# Electricity Industry Participation Code Reconciliation Participant Audit Report

# For

# Hunet Limited

Prepared by Rebecca Elliot – Veritek Ltd

Date of Audit: 19 & 20/04/17

Date Audit Report Complete: 06/07/17

Date Audit Report Due: 14/07/17

# Executive Summary

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

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits version 7.1.

Hunet have continued to grow their customer base since their last audit. This audit found 28 non-compliances, raises one issue and makes three recommendations. Registry validation is still in development, however the monitoring of registry notifications and status management has reduced the number of discrepancies found in this audit.

The issue identified in the last audit of active vacant consumption not being submitted has been corrected as of September 2016, but any ICPs with vacant consumption prior to this have not been corrected. I also found instances where the incorrect status of inactive vacant has been applied to active vacant ICPs.

In this audit I found that there are no checks in place for any AMI active sites with zero consumption. 93% of the Hunet's ICPs are being read by AMI. Event logs are being sent to Hunet from AMS but it is not known where these are being delivered to and are therefore not being actioned. This will be causing inaccuracies. Metrix actively send notifications for such sites and these are being actioned correctly. In addition to this meter reading notes relating to meter changes and access issues are either not being acted on or not followed up in a timely way.

The indicative audit frequency table indicates the next audit should be in three months. This is too short a period for Hunet to make the changes required and therefore I recommend an audit in six months time.

The matters raised are shown in the tables below:

# Table of Non-Compliance

| Subject | Section | Clause | Non compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Relevant information | 2.1 | 10.6, 11.2, 15.2 | No registry validation in place resulting in discrepancies not being identified and corrected at the earliest opportunity | Weak | Medium | 6 | Investigating |
| Changes to registry | 3.3 | 10 of Schedule 11.1 | 32 status updates were not processed within 5 business days of the event on the Registry | Moderate | Medium | 4 | Identified |

| Subject | Section | Clause | Non compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Trader responsibility for an ICP | 3.4 | 11.18 | ICP taken to ready for decommissioning status three days earlier than the final read date | Moderate | Low | 2 | Identified |
| Provision of information to the registry | 3.5 | 9 of Schedule 11.1 | Registry not updated within 5 days of commencement of trading for 27 ICPs | Moderate | Low | 2 | Identified |
| ANZSIC codes | 3.6 | 9(1)(k) of schedule 11.1 | Inaccurate ANZSIC codes populated for ten ICPs | Strong | Low | 1 | Identified |
| Management of "active" status | 3.8 | 17 of Schedule 11.1 | Recording of ICPs at the incorrect status | Moderate | Medium | 4 | Investigating |
| Management of "inactive" status | 3.9 | 19 of Schedule 11.1 | Recording of ICPs at the incorrect status | Weak | Medium | 6 | Investigating |
| Losing trader response to transfer switches | 4.2 | 3 of Schedule 11.3 | Incorrect AN response code was provided for one ICP with AMI metering. AA was applied instead of AD | Moderate | Low | 2 | Identified |
| Losing trader to provide final information | 4.3 | 5 of Schedule 11.3 and 15.2 | Incorrect standard CS file content including<br>• Incorrect and inaccurate switch readings, due to not using actual reads where they are available<br>• Incorrect read type.<br>• Incorrect last read date.<br>• Inaccurate average daily consumption | Weak | Medium | 6 | Investigating |
| Losing trader provides information-switch move | 4.8 | 10 of Schedule 11.3 | Incorrect AN response codes were provided for three ICPs<br>1 late AN file sent<br>1 AN file not sent<br>1 late CS file sent late | Weak | Medium | 6 | Identified |

| Subject | Section | Clause | Non compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Losing trader determines a different switch date | 4.9 | 10(2) of Schedule 11.3 | Two switch event dates set one day earlier than requesting traders date | Moderate | Low | 2 | Identified |
| Losing trader must provide final information- switch move | 4.10 | 11 of Schedule 11.3 and 15.2 | Incorrect standard CS file content including<br>• Incorrect last read date.<br>• Inaccurate average daily consumption | Weak | Low | 3 | Investigating |
| Changes to switch meter reading- switch move | 4.11 | 12(2A)&(2B) of Schedule 11.3 | One read request incorrectly rejected | Weak | Low | 3 | Disputed |
| Withdrawal of switches | 4.15 | 17 & 18 of Schedule 11.3 | Three switches withdrawn more than 2 months after the event date. | Moderate | Low | 2 | Identified |
| Derivation of meter readings | 6.6 | 5(b)&(c) of schedule 15.2 | Checks for phase failure not conducted and recorded. | Moderate | Low | 2 | Investigating |
| NHH meter reading application | 6.7 | 6 of Schedule 15.2 | The midnight read is not being correctly applied for transfer switches | Weak | Low | 3 | Identified |
| Interrogate meters once | 6.8 | 7(1) and 7(2) of Schedule 15.2 | No read process does not achieve best endeavours for any ICPs with Hunet for less than 12 months<br>Lack of accurate reporting<br>Three ICPs with no read gained during the period of supply and exceptional circumstances not met were identified | Weak | Medium | 6 | Investigating |

| Subject | Section | Clause | Non compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| NHH meters interrogated annually | 6.9 | 8(1) & (2) of schedule 15.2 | No access ICPs process and ICPs with a meter change sites will not meet the exceptional circumstance requirement within the 12 month period. Incorrect monthly meter reading report being provided to the Electricity Authority | Weak | Low | 3 | Investigating |
| NHH meters 90% read rate | 6.10 | 9(1) & (2) of schedule 15.2 | No access ICPs process and ICPs with a meter change sites will not meet the exceptional circumstance requirement within the 12 month period | Weak | Low | 3 | Investigating |
| Correction of NHH meter readings | 8.1 | 19 (1) of schedule 15.2 | Consumption on active vacant prior to September 2016 has not being submitted in all instances, therefore corrections are not being applied correctly in all instances | Weak | Low | 3 | Investigating |
| NHH metering information data validation | 9.5 | 16 of schedule 15.2 | Meter mismatches are not being identified during validation.<br>No check for zero consumption on AMI metered sites | Weak | Medium | 6 | Investigating |
| Electronic meter readings & estimated reads | 9.6 | 17 of schedule 15.2 | AMI event information not adequately obtained and monitored | Weak | Medium | 6 | Investigating |
| Electricity supplied information | 11.3 | 15.7 of schedule 15 | Consumption on active vacant not being submitted prior to September 2016 | Weak | Low | 3 | Investigating |
| Allocation of submission information | 12.3 | 15.5 | Consumption on active vacant ICPs is not being included in submission for period prior to September 2016 | Weak | Low | 3 | Investigating |

| Subject | Section | Clause | Non compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Accuracy of submission information | 12.7 | 15.12 | Corrections for consumption on active vacant ICPs is not being included in submission for sites prior to September 2016 | Weak | Low | 3 | Investigating |
| Permanence of meter readings | 12.8 | 4 of schedule15.2 | Some FE still exists at 14 months | Weak | Low | 3 | Investigating |
| Historical estimate process | 12.11 | 4 & 5 of schedule 15.3 | HE scenario not working correctly for Scenario A-ICP becomes Inactive part way through a month | Moderate | Low | 2 | Investigating |
| Historical estimate reporting | 13.4 | 10 of schedule 15.3 | Some FE still exists at 14 months | Moderate | Low | 2 | Investigating |
| Breach Risk Rating Score | | | | | | 100 | |
| Indicative Audit Frequency | | | | | | 3 months | |

# Table of Recommendations

| Subject | Section | Clause | Recommendation for improvement | Remedial Action |
|---|---|---|---|---|
| Relevant information | 2.1 | 10.6, 11.2, 15.2 | Registry validation reporting be put in place ASAP. | Investigating |
| Maintaining shared unmetered load | 5.1 | 11.14 | Include a check for any shared unmetered load be included in the Registry validation reporting. | Investigating |
| NHH meters interrogated annually | 6.9 | 8(1) & (2) of schedule 15.2 | Hunet to work with Datacol to ensure that the file interchange is functioning as expected | Investigating |

# Table of Issues

| Subject | Section | Clause | Issue | Action |
|---|---|---|---|---|
| Metering information | 2.10 | 10.38(a) | ICP 1001294848LC724 had no certification from 26/11/16- 10/2/17. | To be raised at Metrix's next MEP audit |

# Persons Involved in This Audit:

Auditor:

**Rebecca Elliot**
**Veritek Limited**
**Electricity Authority Approved Auditor**

Personnel assisting in this audit were:

| Name | Title |
|---|---|
| Derek Sung | Operations Manager |
| Jun Kim | Customer Care Manager |
| Joshua Park | Senior Development |

# Contents

# 1. Administrative

## 1.1 Summary of Previous Audit

Hunet provided a copy of the last audit, conducted in September 2016 by Rebecca Elliot of Veritek Limited. The status of the issues identified in that audit are recorded below:

## Table of Non-Compliance

| Subject | Section | Clause | Non compliance | Status |
|---|---|---|---|---|
| Relevant Information | 1.10 now 2.1 | 15.2 of part 15 | Information not corrected at the earliest opportunity. | Still existing |
| Provide Correct Information | 1.11 now 2.1 | 11.2 of part 11 | Information not corrected at the earliest opportunity. | Still existing |
| Switching | 2.1.4 now 4.3 | 5 of schedule 11.3 | Average consumption figure not calculated from Hunet's records. | Still existing |
| | 2.2.3 now 4.10 | 11 of schedule 11.3 | Average consumption figure not calculated from Hunet's records. | Still existing |
| | 2.4 now 4.15 | 17 of schedule 11.3 | Incorrect switch withdrawal codes used in some instances. | Cleared |
| Provision of registry information | 2.8.2 now 3.5 | 9(1)(j) of schedule 11.1 | Registry not updated within 5 days of commencement of trading for 3 ICPs. | Still existing |
| | | 9(1)(j) of schedule 11.1 | Incorrect active date recorded for one ICP. | Cleared |
| Changes to registry information | 2.8.3 now 3.3 | 10 of schedule 11.1 | Status changes to registry not updated within five days of the event. | Still existing |
| Registry Discrepancies | 2.8.10 now 2.1 | 11(2) of schedule 11.1 | No registry validation in place. | Still existing |
| ANZSIC codes | 2.8.11 now 3.6 | 9(1)(k) of schedule 11.1 | Inaccurate ANZSIC codes populated. | Still existing |
| Management of "Active" status | 2.8.13 now 3.8 | 12 &17 of schedule 11.1 | 2 ICPs recorded on the registry at the incorrect status. Potentially up to 40 ICPs at the incorrect inactive status (as per list file status count). Lack of effective status management. | Still existing |
| Management of "Inactive" status | 2.8.14 now 3.9 | 12 & 19 of schedule 11.1 | 3 ICPs recorded on the registry at the incorrect status. Potentially up to 40 ICPs at the incorrect inactive status (as per list file status count). Lack of effective status management. | Still existing |
| Interrogate meters once | 3.4 now 6.8 | 7(1)&(2) of schedule 15.2 | 3 ICPs not read during the period of supply. | Still existing |

