i.e. the poorest quality data).

5. HIKO checks that the midnight reading = the next day's midnight reading – the next day's trading period volumes. If there is a difference, HIKO will recalculate the estimates midnight reading and any estimated intervals and spread the difference pro-rata based on the previous estimated values.

The estimation methodology ensures that estimates are based on midnight reads if they are available and consumption is profiled between trading periods based on a similar period with actual data. If no history is available, Paua intends to request consumption history from the previous trader and use it to calculate an estimate.

If actual data is received following estimation it will be imported, and retained through the deduplication process.

Test results confirmed that the estimation and correction processes are operating as described in the supplied documentation.

#### **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**

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

#### **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 zero values*

*17(4)(d) - comparison with expected or previous flow patterns*

*17(4)(e) - comparisons of meter readings with data on any data storage device registers that are available*

*17(4)(f) - a review of meter and data storage device event list. Any event that could have affected the integrity of metering data must be investigated.*

### Audit observation

Paua's documentation and test results were reviewed.

### Audit commentary

Electronic meter reading information is provided by the MEP, and data validation was reviewed as part of their MEP audits. 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. Meters not communicating for 14 days or more appear in the Action Hub for review and action.

Zero and unexpected consumption patterns are identified through the weekly billing validation process, which generated exceptions for "bill outliers" and "0 kWh" which are reviewed by an operator.

Paua checks that consumption is in line with expected patterns at an ICP level, as part of their weekly billing validations. HIKO generates a chart of daily consumption and table of meter events for each ICP that exceptions are generated for, to allow efficient review of exceptions.

Paua receives meter event reports from AMS (NGCM) and IntelliHUB Ltd (MTRX), which will be imported into HIKO. Paua works through the events weekly, checking data before and after the event occurred to determine whether action is required.

Test results confirmed that processes are operating as described.

### Audit outcome

Compliant

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

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

#### Code reference

Clause 13.136

#### Code related audit information

*The generator (and/or embedded generator) must provide to 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 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 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 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

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

#### 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

Paua's documentation and test results were reviewed.

#### Audit commentary

The AV110 files will be generated from HIKO, based on registry list information which is imported daily. I reviewed testing for the May 2020 revision 3 and found ICP days were consistent with the registry list.

The issues relating to NSP changes not being managed correctly are expected to be resolved in HIKO, which will determine aggregation factors from a registry list with history which is imported daily.

I rechecked submission issues from the May 2020 audit where revision 14 had not been completed by May 2020, and found the NSP assignment for ICPs 0000030529TR313, 0000026260TRDC4 and 0000077388TREBA had been corrected.

The GR100 ICP days comparison reports and GR090 ICP missing reports will be imported into HIKO, and any differences will be investigated.

#### **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**

Paua's documentation and test results were reviewed.

#### **Audit commentary**

The AV120 files will be generated from HIKO, based on invoiced volumes. Invoices will be selected for inclusion in the AV120 report based on their invoice date. Testing confirmed that the report contained invoicing information, with small rounding differences between the invoices and total submission.

Submission will be compared to billed volumes for reasonableness prior to submission.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 15.8*

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

*A retailer or direct purchaser (excluding direct consumers) must deliver to the reconciliation manager its total monthly quantity of electricity supplied for each half hourly metered ICP for which it has provided submission information to the reconciliation manager, including:*

*15.8(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*

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

#### Audit observation

Paua's documentation and test results were reviewed.

#### Audit commentary

The AV090 and AV140 files will be generated from HIKO. 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 a technical non-compliance below.

Testing was provided which confirmed aggregation was correct and matched raw meter data, and volumes and aggregates information was consistent with only small rounding differences present (a maximum of  $\pm 0.1$  kWh).

Issues with AV090 and AV140 submissions identified in previous audits are expected to be resolved with HIKO. Revisions will be consistently provided, and aggregation factors will be determined from a registry list.

The GR090 ICP missing reports will be imported into HIKO, and any differences will be investigated.