| Subject | Section | Clause | Non compliance | Status |
|---|---|---|---|---|
| Annual interrogation | 3.5 now 6.9 | 8(1)&(2) of schedule 15.2 | Incorrect monthly meter reading report being provided to the Electricity Authority. | Still existing |
| | | | Exceptional circumstances not met for five ICPs. | Still existing |
| 90% read rate | 3.6 now 6.10 | 9(1)&(2) of schedule 15.2 | ICPs with meter changes not being actioned – exceptional circumstances not proven. | Still existing |
| Event logs | 4.2.5 now 9.6 | 17(4)(f) & 21(5) of schedule 15.2 | AMI event information not adequately obtained and monitored. | Still existing |
| Electricity Supplied | 5.3 now 11.3 | 15.7 of part 15 | Consumption on active vacant not being submitted. | Still existing |
| Permanence of volume information | 6.1.2 now 12.7 | 4 of schedule 15.2 & clause 6 of schedule 15.2 | Some FE still exists at 14 months. | Still existing |
| Creation of Submission Information | 6.1.3 now 12.3 | 15.5 of part 15 | Consumption on active vacant ICPs is not being included in submission. | Still existing |
| Meter Reading Reports | 6.2.1 now 13.1 | 8&9 of schedule 15.2 | Some monthly meter reading reports sent late. | Cleared |
| HE reporting | 6.2.4 now 13.4 | 10 of schedule 15.3 | HE targets not met for some NSPs. | Still existing |

# Table of Recommendations

| Subject | Section | Clause | Recommendation for Improvement | Status |
|---|---|---|---|---|
| Embedded Generation | 1.10.7 now 6.1 | 10.13(2) of part 10 & 15.13 of part 15 | Hunet confirm with the Distributor if embedded generation is installed. | Still existing |
| Changes to registry information | 2.8.3 now 3.3 | 10 of schedule 11.1 | Confirm all ICPs at "inactive- vacant" are correct. | Still existing |
| Registry Discrepancies | 2.8.10 now 2.1 | 11(2) of schedule 11.1 | Registry validation be put in place ASAP. | Still existing |
| Shared Unmetered Load | 2.10.3 now 5.1 | 11.14 of part 11 | Include a check for any shared unmetered load be included in the Registry validation. | Still existing |
| Event logs | 4.2.5 now 9.6 | 17(4)(f) & 21(5) of schedule 15.2 | Liaise with MEPs to get AMI event reporting in place. | Still existing |

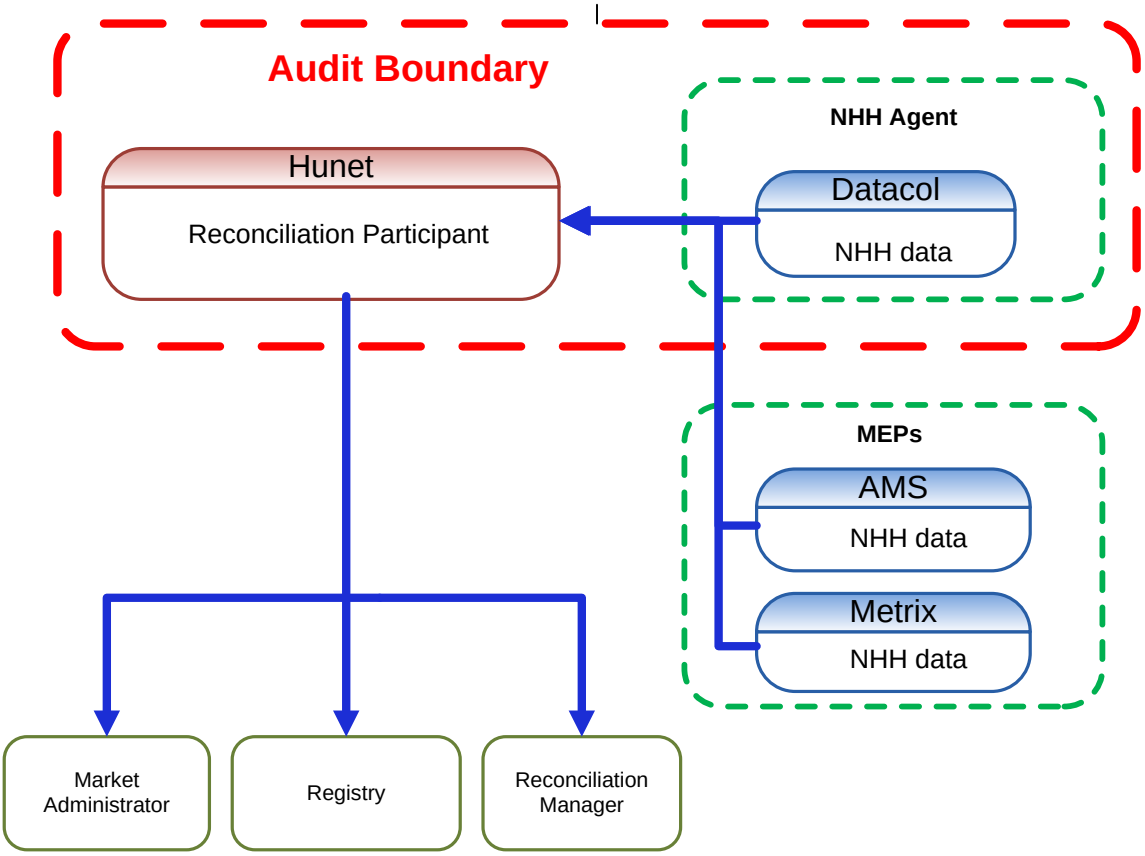
## 1.2 Scope of Audit

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

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

The audit was carried out at Hunet's premises in Auckland, on April 19 and 20, 2017.

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



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

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

Datacol was audited before the new code came into effect and therefore has been audited in accordance with the Guidelines for Reconciliation Participant Audits V6.2. Their audit report records compliance with the Code, and is attached as an appendix.

## 1.3 Exemptions from obligations to comply with code (Section 11 of Electricity Industry Act 2010)

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

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

## 1.4 Organisation structure

Hunet's organisational structure was sighted.

## 1.5 Use of agents (Clause 15.34 of Part 15)

Hunet continues to use Datacol's services as a NHH data collection agent. The audit report for Datacol is attached as an appendix. The audit was conducted in April 2017.

MEPs AMS and Metrix continue to provide NHH AMI data. Their compliance with the code is examined as part of their MEP audits.

All other activities are performed "in-house".

## 1.6 Hardware and software

Hunet has a bespoke MySQL database on a Linux operating system. Daily backups are performed to a remotely hosted server.

## 1.7 Breaches or Breach Allegations

Hunet has had no alleged during the audit period breaches recorded since their last audit in September 2016.

## 1.8 ICP data

Hunet provided a list file as at March 2017. The list file was examined by status:

| ICP Status | Number of ICPs March 2017 | Number of ICPs August 2016 | Number of ICPs May 2016 |
|---|---|---|---|
| Active | 4,288 | 3,732 | 3,402 |
| Inactive – vacant (1,4) | 26 | 40 | 10 |
| Inactive - reconciled elsewhere (1,5) | 0 | 0 | 0 |
| Inactive – ready for decommissioning (1,6) | 0 | 1 | 0 |
| Inactive AMI remote disconnection (1,7) | 28 | 19 | |
| Inactive – at pole fuse (1,9) | 1 | 0 | 0 |
| Inactive - new connection in progress (1,12) | 1 | 83 | 1 |
| Decommissioned | 14 | 9 | 9 |

The active ICPs are summarised by category in the table below:

| Category | 2017 | Aug 2016 | May 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|---|
| 1 | 4,274 | 3,737 | 3,388 | 2,717 | 2,352 | 1,764 |
| 2 | 14 | 14 | 14 | 13 | 10 | 9 |
| Blank | - | 1 | - | - | - | - |

## 1.9 Authorisation received

No information was required to be sought from other parties, therefore no letter of authorisation was required.

# 2. Operational infrastructure

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

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

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

**Audit Observation**

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

**Audit Commentary**

Hunet monitors the registry notification files to update their database when registry information changes. As recorded in the last two audits, the list file used to be checked once per month to identify current and historic changes, but this validation is not being carried out. Despite this, this audit found fewer discrepancies as the daily registry notification files are being better monitored.

I reported in the last audit that Hunet expected to have registry validation reporting to be in place by the end of September 2016. This still under development and this is expected to validate against status and ANZSIC codes only. Full validation is still to be developed. I have repeated the recommendation from the last audit below to maintain visibility of this matter.

The analysis of the list file returned the following findings:

| Item No. | Issue | 2017 | Comments |
|---|---|---|---|
| 1 | ICP not managed in Hunet's system | 1 | ICP 1001276031UN80C is recorded on the registry at status "new connection in progress" but the ICP was not found in Hunet's system. |
| 2 | Status mismatch between registry and Hunet | 1 | ICP 0001411741UN943 recorded as inactive remotely disconnected but it is active in Hunet's system. |
| 3 | Active with no MEP | - | |
| 4 | Incorrect submission flag | - | |
| 5 | Blank ANZSIC codes | - | |
| 6 | ANZSIC "T999" not stated | 1 | Switched in from :PUNZ in March 2017. |
| 7 | ANZSIC "T994" don't know | 9 | This is a reduction from the 96 recorded in the last audit. |

| Item No. | Issue | 2017 | Comments |
|---|---|---|---|
| 8 | Category 9 but Active with MEP and UML "N" | - | All ICPs with category 9 meters have an inactive status. |
| 9 | ICPs with Distributor unmetered load populated but retail unmetered load is blank | - | |
| 10 | ICPs with unmetered load flag Y but load is recorded as zero | - | |
| 11 | ICPs with incorrect shared unmetered load | - | |
| 12 | ICPs with Distributed Generation indicated but no DG profile | 1 | ICP 0000609129UN921- this has been recorded in the last two audits. The customer has advised the embedded generation is no longer connected. This will require further investigation to check if DG is connected or not and whether a meter change is required or ICP will need to switch away. |

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Regarding: Clauses 10.6, 11.2, 15.2 | Registry validation reporting be put in place ASAP. | Full validation will be developed asap | Identified |

Hunet has an adequate "timeline" capability to ensure revisions occur against the aggregation factors in place at the time of the initial submission.