I rechecked submission issues from the May 2020 audit where revision 14 had not been completed by May 2020, and found the NSP assignment for ICPs 0000030529TR313, 0000026260TRDC4 and 0000077388TREBA had been corrected.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.4 With: Clause 15.8  From: 01-Oct-18 To: 01-Dec 19	The HHR aggregates file does not contain electricity supplied information. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The issue relating to content of the aggregates file is an error in the code, Paua is providing submission information as expected.		
Actions taken to resolve the issue		Completion date	Remedial action status
Our AV Aggregates file is correct and accurate so no changes are envisaged.		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
No actions as our AV Aggregates file is correct and accurate.		Completed	

## 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 (NGCM) and IntelliHUB Ltd (MTRX) were reviewed as part of their MEP audit. Submissions for periods with daylight savings changes were reviewed.

#### Audit commentary

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

#### 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

Paua's documentation and test results were reviewed.

#### Audit commentary

This clause relates to the timing of sending of files, which are intended to be consistently sent on time for initial and revision submissions. HIKO contains a schedule of submission dates and times to help the operator ensure that submissions are generated on time for the initial submission, r1, r3, r7 and r14. All revisions will be generated from HIKO, which will contain data from January 2015 onwards.

Submissions will be based on the latest data, and all estimates will be replaced with actual data where it is available. The estimation issues identified in the previous audit will be resolved in HIKO. Estimates are

based on midnight reads if they are available and consumption is profiled between trading periods based on a similar period with actual data. If no history is available, Paua intends to request consumption history from the previous trader and use it to calculate an estimate.

The timeliness of submissions will be checked in the first audit after going live.

One alleged breach was recorded during the audit period for late provision of revision data, and this issue is not expected to recur once HIKO is implemented.

Reference	Code	Summary	Severity	Status	Result
2005GIVE1	Part 15 clause 15.4(2)	On business day 13, the reconciliation manager noticed GIVE had yet to submit any revised data for washups.	low	closed	early closure

#### Audit outcome

Compliant

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

#### Code reference

Clause 15.5

#### Code related audit information

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

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

#### Audit observation

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

The processes to ensure that submissions are accurate were discussed and observed.

#### Audit commentary

Prior to submission:

1. ICP level volumes are validated as described in **section 9.6**,
2. HIKO's metering data is compared to a registry list imported from the registry to ensure that all active ICP days are included and actual or estimated data is available for each active trading period,
3. current submission totals are compared to previous submissions for the same month and previous month for reasonableness, and exceptions are investigated, and
4. submission volumes are also compared to billed volumes for reasonableness, and exceptions are investigated.

The issues relating to NSP changes not being managed correctly are expected to be resolved in HIKO, which will determine aggregation factors from a registry list with history which will be imported daily.



I rechecked submission issues from the May 2020 audit where revision 14 had not been completed prior to that audit being finalised, and found the NSP assignment for ICPs 0000030529TR313, 0000026260TRDC4 and 0000077388TREBA had been corrected.

#### 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

The revision process was checked during the audit to confirm compliance.

#### Audit commentary

All estimates will be replaced with actual data where it is available. The estimation issues identified in the previous audit will be resolved in HIKO. Estimates are based on midnight reads if they are available and consumption is profiled between trading periods based on a similar period with actual data. If no history is available, Paua intends to request consumption history from the previous trader and use it to calculate an estimate.

This clause relates to the timing of sending of files, which are intended to be consistently sent on time for initial and revision submissions. HIKO contains a schedule of submission dates and times to help the operator ensure that submissions are generated on time for the initial submission, r1, r3, r7 and r14.

The issues relating to NSP changes not being managed correctly are expected to be resolved in HIKO, which will determine aggregation factors from a registry list with history which is imported daily.