Hunet have not taken all practicable steps to ensure information is correct and not misleading. This is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clauses 10.6, 11.2, 15.2<br><br>From/to: entire audit period | No registry validation in place resulting in discrepancies not being identified and corrected at the earliest opportunity.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: Twice<br>Controls: Weak<br>Breach Risk Rating: 6 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Medium | The current validation process is manual and hard to manage with a growing customer base. The potential for errors to not be corrected is high. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| We carried out training with switching team but some orders handled by other teams – provisioning team & credit control team. I believe that is why there has been some missing information or invalid status updates due to insufficient training. The correction are on the way | 30 Sep 2017 | Investigating- training addresses part of the issue but reporting to identify discrepancies is needed. I note that development has been underway in relation to this for almost 12 mths – confirmation of delivery of this is needed. |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will keep carrying out training and discussion with switching team for information details on registry. We then change our ordering process so all orders related to ICP and metering updates must be reported to switching team. Switching team will do clearing validation on their email box if they have updated the changes correctly. | 30 July 2017 | |

## 2.2 Provision of information (Clause 15.35)

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

**Audit Observation**

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

**Audit Commentary**

This area is discussed in a number of sections in this report and compliance is confirmed.

## 2.3 Data transmission (Clause 20 Schedule 15.2)

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

**Audit Observation**

I observed the AMS, Metrix and Datacol SFTP folders, and traced a read from each through to Hunet's system.

**Audit Commentary**

All data from MEPs and agents is transmitted to Hunet via SFTP, which ensures the security and integrity of the data.

## 2.4 Audit trails (Clause 21 Schedule 15.2)

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

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

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

**Audit Observation**

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

**Audit Commentary**

The logs for the following activities were reviewed.

- **Meter readings:** an audit trail is available for all meter readings.
- **Registry notifications:** a compliant audit trail is recorded within the registry.
- **Switching files:** a compliant audit trail is recorded within the registry, and within Hunet's system.
- **Reconciliation reports:** a compliant audit trail is recorded within the allocation portal.

Compliance is confirmed.

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

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

**Audit Observation**

I reviewed Hunet's current terms and conditions.

**Audit Commentary**

Hunet's current terms and conditions with their customers includes consent to access for authorised parties for the duration of the contract. Compliance is confirmed.

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

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

*- the Authority*

*- an ATH*

*- an auditor*

*- an MEP*

*- a gaining metering equipment provider.*

**Audit Observation**

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

**Audit Commentary**

Hunet's contract with their customers includes consent to access for authorised parties for the duration of the contract. Hunet confirmed that they have been able to arrange access for other parties when requested. Compliance is confirmed.

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

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

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

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

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

**Audit Observation**

A registry list file was reviewed for the audit period to confirm that Hunet supplied only category one and two metered sites, and all ICPs had an MEP recorded.

**Audit Commentary**

The physical meter location point is not specifically mentioned in the Terms and Conditions, but the existing practices in the electrical industry achieve compliance.

Hunet deals with category one and two sites only, therefore they do not deal with installations with loss compensation.

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

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

**Audit Observation**

I reviewed Hunet's current terms and conditions.

**Audit Commentary**

Hunet's terms and conditions contain the appropriate clauses to achieve compliance with this requirement.

## 2.9 Electrical connection of an ICP (Clause 10.32)

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

**Audit Observation**

The new connection process was examined in detail to evaluate the strength of controls. The list file and event detail report for the audit period from 1/8/16 to 31/3/17 were analysed to confirm process compliance and controls are functioning as expected.

**Audit Commentary**

Hunet does not deal with many new connections. They trade only on the Vector network. The new connection process is manual with all requests for new connections made directly to Vector via their service portal. Once the ICP is created they take the ICP to the "new connection in progress" status in the registry and nominate the MEP. They then await notification by way of the metering paperwork being returned from the MEP to then change the status to "Active". There is no automated interface between Hunet's system and the registry. All changes must be made loaded directly to the registry by the operator. This process is discussed in more detail in **Section 3.5 Provision of information to the registry**. They have had one apartment building containing 82 new connections energised during the audit period. All had an MEP who accepted responsibility prior to energisation. Whilst the process is manual due to the small volume handled, the process works. Compliance is confirmed.

## 2.10 Metering certification (Clause 10.33(2))

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

**Audit Observation**

The list file and event detail report for the audit period was examined and found 82 new connections made during the audit period.

**Audit Commentary**

All had a certified metering installed and all were certified within five days of livening. I noted that two ICPs had a variance of one day between the active date and the meter certification date. I sited the energisation paperwork for both and confirm these were taken to active on the correct date. Compliance is confirmed.

I note that ICP 1001294848LC724 was interim certified. This certification expired on 26/11/16 but wasn't recertified by Metrix until 10/2/17. It is the MEP's responsibility to recertify meter. I raise this as an issue to be examined during Metrix's next MEP audit.

| Issue | Description | Audited party comment | Action |
|---|---|---|---|
| Regarding: Clauses 10.38(a) | ICP 1001294848LC724 had no certification from 26/11/16 - 10/2/17. Metrix is the MEP. | Hunet has been gaining the ICP since 28/09/2016 | To be raised at Metrix's next MEP audit. |

## 2.11 Arrangements for line function services (Clause 11.16)

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

**Audit Observation**

A registry list with history was reviewed to confirm the networks Hunet traded on during the audit period.

**Audit Commentary**

Hunet trades only on the Vector network and confirmed there is an arrangement in place. Compliance is confirmed.

## 2.12 Arrangements for metering equipment provision (Clause 10.36)

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

**Audit Observation**

A registry list with history was reviewed to confirm all MEPs for Hunet ICPs during the audit period.

**Audit Commentary**

Hunet confirmed there are arrangements in place with all MEPs. All active ICPs have an MEP recorded. Compliance is confirmed.

# 3. Maintaining registry information

## 3.1 Obtaining ICP identifiers (Clause 11.3)

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

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

**Audit Observation**

The list file was analysed and found that two ICPs have been requested since the last audit.

**Audit Commentary**

Hunet applied for these ICPs in accordance with the Code. Compliance is confirmed.

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

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

**Audit Observation**

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

**Audit Commentary**

The new connection process is detailed in **Section 2.9 Electrical connection of an ICP**. The process in place ensures that the trader required information is populated as required by this clause. Compliance is confirmed.

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

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

**Audit Observation**

The process to manage status changes is discussed in detail in Sections **3.8** and **3.9** below. In this section I have examined the event detail report for the audit period of 1/9/16 - 31/3/17 to determine the overall performance for that period. I used the extreme case methodology to sample ICPs that were updated greater than 30 days from the event date for each of the status type updates.

The process to manage MEP changes is discussed in detail in **Section 3.11 Changes of MEP**. The event detail analysis identified 77 MEP nomination events. The nomination date was compared to the metering event effective date to identify any ICPs that were not nominated within five business days.

**Audit Commentary**

The event detail report analysis found:

| Event | Year | Total ICPs | ICPs Notified Within 5 Days | ICPs Notified Greater Than 5 Days | Average Notification Days | Percentage Compliant |
|---|---|---|---|---|---|---|
| Change to active - Reconnections | 2015 | 13 | 2 | 11 | 39 | 15% |
| | May 2016 | 3 | 0 | 3 | 84 | 0% |
| | Aug 2016 | 40 | 31 | 9 | 15.25 | 78% |
| | 2017 | 78 | 69 | 9 | 20.85 | 89% |
| Change to inactive – Vacant | May 2016 | 10 | 9 | 1 | 21.5 | 90% |
| | Aug 2016 | 70 | 44 | 26 | 98.3 | 63% |
| | 2017 | 39 | 21 | 18 | 198.33 | 54% |
| Change to inactive – AMI remote disconnection | Aug 2016 | 9 | 9 | 0 | 0 | 100% |
| | 2017 | 101 | 98 | 3 | 1.3 | 97% |

| Event | Year | Total ICPs | ICPs Notified Within 5 Days | ICPs Notified Greater Than 5 Days | Average Notification Days | Percentage Compliant |
|---|---|---|---|---|---|---|
| Change to inactive - at pole fuse | 2017 | 1 | 0 | 1 | 138 | 0% |
| Change to de-energised ready for decommissioning | 2015 | 1 | 0 | 1 | 1 | 0% |
| | May 2016 | 0 | - | - | - | - |
| | Aug 2016 | 1 | 0 | 1 | 48 | 0% |
| | 2017 | 1 | 0 | 1 | 6 | 0% |

**Reconnections**

I checked the nine reconnected ICPs that were backdated greater than five days and found:

- ICP 0000229518UNEEF was a backdated switch that was corrected to active as soon as the switch completed
- ICP 0003133752AA531 was a correction to the start date identified in the last audit
- The remaining seven ICPs were corrections to ICP statuses that were missed due to the manual processes in place with an average of 204 days to update the registry. These would have been picked up earlier if there was registry discrepancy reporting in place, hence my recommendation in **Section 2.1 Relevant information**.

**Inactive – Vacant**

I checked six of the 18 ICPs that were backdated greater than 30 days and found that these had already been updated to inactive - vacant in August for June 2016 and then the event was reversed in August 2016 returning them to active. This was done due to a misunderstanding in the use of "active-vacant" vs. disconnected vacant discovered in the last audit. They have then been backdated to vacant in December 2016 for the same date in June 2016. These sites have not been disconnected and therefore are recorded at the incorrect status on the registry.

**Inactive – Disconnected remotely by AMI meter**

Hunet have begun to use the "inactive - AMI remote disconnection" status. All of these updates were completed on the same day as the event with the exception of three ICPs. These were examined and found that the requests had been sent to the MEP but no update was received so the job was re-requested and then advice that the original request had been actioned, hence these were backdated. There are strong process controls in place for this status hence the overall high level of compliance.