I rechecked submission issues from the May 2020 audit where revision 14 had not been completed prior to that audit being finalised, and found the NSP assignment for ICPs 0000030529TR313, 0000026260TRDC4 and 0000077388TREBA had been corrected.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 4 Schedule 15.2*

#### Code related audit information

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

*The relevant reconciliation participant must, at the earliest opportunity, and no later than the month 14 revision cycle, replace volume information created using estimated readings with volume information created using validated meter readings.*

*If, despite having used reasonable endeavours for at least 12 months, a reconciliation participant has been unable to obtain a validated meter reading, the reconciliation participant must replace volume information created using an estimated reading with volume information created using a permanent estimate in place of a validated meter reading.*

#### Audit observation

Processes for permanence of meter readings were reviewed.

#### 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.

#### 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 for each ICP must comprise the following:*

- *half hour volume information for the total metered quantity of electricity 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) *any half hour volume information for the ICP; or*
  - b) *any 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 discussed in **section 11.4**.

#### 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

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

#### 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<sub>Px</sub> 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<sub>Px</sub>.*

#### Audit observation

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

#### 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

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

#### 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

Paua only uses the HHR profile, and no profile changes are expected.

#### Audit commentary

Paua only uses the HHR profile, and no profile changes are expected.

#### 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

*For each category 3 of higher metering installation, a reconciliation participant must provide half hour submission information to the reconciliation manager.*

*For each category 1 or category 2 metering installation, a reconciliation participant must provide to the reconciliation manager:*

- *Half hour submission information; or*
- *Non half hour submission information; or*
- *A combination of half hour submission information and non half hour submission information*

*However, a reconciliation participant may instead use a profile if:*

- *The reconciliation participant is using a profile approved in accordance with clause Schedule 15.5; and*
- *The approved profile allows the reconciliation participant to provide half hour submission information from a non half hour metering installation; and*
- *The reconciliation participant provides submission information that complies with the requirements set out in the approved profile.*

*Half hour submission information provided to the reconciliation manager must be aggregated to the following levels:*

- *NSP code*
- *reconciliation type*
- *profile*
- *loss category code*
- *flow direction*
- *dedicated NSP*
- *trading period*

*The non half hour submission information that a reconciliation participant submits must be aggregated to the following levels:*

- *NSP code*
- *reconciliation type*
- *profile*
- *loss category code*
- *flow direction*
- *dedicated NSP*
- *consumption period or day*

#### 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.

HIKO imports a registry list to ensure that aggregation factors are correctly applied.

I rechecked the aggregation issues from the May 2020 audit where revision 14 had not been completed prior to that audit being finalised, and found the NSP assignment for ICPs 0000030529TR313, 0000026260TRDC4 and 0000077388TREBA had been corrected.

### 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

Paua's documentation and test results were reviewed.

### Audit commentary

Testing was provided to show that submission information was appropriately rounded.

### 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**

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

**Audit commentary**

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

**Audit outcome**

Not applicable

## CONCLUSION

**Paua** intends to migrate from its existing database to the HIKO database, which has been developed by Paua. HIKO will hold all of Paua's customer, ICP, and meter data. HIKO will import and export registry information including switching files, process metering information, and generate submission files for the reconciliation manager.

HIKO is currently being used for customer management and billing, and Paua continues to use its pre FOXworks system for reconciliation. Switching files are manually processed on the registry.

Clause 8(1) of Schedule 15.1 requires that if a reconciliation participant intends to make a "material" change to any certified facilities, processes or procedures then the changes must be subject to an audit prior to the change taking place. This audit was therefore performed at the request of **Paua** so that it can be supplied to the Electricity Authority to satisfy the requirements of Clause 8(1).

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.2. The test system was examined to determine compliance of the file preparation processes.

There is one technical non-compliance relating to the content of the HHR aggregates file.

I have recommended that some further testing is conducted prior to going live, including on the meter replacement process and the revised CS generation process. I also recommended that ICPs with "new" or "ready" status are periodically reviewed to identify any new ICPs assigned to Paua in error by distributors.

## PARTICIPANT RESPONSE

We are happy to take on board the recommendations of our auditor and all will be completed before going live with HIKO.

Many thanks to our auditors for their support throughout our development process.