**Inactive – Meter removed**

In the last audit ICP 0140009728LC82D status was recorded incorrectly as "Active" with the meter category 9 and UML "N" but it was determined that the ICP had been de-energised and the meter had been removed. This has since been correctly backdated to "Inactive - meter removed" and should remain at this status until such time as advised by either the network or the property owner that this site is to be decommissioned. Whilst this is technically non-compliant for backdating greater than five days this action complies with the requirement to provide complete and accurate information.

**Inactive – Ready for decommissioning**

ICP 0227742052LC1B8 was backdated to this status on 10/3/17 for the 2/3/17 (six business days). This was examined and found that the meter was removed and the final read was taken on 5/3/17. This is discussed further in **Section 3.4 Trader responsibility for an ICP**.

The late updating of the registry is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 10 of Schedule 11.1<br><br>From/to: entire audit period | 32 status updates were not processed within 5 business days of the event on the Registry.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: Six times previously<br>Controls: Moderate<br>Breach Risk Rating: 4 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Medium | Whilst a relatively small number of ICPs are affected and manual processes are better managed, the ability to identify incorrect statuses if the manual process is missed is lacking. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| The corrections are on the way. | 31 Aug 2017 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| There has been some invalid status updates on vacant ICPs by our credit control team. They updated some active vacant ICPs to Inactive in order to remove them from their following-up list because they had had no read updates for a long time. We will training credit control team not to update status on their end. Only switching team will be able to update status when they receive completed paper work of disconnection from meter companies. | 31 Aug 2017 | |

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

*A trader becomes responsible for an ICP when the trader is recorded in the registry as being responsible for the ICP. The responsible trader must ensure that an MEP is recorded in the Registry.*

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

**Audit Observation**

A registry list file was examined to confirm that all active ICPs had a valid MEP.

The process for the decommissioning of ICPs was examined. One ICP was decommissioned during the audit period, and it was checked to confirm the process and confirm controls are in place.

**Audit Commentary**

The new connection process ensures that all ICPs are taken to "inactive - new connection in progress" and the MEP nomination is sent at the same time. A check of the list file and found all active ICPs had an MEP.

The last actual reading is normally the one taken at the time of de-energisation. The MEP responsible is made aware that the site is to be decommissioned. As discussed in **Section 3.3 Changes to registry information**, ICP 0227742052LC1B8 had a final read gained on the 5/3/17 but was incorrectly was taken to "inactive - ready for decommissioning" for 2/3/17. This is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: 11.18<br><br>From/to: 2/3/17-5/3/17 | ICP taken to ready for decommissioning status three days earlier than the final read date.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Moderate<br>Breach Risk Rating: 2 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | This appears to be due to human error. Hunet decommission a very small number of ICPs therefore the market impact is low. Discrepancy reporting would assist in identifying such errors. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| I believe that it was a human mistake. We were advised from the customer that the property is demolished on 06/03/2017. We should have put the effective date as 06/03/2017. We will see if we can reverse and correct the event. | 31 Aug 2017 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will also carry out training that we validate input data and always make changes based on the paper work. | 31 Aug 2017 | |

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

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

**Audit Observation**

The event detail report was examined to confirm that information is provided to the registry within five business days of commencement of trading at each ICP. 82 new connections have been completed during the audit period.

**Audit Commentary**

As detailed in **Section 2.9 Electrical connection of an ICP**, Hunet's new connection process is that they will only take an ICP to active once they receive the metering paperwork from the MEP confirming metering has been certified and energised. If the MEP is late sending the data this causes Hunet to be late updating the ICP to active.

Analysis of the event detail report showed the following:

| Event | Year | Total ICPs | ICPs Notified Within 5 Days | ICPs Notified Greater Than 5 Days | Average Notification Days | Percentage Compliant |
|---|---|---|---|---|---|---|
| Changes to active - new connections | 2016 | 3 | 0 | 3 | 23.6 | 0% |
| | 2017 | 82 | 55 | 27 | 6.1 | 67% |

27 of these ICPs were updated to active greater than five days after energisation. These were all examined and found that this was due to the return of late paperwork from the MEP. I note that 18 of the 27 were updated one day late. This is recorded as non-compliance below.

As noted in the previous audit, Vector has only updated the initial energisation date for four of these new connections.

| Non-compliance | Description |
|---|---|
| With: Clause 9 of Schedule 11.1<br><br>From/to: 29/7/16-12/10/17 | Registry not updated within 5 days of commencement of trading for 27 ICPs.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Five times<br>Controls: Moderate<br>Breach Risk Rating: 2 |
| Audit Risk Rating | Rationale for audit risk rating |
| Low | Hunet do not have a large volume of new connections. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| We will get them closed as soon as possible | 30 Sep 2017 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| It was our first time that we install a bulk of new ICPs for a multiple dwelling unit and there was no proper manual of the work-process on the job. Through the audit process, HNET achieved a clear idea and switching team will actively check and update the registry information with great attention. | 30 Sep 2017 | |

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

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

**Audit Observation**

The process to capture and manage ANZISC codes was examined. A snapshot registry list file was reviewed to check ANZSIC codes.

**Audit Commentary**

The ANZSIC code is captured when the customer registers. As discussed in **Section 2.1 Relevant Information** above, ANZSIC code validation is in development.

The list file was analysed and found nine active ICPs where the code is T994 (don't know) and one ICP where the code is T99 (not stated). This is a reduction from the 96 ICPs recorded in the last audit. I checked these on the registry and found nine of them have been with Hunet for some time. All of them relate to small industrial / retail type premises. These can be difficult to determine without the co-operation of the customer. Hunet are continuing to resolve these. The lack of a valid code is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 9(1)(k) of schedule 11.1<br><br>From/to: Entire audit period | Inaccurate ANZSIC codes populated for ten ICPs.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Four times<br>Controls: Strong<br>Breach Risk Rating: 1 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | Good progress has been made since the last audit. The remaining ten ICPs continue to be worked on to resolve. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| A new field was added in the service application form in December 2015. Internal rules enhanced to achieve the information more effectively. | 30 July 2017 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will always try our best to gain correct business type from our customers and to reduce unknown type. | 30 July 2017 | |

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

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

**Audit Observation**

A registry list with history was reviewed for the audit period to confirm that Hunet has not supplied any ICPs with unmetered load.

**Audit Commentary**

Hunet has not supplied any unmetered load during the audit period. This is checked before the customers application is accepted. Compliance is confirmed.

## 3.8 Management of "active" status (Clause 17 Schedule 11.1)

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

**Audit Observation**

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

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

**Audit Commentary**

The new connection process is discussed in detail in **Sections 2.9 & 3.5** above. Hunet's system will not allow more than one party per ICP, nor will it allow an ICP to be set up without both a meter and Metering Equipment Provider. Hunet's processes ensure that there is only one customer associated with any ICP and that there is a method of quantification. No ICPs were found at the status "Inactive - new connection in progress" with an initial energisation date populated. However, ICP 1001276031UN80C is recorded on the registry as being a new connection in progress but there is no record of this ICP in Hunet's database. It was claimed by Hunet on 20/3/15. This is being investigated.

A service request is issued for all reconnections to the relevant party. The status is updated once the service request is returned confirming completion. The Registry is updated manually. If this step is missed the status can remain out of alignment due to the lack of registry discrepancy reporting as discussed earlier in this report.

The ICPs at an incorrect status on the Registry is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 17 of Schedule 11.1<br><br>From/to: entire audit period | Recording of ICPs at the incorrect status.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: Twice<br>Controls: Moderate<br>Breach Risk Rating: 4 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Medium | The lack of registry discrepancy reporting is resulting in ICPs not being corrected for some time, whilst small in volume if left unchecked this could have a larger impact as the customer base grows. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| If we are not able to find the customer who requested the ICP install, then we will request Vector if they can decommission the ICP. | 31 July 2017 | Investigating- discrepancy reporting is needed to identify any errors made by staff |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| ICP creation orders have been submitted by individual staff members and they were not fully trained. We will change the ordering process so only switching team submit orders and they follow up until the orders get completes. | 31 July 2017 | |

## 3.9 Management of "inactive" status (Clause 19 Schedule 11.1)

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

**Audit Observation**

An event detail report for the audit period was reviewed, to identify all changes to inactive during the audit period.

The process for the management of ICP disconnection was examined. The event detail report for the audit period was analysed and the findings in relation to the timeliness of updates to registry is recorded in **Section 3.3 Changes to registry information**.

**Audit Commentary**

Hunet manages all sites at an inactive status in an extract from the database called the "Power empty house management" spreadsheet. As with reconnections, a service request is issued for all disconnections to the relevant party. The status is updated once the service request is returned confirming completion. The Registry is updated manually. If this step is missed the status can remain out of alignment due to the lack of registry discrepancy reporting as discussed earlier in this report.

I reported in the last audit that there was a misunderstanding in relation to the use of statuses that caused some ICPs that had been long term "active - vacant" are being changed in the registry to "inactive - vacant" even though they hadn't been de-energised. I found three further examples of this from my checking of the AN file switching file reason codes where the ICPs had been incorrectly changed to "inactive vacant" (detailed further in **Section 4.8 Losing trader provides information to the registry**). As discussed in **Section 3.3 Changes to Registry**, it appears that some of these same ICPs have again been returned to inactive vacant when they have not been disconnected. This is recorded as non-compliance below.

The ICPs at an incorrect status on the Registry is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 19 of Schedule 11.1<br><br>From/to: entire audit period | Recording of ICPs at the incorrect status.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Twice<br>Controls: Weak<br>Breach Risk Rating: 6 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Medium | The lack of registry discrepancy reporting is resulting in ICPs not being corrected for some time, whilst small in volume if left unchecked this could have a larger impact as the customer base grows. The incorrect application of statuses is still evident. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| We carried out training with switching team but some orders handled by other teams – provisioning team & credit control team. I believe that is why there has been some missing information or invalid status updates due to insufficient training. The correction are on the way | 30 Sep 2017 | Investigating- discrepancy reporting is needed to identify any errors made by staff |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will keep carrying out training and discussion with switching team for information details on registry. We then change our ordering process so all orders related to ICP and metering updates must be reported to switching team. Switching team will do clearing validation on their email box if they have updated the changes correctly | 30 Sep 2017 | |

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

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

**Audit Observation**

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

**Audit Commentary**

Hunet only trades on the Vector network. All new connections are taken to the "inactive - new connection in progress" status so it is unlikely that there are any ICPs at the "Ready" status. Hunet have not received any such requests from Vector.

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

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

**Audit Observation**

The process to manage a change of MEP on an existing ICP was examined. An event detail report for the audit period was reviewed.

**Audit Commentary**

When an MEP change is required, Hunet nominates the MEP on the registry and logs a job for meter replacement at the same time.

As discussed in **Section 3.3 Changes to Registry** above, the event detail analysis identified 77 MEP nomination events. The nomination date was compared to the metering event effective date and confirmed that all ICPs were nominated within five business days of the meter certification date. Compliance is confirmed.

# 4. Performing customer and embedded network switching

I note that the switch breach reporting is in the process of being updated by Jade to align with the current code. Therefore the switch breach report has been used to indicate non-compliance but due to inaccuracies it is not always possible to give a definitive number of the volume of late files.

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

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

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

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

**Audit Observation**

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

**Audit Commentary**

Hunet's processes are compliant with the requirements of the Section 36M of the Fair Trading Act 1986. The withdrawal process is used if the customer changes their mind. Customers are advised of their responsibilities in relation to this matter.

The event detail report was examined in relation to Hunet as the gaining trader for a sample of five NHH standard switches. The registry was informed via the NT file within two business days of all conditions in relation to the agreement being met for all ICPs.

Compliance is confirmed

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

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

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

**Audit Observation**

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

The switch breach report was examined for the audit period of 1/8/16 to 31/3/17.

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

**Audit Commentary**

This found ICP 0000190847UN22C is an advanced metered site but the code "AA" was sent rather than the more accurate code of "AD". This is recorded as non-compliance below.

The switch breach history report for the audit period was reviewed, and showed no late AN files.

There have been 348 transfer switches out during the audit period; all occurred within ten business days and 333 (96%) occurred within five business days. ANs are normally processed on the day the NT is received. Compliance is confirmed.

| Non-compliance | Description |
|---|---|
| With: Clause 3 of Schedule 11.3<br><br>From/to: 24/11/16-24/11/16 | Incorrect AN response code was provided for one ICP with AMI metering. AA was applied instead of AD.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Moderate<br>Breach Risk Rating: 2 |
| Audit Risk Rating | Rationale for audit risk rating |
| Low | There was one error found. Other participants could confirm AMI metering was in place for the affected ICPs through other registry fields. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| We carried out training with switching team. | 14 July 2017 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will always try our best put correct code on ANs | 14 July 2017 | |

## 4.3 Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3)

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

**Audit Observation**

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

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

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

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

**Audit Commentary**

The accuracy of the content of CS files was checked and found that all five files had errors. As recorded in the previous audit reports, the average daily consumption field is populated with the same figure as the original CS switch figure from the previous trader. Whilst this is often accurate, it needs to be calculated from Hunet's records. Hunet indicated in their last audit response that the software fix for this is due for deployment in October 2016. The manual work around process indicated in the last audit has not been put in place. This is recorded as non-compliance below.

I found two examples where the midnight read was incorrectly dated as the same date as the event date. Additionally, ICP 0000190178UN303 had an AMI midnight read and that was sent as an estimate rather than an actual, and ICP 0000137321UNDD5 had an incorrect midnight read sent for the event date rather than the midnight read for the day before the event (as per the switch event meter reading application applies). This is due to a misunderstanding by staff of how to correctly apply these reads. This is recorded as non-compliance in **Section 6.7 NHH Meter Reading Application** below.

The switch breach report was checked and confirmed that all CS files were sent within the required timeframe during the audit.

| Non-compliance | Description |
|---|---|
| With: Clause 5 of Schedule 11.3 and Clause 15.2 of Part 15.<br><br>From/to: Entire audit period | Incorrect standard CS file content including:<br>• incorrect labelling of reads and switch reading sent for the incorrect event date<br>• incorrect read type<br>• incorrect last read date<br>• inaccurate average daily consumption.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: Six times<br>Controls: Weak<br>Breach Risk Rating: 6 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Medium | System issue regarding average daily consumption is still evident. A variety of errors identified indicating staff training is required. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| This is due to a misunderstanding by staff of how to correctly apply these reads and we fully trained switching to put the correct read and date. | 14 July 2017 | Investigating- the response addresses the training issue. The system issue is addressed in response to Section 4.10 below |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| I have reviewed the recent final reads and they look all good now. I can confirmed that our switching team is well trained. | 14 July 2017 | |

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

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

**Audit Observation**

The process for the management of read requests was examined.

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

A combined sample of ten read change requests from the event detail report was selected using the diverse sample methodology. The sample included both transfer and gaining trader read requests, files exchanged with different traders, and a mix of acceptances and rejections.

All read change rejections, and a sample of five read change acceptances were selected from the event detail report using the diverse sample methodology. The sample covered both transfer and gaining trader read requests, and files exchanged with different traders.

The switch breach history report for the audit period was reviewed, and no late read change requests or acknowledgement were identified for transfer switches.

**Audit Commentary**

When a high or low read is identified through the read validation process for a new ICP switched in, the ICP is investigated to determine whether a read change is required.

No late read change requests or acknowledgements were identified for transfer switches.

No data accuracy issues were identified for transfer read change requests or acknowledgements. All read changes rejected had been rejected for valid reasons. Compliance is confirmed.

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

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

**Audit Observation**

The process for the management of read requests was examined. The event detail report and switch breach report were analysed. A sample of five ICPs for each of the following scenarios were selected using the typical sample methodology from the event detail report.

- other retailer's request accepted by Hunet
- other retailer's request rejected by Hunet.

The sample covered both transfer and gaining trader read requests, and a variety of other participants.

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

**Audit Commentary**

No data accuracy issues were identified for transfer read change requests or acknowledgements. There were no read rejections in relation to transfer switches for the audit period.

No late read change requests or acknowledgements were identified for transfer switches. Compliance is confirmed.

## 4.6 Disputes – standard switch (Clause 7 Schedule 11.3)

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

**Audit Observation**

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

**Audit Commentary**

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

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

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

**Audit Observation**

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

**Audit Commentary**

Hunet's processes are compliant with the requirements of the Section 36M of the Fair Trading Act 1986. The withdrawal process is used if the customer changes their mind. Customers are advised of their responsibilities in relation to this matter.

The event detail report was examined in relation to Hunet as the gaining trader for a sample of five NHH standard switches. The registry was informed via the NT file within two business days of all conditions in relation to the agreement being met for all ICPs.

Compliance is confirmed.

## 4.8 Losing trader provides information – switch move (Clause 10 Schedule 11.3)

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

**Audit Observation**

An event detail report for the audit period was reviewed, to identify AN files issued by Hunet during the audit period. A sample of three ANs (or all if less than three were available) with each acknowledgement code were reviewed to determine whether the codes had been correctly applied.

The switch breach history report for the audit period was reviewed, and showed two late AN files.

**Audit Commentary**

I identified three switch move ICPs (0000129769UN144, 0114241715LC48F & 0000206726UN026) where the incorrect AN response "PD" (premise de-energised) code was applied when none of these sites were de-energised. This is discussed in **Section 3.3 Changes to Registry**. These sites had also been updated to the incorrect status code on the registry. All three were corrected to active by the gaining trader. This was due to human error. This is recorded as non-compliance below.

The switch breach report recorded two late AN files. These were checked on the registry and found:

- ICP 0199612366LC4EB – the AN file was sent late.
- ICP 1001294848LC724 an AN was never sent and the CS file was sent later than five business days of the NT being received (not reported in the switch breach report). The code requires that an AN file is sent in every instance.

This is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 10 of Schedule 11.3<br><br>From/to: entire audit period | Incorrect AN response codes were provided for three ICPs.<br>1 late AN file sent.<br>1 AN file not sent.<br>1 late CS file sent late.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach Risk Rating: 6 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Medium | There were a small number of errors found. The incidence of the registry status being incorrect as well as the incorrect AN code will cause the gaining trader to incorrectly believe the ICP is de-energised and is therefore misleading. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| We carried out training with switching team | 14 July 2017 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Switching team have never used PD due to lake of acknowledge of AN types. They are fully trained now and they know what to put when ICP is disconnected. Switching team now also check switch breach page on EA regularly to see if they are missing any switch to response. | 14 July 2017 | |

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

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

**Audit Observation**

The setting of event dates for move switches was examined. The event detail report for the audit period was examined comparing the NT requested event date with the AN event date sent by Hunet.

**Audit Commentary**

Review of the event detail report showed six ICPs where the switch event date was earlier than the gaining trader's request date. These were all checked on the registry and confirmed for four ICPs that the AN sent event date was not earlier than the requested date. All were withdrawn switches which resets the event date to the withdrawal request date hence they appear to be earlier. The remaining two ICPs (0445165049LC73D & 0554411217LC961) the event date was set one day earlier than the requested date in the AN file. For ICP 0445165049LC73D the CS file was actually sent for the gaining trader's requested date. ICP 0554411217LC961 switch was subsequently withdrawn due to a metering issue. The setting of the event date earlier than the losing traders requested date is recorded as non-compliance

15 ICPs appeared to have an event date set greater than 10 days after the date the NT request was received. In all cases I found these were compliant and an earlier switch withdrawal caused them to appear backdated. Compliance is confirmed.

| Non-compliance | Description |
|---|---|
| With: Clause 10(2) of Schedule 11.3<br><br>From/to: 5/12/17-11/1/17 | Two switch event dates set one day earlier than requesting traders date in the AN file.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Moderate<br>Breach Risk Rating: 2 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | Whilst the date in the AN was earlier the CS file was sent for the requested event date for 2 ICPs. There were exceptions with the remaining 4 event dates and the event date was set correctly. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| I believe that they were all done by human mistake. Switching team know what they should do. | 14 July 2017 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will keep carrying out training that we validate input data. | 14 July 2017 | |

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

*If the losing trader has provided information to the registry in accordance with clause 10(a), within five business days after of receipt of the switch request, the losing trader must provide a CS file.*

**Audit Observation**

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

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

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

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

**Audit Commentary**

As recorded in the previous audit reports, the accuracy of the content of CS files was found that the average daily consumption field is populated with the same figure from the CS file from the previous trader. Whilst this is often accurate, it needs to be calculated from Hunet's records. Hunet indicated in their last audit response that the software fix for this is due for deployment in October 2016. The manual

work around process indicated in the last audit has not been put in place. This is recorded as non-compliance below.

I found that the midnight read of 25/8/16 for ICP 0000143687UND79 was incorrectly dated as the same date as the event date of 26/8/16. This is due to a misunderstanding by staff of how to correctly apply these reads. This is recorded as non-compliance below.

The switch breach report was checked and confirmed that all CS files were sent within the required timeframe during the audit.

| Non-compliance | Description |
|---|---|
| **With:** Clause 11 of Schedule 11.3 and Clause 15.2 of Part 15.<br><br>**From/to:** Entire audit period | Incorrect standard CS file content including:<br>• incorrect last read date<br>• inaccurate average daily consumption.<br>**Potential impact:** Low<br>**Actual impact:** Low<br>**Audit history:** Six times<br>**Controls:** Weak<br>Breach Risk Rating: 3 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | The issue of incorrect average daily consumption remains unresolved. Overall the content of the move switch files was found to be accurate |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| We need to implement a new function on our system in order to extract and update accurate average daily consumption. We currently don't have a process of reviewing daily consumption. | 28 Feb 2018 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| All involved teams including data development and switching team will have a discussion meeting to find a best way how we can implement the function. | 28 Feb 2018 | |

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

*As of October 9th, 2015, the gaining trader may provide an AMI switch event meter reading within <u>five</u> business days of the event date to the losing trader. In this instance the losing trader MUST use the gaining traders switch event meter reading. If no AMI switch event meter reading is available the gaining trader MUST use the losing traders switch event meter reading. If the validated meter reading or permanent estimate provided by the losing trader differs by less than 200 kWh from a value established by the gaining trader for a Move Switch event, the gaining trader uses the losing trader's validated meter reading or permanent estimate as the switch event meter reading.*

**Audit Observation**

The process for the management of read requests was examined.

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

A combined sample of ten read change requests from the event detail report was selected using the diverse sample methodology. The sample included both transfer and gaining trader read requests, files exchanged with different traders, and a mix of acceptances and rejections.

All read change rejections, and a sample of five read change acceptances were selected from the event detail report using the diverse sample methodology. The sample covered both transfer and gaining trader read requests, and files exchanged with different traders.

The switch breach history report for the audit period was reviewed. Two late read change requests and three late acknowledgement were identified for gaining trader read changes.

**Audit Commentary**

The switch breach report recorded that all RR files were sent within the allowable timeframe during the audit period.

The sample checked found that for ICP 1001112123UN34C was sent with an AMI read for 5/1/17 whilst the event date was 7/1/17 (this is the same issue of incorrectly applying reads recorded as non-compliance in **Section 4.3 Losing Trader must provide final information**). Flick requested a read change for the midnight read of the 6/1/17 with the correct AMI read within five days of the event date. Hunet incorrectly rejected this request. This is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 12(2A)&(2B) of Schedule 11.3<br><br>From/to: 5/1/17-7/1/17 | One read request incorrectly rejected.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach Risk Rating: 3 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | This was the only incidence in the audit period. This highlights a staff training issue and that no check is in place to ensure staff are adhering to the code requirements. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| The RR for the ICP 1001112123UN34C was an invalid request. The read on RR was 34149(A) but the actual read from AMI was 34102. That was the reason why we rejected the RR. | 14 July 2017 | Disputed- I noted the customer moved out 5/1/17 and the read for this date was sent with an event date of 7/1/17 when midnight read of 6/1/17 should have been sent – this is what Flick sent through and this should have been accepted. |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will keep carrying out training and monitor switch breach on EA, so we don't miss our due to response. | 14 July 2017 | |

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

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

**Audit Observation**

Hunet do not trade half hourly therefore there were no gaining trader switches. The event detail report for the audit period was examined and confirmed this.

**Audit Commentary**

Hunet did not complete any half hour switches during the audit period.

## 4.13 Losing trader provision of information – gaining trader switch (Clause 15 Schedule 11.3)

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

**Audit Observation**

Hunet do not trade half hourly therefore there were no gaining trader switches. The event detail report for the audit period was examined and confirmed this.

**Audit Commentary**

Hunet did not complete any half hour switches during the audit period.

## 4.14 Gaining trader to notify registry – gaining trader switch (Clause 16 Schedule 11.3)

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

**Audit Observation**

Hunet do not trade half hourly therefore there were no gaining trader switches. The event detail report for the audit period was examined and confirmed this.

**Audit Commentary**

Hunet did not complete any half hour switches during the audit period.

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

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

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

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

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

**Audit Observation**

A sample of five ICPs using the typical sampling methodology from the event detail report for the audit period for switch withdrawal requests and rejections was checked. The switch breach report for the audit period and the event detail report were examined to confirm timeliness of switch requests. This is not being correctly identified in the switch breach report.

**Audit Commentary**

The sample checked of withdrawal requests rejected by Hunet found that all had been rejected for valid reasons. Accepted withdrawals had been processed as expected.

I reviewed five withdrawal requests, and checked the reason codes and found all were correct. This is an improvement from the findings in the last audit.

Two late notifications of withdrawal were identified on the switch breach report. Both were investigated and found that neither switch was withdrawn.

Analysis of the event detail report found three late switch withdrawal requests. Two were due to the wrong premise being switched in. These were rectified as soon as this was discovered. The third withdrawal request for ICP 0830848633LC317 was sent for a metering issue and was rejected by Bosco. This was sent in error as the customer was moving to a new premise and an NT-MI should have been sent. The late sending of switch withdrawals is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 17 & 18 of Schedule 11.3<br><br>From/to: Entire audit period | Three switches withdrawn more than 2 months after the event date.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Twice<br>Controls: Moderate<br>Breach Risk Rating: 2 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | The three late switch withdrawals were actioned as soon as practicable. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| We haven't had updated meter replacement on our system and this issue caused the late switch withdrawal requests. We are now checking all the meters having metering issue and will update the new information on our system asap. | 31 Dec 2017 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We have created a new email address metering@megaenergy.co.nz in order to follow up all the metering changes and replacement and so we can update the changes within 5 days. | 31 July 2017 | |

## 4.16 Metering information (Clause 21 Schedule 11.3)

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

**Audit Observation**

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

**Audit Commentary**

All meter readings used in the switching process are validated meter readings or permanent estimates. Non-compliance relating to the incorrect labelling of reads is recorded in sections **4.3** and **4.10**.

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

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

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

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

**Audit Observation**

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

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

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

**Audit Commentary**

Hunet are not a switch protected retailer. Staff are expected to manually check whether the trader is switch protected or not. This is reliant on the diligence of each staff member and therefore a high risk of error.

I checked the event detail report for all withdrawn switches from the audit period and there were five switches that were withdrawn with code "CX" applied prior to the switch completion date. These were all checked and I found two that were gains to a switch save protected retailer. These were checked on site and found only two that related to switch save protected traders. Both of these were checked and compliance is confirmed.

# 5. Maintenance of unmetered load

## 5.1 Maintaining shared unmetered load (Clause 11.14)

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

**Audit Observation**

A registry list with history was reviewed for the audit period to confirm that Hunet has not supplied any ICPs with unmetered load.

I reviewed processes to identify shared unmetered load.

**Audit Commentary**

Hunet has not supplied any unmetered load during the audit period. As discussed in **Section 3.7 Changes to unmetered load**, this is checked before the customers application is accepted. Compliance is confirmed.

As noted in the last audit, there is no validation reporting in place to pick up any ICPs that have shared unmetered load added to them while they are with Hunet. I repeat my recommendation that this check be included in the registry validation reporting under development.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Regarding: 11.14 | The three late switch withdrawals were actioned as soon as practicable. | Data development team added it to their system review project. | Investigating |

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

*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**

A registry list with history was reviewed for the audit period to confirm that Hunet has not supplied any ICPs with unmetered load.

**Audit Commentary**

Hunet has not supplied any unmetered load during the audit period and do not intend to.

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

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

**Audit Observation**

A registry list with history was reviewed for the audit period to confirm that Hunet has not supplied any ICPs with unmetered load.

**Audit Commentary**

Hunet has not supplied any unmetered load during the audit period and do not intend to.

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

*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**

A registry list with history was reviewed for the audit period to confirm that Hunet has not supplied any ICPs with distributed unmetered load.

**Audit Commentary**

Hunet has not supplied any distributed unmetered load during the audit period and do not intend to.

# 6. Gathering raw meter data

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

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

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

**Audit Observation**

A registry list with history was reviewed for the audit period to check if Hunet has supplied any ICPs with distributed generation.

**Audit Commentary**

In accordance with Part 10 the responsibility for the metering installations at each point of connection rests with the Metering Equipment Provider.

Examination of the list file found ICP 0000609129UN921 (this ICP was identified in the last two audits), with generation capacity recorded by the Distributor. It does not have an injection channel recorded in the metering on the registry and the customer advised in the last audit that they no longer have solar panels in use. This will require further investigation to check if embedded generation is connected or not, and whether a meter change is required, or the ICP will need to switch away. As reported in the last audit Hunet have software development underway to be able to manage customers with injection but until such time they do not accept any customers with generation indicated and an injection channel present. Compliance is confirmed.

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

*An asset owner must, for each GIP that connects to the grid, ensure that there is one or more certified metering installations for the GIP.*

**Audit Observation**

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

**Audit Commentary**

Examination of the list file found that Hunet has not supplied any GIPs.

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

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

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

**Audit Observation**

A registry list with history was reviewed for the audit period to confirm that Hunet has only used the RPS profile during the audit period.

**Audit Commentary**

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

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

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

**Audit Observation**

Processes relating to defective metering were examined.

There were two examples of stopped meters identified during the audit period.

**Audit Commentary**

Potential defective metering installations are identified by identifying missing, high or low reads during the validation process. Two examples of potential stopped meters sent to AMS were sighted. These were still being investigated with AMS at the time of the site audit.

In addition to this Metrix and AMS email Hunet in regards to potential defective meters requesting them to raise a service request to address these. No such notifications have been received from AMS during the audit period. I sited two examples sent by Metrix that have been actioned accordingly.

The management of event logs from AMI meters still requires some work. Therefore not all potentially defective meters are being identified and actioned. This is recorded as non-compliance in **Section 9.6 Electronic meter readings and estimated reads**.

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

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

**Audit Observation**

The data collection process was examined. A sample of five meter reads from Datacol and the two MEPs supplying AMI reads were checked using the typical case sample methodology.

**Audit Commentary**

All information used to determine volume information is collected by Datacol as an agent to Hunet. The Datacol audit report was reviewed and compliance is confirmed. Their audit report is attached as an appendix. AMS and Metrix also provide this information to Hunet as Meter Equipment Providers and this function has been examined as part of their respective MEP audits.

I checked the content of a sample of five reading files from Datacol to confirm the data in Hunet's database matched the data in the files. Compliance is confirmed.

I checked the content of a sample of five reading files for each MEP to confirm the data in Hunet's database matched the data in the files. Compliance is confirmed.

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

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

*All validated meter readings must be derived from meter readings.*

*A meter reading provided by a consumer may be used as a validated meter reading only if another set of validated meter readings not provided by the consumer are used during the validation process.*
*During the manual interrogation of each NHH metering installation the reconciliation participant must:*
*(a) obtain the meter register*
*(b) ensure seals are present and intact*
*(c) check for phase failure (if supported by the meter)*
*(d) check for signs of tampering and damage*
*(e) check for electrically unsafe situations.*
*If the relevant parts of the metering installation are visible and it is safe to do so.*

**Audit Observation**

The data collection process was examined. A sample of five meter reads from Datacol and the two MEPs were checked using the typical case sample methodology.

Processes for customer reads were reviewed.

**Audit Commentary**

For manually collected readings, the meter register value is collected and entered into a hand held device. This reading enters Hunet's system and is appropriately labelled to denote that it is a meter reading collected and validated by a meter reader. Validated meter readings are derived from meter readings. Some AMI readings are supplied by AMS and Metrix, these are also appropriately labelled. I checked the content of five read files from each provider to confirm the data in Hunet's database matched the data in the files. Compliance is confirmed.

The customer read process was examined and found that all customer reads are required to be supported by a photo and are treated as an estimated read. Compliance is confirmed.

The Datacol report records non-compliance in relation to the lack of checks for phase failure. Datacol are working with the retailers to resolve this. This is recorded as non-compliance for Hunet.

| Non-compliance | Description |
|---|---|
| **With:** Clause 5(b)&(c) of schedule 15.2<br><br>**From/to:** Entire audit period | Checks for phase failure not conducted and recorded.<br>**Potential impact:** Low<br>**Actual impact:** Low<br>**Audit history:** None<br>**Controls:** Moderate<br>Breach Risk Rating: 2 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | Datacol have a fix in progress to address this and Hunet have a small number of category 2 sites |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| We will work with Datacol to resolve the issue | 31 Sep 2017 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will work with Datacol to resolve the issue | 31 Sep 2017 | |

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

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

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

**Audit Observation**

The process of the application of meter readings was examined,

An event detail report for the audit period was reviewed to identify CS files issued by Hunet during the audit period. A sample of four TR CS files and four MI CS files containing actual reads were reviewed to determine whether the data provided was complete and accurate.

**Audit Commentary**

AMI midnight readings are correctly time-stamped for the MI switches, but not for all of the TR switches checked. Two examples were found where the midnight read was incorrectly dated as the same date as the event date. ICP 0000190178UN303 had an AMI midnight read and was sent as an estimate rather than an actual, and ICP 0000137321UNDD5 had an incorrect midnight read sent for the event date rather than the midnight read for the day before the event. This is due to a misunderstanding by staff of how to correctly apply these reads. This is recorded as non-compliance below.

| Non-compliance | Description |
|---|---|
| With: Clause 6 of Schedule 15.2<br><br>From/to: entire audit period | The midnight read is not being correctly applied for transfer switches.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach Risk Rating: 3 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | The process is correct for move in switches but were misunderstood in relation to transfer switches. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| There was a misunderstanding in relation to the final read on switch date. Switching team is now fully aware of this issue and they now know what to use as a final read. | 14 July 2017 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| I have reviewed recent CSs and they looked all good. They are now fully trained. | 14 July 2017 | |

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

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

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

**Audit Observation**

The process to manage missed reads was examined.

Hunet provided a list of ICPs not read during the period of supply. The extreme case sampling method was used to select the five ICPs with the longest period of supply which were unread.

**Audit Commentary**

Hunet have changed the process in place to obtain reads since the last audit. The process for the management of the no read files is that they are checked on a daily basis and are worked through on a priority basis. The no read codes that relate to access are managed on a six monthly basis when the system sends out a text messages and emails are sent on the same day to all sites that have had access issues. For any that don't respond to this an outbound call is made to attempt to gain access. This was implemented in August 2016. The next bulk follow up will be undertaken late April. This frequency will not meet the "exceptional circumstances" requirement for ICPs with no access issues within a 12 month period. If the site is vacant a letter is sent to the address. This process is unlikely to achieve compliance to gain a read for any sites that are not with Hunet for less than 12 months. This is recorded as non-compliance

There have been five ICPs that have not had a read during the period of supply since the last audit. All of these were checked on the registry and I found that two were still with Hunet and shouldn't have been included, therefore the reporting needs to be checked to ensure that the relevant ICPs are being reported. The remaining three ICPs were checked and found that they all had short periods of supply with the longest being 41 days. This is not long enough to for Hunet to complete their no read process and therefore exceptional circumstances cannot be proven for these. The lack of accurate reporting and the three ICPS not read during the period of supply is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clauses 7(1) and 7(2) of Schedule 15.2<br><br>From/to: Entire audit period | No read process does not achieve best endeavours for any ICPs with Hunet for less than 12 months.<br>Lack of accurate reporting.<br>Three ICPs with no read gained during the period of supply and exceptional circumstances not met were identified.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Three times previously<br>Controls: Weak<br>Breach Risk Rating: 6 |
| Audit Risk Rating | Rationale for audit risk rating |
| Medium | There were only three ICPs identified and all had a short period of supply. However the reporting was found to be inaccurate and the no read process has weak controls. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| The process for the management of the no read files is that they are checked on a daily basis and are worked through on a priority basis. We have reviewed all the ICPs failed to read and we plan to request smart meter installation or meter fault for no read ICPs | 28 Feb 2018 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| System now reports us the list of ICPs failed to read on a daily basis but we haven't gone further investigation of no read ICPs. However, we will actively go investigation of those ICPs from now on and try our best to reduce number of no read ICPs. | 28 Feb 2018 | |

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

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

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

**Audit Observation**

The meter reading process was examined. Monthly reports for the months of November 2016 to March 2017 were provided.

**Audit Commentary**

The process for the management of the no read files is that they are checked on a daily basis and are worked through on a priority basis. The no read codes that relate to access are managed on a six monthly basis when the system sends out text messages and emails are sent on the same day to all sites that have had access issues. For any that don't respond to this an outbound call is made to attempt to gain access. This was implemented in August 2016. The next bulk follow up will be undertaken late April. This frequency will not meet the "exceptional circumstances" requirement for ICPs with no access issues within a 12 month period. This is recorded as non-compliance below.

I checked the no read files from Datacol and found that requests to stop reading meters were not being actioned by Datacol. Specifically, a request to stop reading ICP 1001123730LC9BF was sent to Datacol on December 5th but this was still being read. This was checked during Datacol's audit and no such request had been received by Datacol. I recommend that Hunet work with Datacol to ensure that the file interchanges are working as expected.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Regarding: Clause 8(1) & (2) of schedule 15.2 | Hunet to work with Datacol to ensure that the file interchange is functioning as expected. | We will absolutely work with Datacol to resolve the issue. | Investigating |

In the last audit I found evidence of meter changes not being actioned leading to ICPs not being read for 12 months or more. I did not find any examples in relation to not read at 12 months ICPs checked but I did find an example for NHH corrections for ICP 0000242228UNBAD where the meter was replaced in June 2016 but this was not updated in Hunet's system until December 2016. Examples were also found when examining FE remaining at 14 months in **Section 13.4 Historic estimate reporting**. This will be impacting the number of unread ICPs at 12 months. This is recorded as non-compliance.

The monthly meter reading reports provided were reviewed.

| Month | Not Read @ 12 months | Total ICPs |
|---|---|---|
| November | 36 | 2,084 |
| December | 37 | 2,134 |
| January | 40 | 2,203 |
| February | 40 | 2,240 |
| March | 45 | 2,377 |

The report for March 2017 had 45 ICPs recorded as not read in the previous 12 month period. The ICP level breakdown contained the same number of ICPs. A sample of five ICPs were checked. Three were confirmed to meet the requirements of this clause. The remaining two ICPs examined shouldn't have been on the list. Specifically:

- ICP 0147971039LC043 - this site was de-energised in April 2015 but not updated to this until June 2016 and then backdated to decommissioned January 2017 and therefore should not be on this list
- ICP 0002622180WF86F was gained in August 2016 and has had reads gained while with Hunet.

The parameters for this report are being reviewed to ensure that the correct ICPs are being reported. A subsequent file has been sent for March containing 40 unread ICPs at 12 months, but I am unable to confirm if this is correct without sighting Hunet's records for a sample of these. This incorrect reporting is recorded as non-compliance below.

| Non-compliance | Description |
|---|---|
| With: Clauses 8(1) & (2) of schedule 15.2<br><br>From/to: entire audit period | No access ICPs process and ICPs with a meter change sites will not meet the exceptional circumstance requirement within the 12 month period.<br>Incorrect monthly meter reading report being provided to the Electricity Authority.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Three times previously<br>Controls: Weak<br>Breach Risk Rating: 3 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | Overall the volume of unread ICPs reported is small and the report was over reporting the number of ICPs. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| Data development team is working on system amendment. | 31 Nov 2017 | Investigating- no action detailed in relation to the addressing the no read process timeliness |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Data development team will review report files once new logic applied. | 31 Nov 2017 | |

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

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

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

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

**Audit Observation**

The meter reading process was examined. Monthly reports for the months of January- March 2017 were provided.

**Audit Commentary**

The monthly meter reading reports provided were reviewed.

| Month | Total NSPs where ICPs were supplied > 4 months | NSPs<90% read | Total ICPs unread for 4 months | Overall percentage read |
|---|---|---|---|---|
| November 2016 | 40 | 7 | 65 | 98% |
| December 2016 | 40 | 7 | 70 | 98% |
| January 2017 | 38 | 6 | 72 | 98% |
| February 2017 | 41 | 8 | 74 | 98% |
| March 2017 | 42 | 8 | 69 | 98% |

The March file is detailed below:

| NSP | Not Read ICPs | Total ICPs | Read Percentage |
|---|---|---|---|
| DMW0011 | 1 | 2 | 50 |
| PEN0221 | 3 | 22 | 86 |
| WDT0011 | 1 | 1 | 0 |
| WFL0011 | 4 | 5 | 20 |
| WGF0011 | 3 | 7 | 57 |
| WSC0011 | 1 | 1 | 0 |
| WSL0111 | 1 | 2 | 50 |
| WWC0011 | 1 | 3 | 67 |

The table above indicates eight NSPs that did not meet the required threshold. The ICP level data was not provided in relation to these ICPs therefore I could not confirm the validity of the reporting. The issue identified above in **Section 6.8 Interrogate meters once**, where the no access sites are only being followed up every six months and not all meter changes are being captured will result in exceptional circumstances not having been proven for such sites. This is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clauses 9(1) & (2) of schedule 15.2<br><br>From/to: March 17 | No access ICPs process and ICPs with a meter change sites will not meet the exceptional circumstance requirement within the 4 month period.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Three times previously<br>Controls: Weak<br>Breach Risk Rating: 3 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | Overall the volume of unread ICPs reported is small. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| Data development team is working on system amendment. | 31 Nov 2017 | Investigating- no action detailed in relation to the addressing the no read process timeliness |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Data development team will review report files once new logic applied. | 31 Nov 2017 | |

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

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

**Audit Observation**

For the ICPs where the data is collected by Datacol these processes were reviewed as part of their agent audit is attached to this report.

For the ICPs where the data is collected by AMS and Metrix these processes were reviewed as part of their MEP audits.

**Audit Commentary**

All actual reads are received from Datacol, switching files or MEPs. Customer reads are treated as estimated reads. Compliance is confirmed.

Compliance is confirmed in relation to the reads collected by Datacol in their audit report attached.

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

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

**Audit Observation**

A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**

Hunet does not deal with any HHR data.

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

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

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

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

**Audit Observation**

A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**

Hunet does not deal with any HHR data.

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

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

**Audit Observation**
A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**
Hunet does not deal with any HHR data.

# 7. Storing raw meter data

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

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

**Audit Observation**
Hunet trades all ICPs as NHH ICPs therefore the trading period requirement is not applicable.

**Audit Commentary**
Not applicable.

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

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

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

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

**Audit Observation**

These processes were reviewed at Datacol as part of their agent audit. This report is attached as an appendix to this report.

Processes to archive and store raw meter data were reviewed.

**Audit Commentary**

Compliance is confirmed in relation to this function in the Datacol audit report.

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

Compliance with clause 18.3 of schedule 15.2 was examined, which requires that "…..meter readings cannot be modified without an audit trail being created." Readings cannot be modified without an audit trail being created. Validation occurs in a temporary table before it becomes a permanent record and meter readings are not edited. Audit trails are discussed in further detail in **Section 2.4.Audit trails**.

Compliance is confirmed.

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

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

**Audit Observation**

Processes to record non-metering information were discussed.

**Audit Commentary**

Hunet does not deal with any non-metering information.

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

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

**Audit Observation**

Clock synchronisation processes for MEPs were reviewed as part of their MEP audits. MEPs are to advise Hunet of clock synchronisation discrepancies and adjustments.

**Audit Commentary**

Hunet advised that they do not believe they have received any clock synchronisation adjustment information from the MEPs. Reporting is being sent by AMS to Hunet in relation to this but Hunet were unaware of it. As Hunet are not trading half hourly there is no material impact in relation to this. The management of AMI event data is recorded as non-compliance in **Section 9.6 Electronic meter readings and estimated readings**.

# 8. Creating and managing (including validating, estimating, storing, correcting and archiving) volume information

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

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

*- confirmation of the original meter reading by carrying out another meter reading*

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

*- if the original meter reading cannot be confirmed or replaced by a meter reading from another interrogation, then an estimated reading is substituted and the estimated reading is marked as an estimate and it is subsequently replaced in accordance with clause 4(2).*

**Audit Observation**

Processes for correction of NHH meter readings were reviewed.

**Audit Commentary**

Where errors are detected during validation of non-half hour meter readings then firstly a check reading is performed. If an original meter reading cannot be confirmed by a check reading then an estimated reading is used which is appropriately labelled. The estimated read is calculated based on the average daily consumption.

There were two examples of NHH corrections due to stopped meters provided. The calculations for ICP 0000242228UNBAD and 0328429023LCF4A were checked for the period of the meter being stopped and the consumption has been calculated correctly in both instances. The apportionment between meter reads is incorrect. This is recorded as non-compliance in **Section 12.11 Historical estimates process**.

In the previous audit, a non-compliance was raised because consumption on active-vacant sites was not being reported. Vacant consumption functionality is still under development. This has been found to be a more complex task than originally scoped. This is being done manually for now using a new function developed within Hunet's system called "Power empty house management". This identifies all the properties that are active vacant and tracks the actions taken to manage these – whether letters have been sent through to when the premise is de-energised. The status changes are managed manually on the registry. Hunet's system doesn't delineate between active vacant and de-energised vacant. Agents check the registry to confirm the ICP status. The incorrect use of statuses is still evident as detailed in **Section 3.9 Management of "inactive" status**. I checked seven examples from this

list. Any vacant consumption found has been submitted for these. There are 44 active vacant ICPs identified on the list. Vacant consumption has not been submitted in all instances prior to September 2016. This is recorded as non-compliance.

This is recorded as non-compliance below.

| Non-compliance | Description |
|---|---|
| With: Clause 19 (1) of schedule 15.2<br><br>From/to: July 15- Sept 16 | Consumption on active vacant prior to September 2016 has not being submitted in all instances, therefore corrections are not being applied correctly in all instances.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: None against this clause - recorded against the electricity supplied clause in the previous audit<br>Controls: Weak<br>Breach Risk Rating: 3 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | The management of corrections is manual with weak controls in place therefore the risk of this continuing to occur is highly likely. However, the volume of ICPs that Hunet trades across is low. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| Data development team is working on system amendment. However, we will try our best to get reads up to dated manually for all the active vacant ICPs | 30 Nov 2017 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Data development team will review report files once new logic applied. | 28 Feb 2018 | |

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

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

**Audit Observation**

A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**

Hunet does not deal with any HHR data.

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

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

**Audit Observation**

A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**

Hunet does not deal with any HHR data.

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

*In correcting a meter reading in accordance with clause 19, the raw meter data must not be overwritten. If the raw meter data and the meter readings are the same, an automatic secure backup of the affected data must be made and archived by the processing or data correction application.*
*If data is corrected or altered, a journal must be generated and archived with the raw meter data file.*
*The journal must contain the following:*
*22(2)(a) - the date of the correction or alteration*
*22(2)(b) - the time of the correction or alteration*
*22(2)(c) - the operator identifier of the reconciliation participant*
*22(2)(d) - the half-hour metering data or the non half hour metering data corrected or altered, and the total difference in volume of such corrected or altered data*
*22(2)(e) - the technique used to arrive at the corrected data*
*22(2)(f) - the reason for the correction or alteration.*

**Audit Observation**

If the MEP is providing the raw data to Hunet then it is their responsibility to ensure that raw data cannot be edited. Datacol, as an agent to Hunet, holds NHH raw meter data and their audit report is attached to this report which confirms that it cannot be edited.

Corrections are discussed in **Section 8.1 Correction of NHH meter readings**, which confirmed that raw meter data is not overwritten as part of the correction process. Audit trails are discussed in **Section 2.4 Audit trails**.

**Audit Commentary**

There were no examples of corrections to actual metering data available during the audit period. Consumption is estimated where a reading is unavailable.

The Datacol audit report confirms that raw meter data cannot be edited. Compliance is confirmed.

# 9. Estimating and validating volume information

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

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

**Audit Observation**

Provision of estimated reads to other participants during switching was reviewed in **Sections 4.3**, **4.4**, **4.10** and **4.11**.

Correct identification of estimated reads, and review of the estimation process was completed in **Section 8.1 Correction of NHH meter readings**.

**Audit Commentary**

Estimated readings are clearly identified as required by this clause.

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

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

**Audit Observation**

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

**Audit Commentary**

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

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

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

**Audit Observation**

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

**Audit Commentary**

NHH Meter readings provided by Datacol and the MEP are not rounded or truncated.

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

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

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

**Audit Observation**

A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**

Hunet does not deal with any HHR data.

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

*Each validity check of non half hour meter readings and estimated readings must include the following:*

*16(2)(a) - confirmation that the meter reading or estimated reading relates to the correct ICP, meter, and register*

*16(2)(b) - checks for invalid dates and times*

*16(2)(c) - confirmation that the meter reading or estimated reading lies within an acceptable range compared with the expected pattern, previous pattern, or trend*

*16(2)(d) - confirmation that there is no obvious corruption of the data, including unexpected 0 values.*

**Audit Observation**

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

**Audit Commentary**

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

When data is uploaded into Hunet's systems there is an ICP, meter and register check to ensure the data is populated against the correct record. This step also checks dates and times. It appears that meter changes are not being picked up at this point and the read will be rejected due to the meters not matching and reads are then estimated for the customer based on historic consumption. This is recorded as non-compliance below.

A further validation occurs within Hunet's system, this validation checks the following:

- high consumption (over 3,000 units - ICPs are allocated to groups based on consumption, a comparison is made between actual and expected consumption)
- readings lower than the previous reading
- some individual invoices are checked manually on a monthly basis
- correct number of dials
- no consumption for manual reads.

The majority (4,074 or 93%) of Hunet's customer base is read by AMI. There is no check in place for no consumption for AMI read sites. This is recorded as non-compliance.

All billing is for a complete calendar month so "short days" and "long days" validation is not required.

Two examples of defectives meters were provided. These were checked during the site audit and found that the consumption was estimated correctly for the relevant period, but the submission was not correctly allocated. This is recorded as non-compliance in **Section 12.11 Historical estimate process**.

The matter of "bypassed" metering was evaluated during the audit. This can occur when an ICP has an AMI metering installation and remote disconnection has occurred, then a new Retailer (normally following a move switch) requests a "manual" reconnection and the field technician physically bypasses the meter. If this is found Hunet issue a service request to the MEP to remedy and any consumption for the period of the bypass would be estimated. No examples of bypassed meters were found during the audit period.

| Non-compliance | Description |
|---|---|
| With: Clause 16 of schedule 15.2<br><br>From/to: Entire audit period | Meter mismatches are not being identified during validation.<br>No check for zero consumption on AMI metered sites.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach Risk Rating: 6 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Medium | Meter changes not being actioned resulting in sites being estimated therefore controls are weak and 93% of sites are AMI read therefore the risk of zero consumption not being identified and investigated is high, but overall Hunet's customer base is small. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| We will manually get it processed as the system cannot support at this stage. | 31 Aug 2017 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Data development team will see how the system can support the function | 28 Feb 2018 | |

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

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

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

**Audit Observation**

Submission type is NHH for all ICPs, and data is validated as described in **Section 9.5 NHH metering information**.

The management of event logs was reviewed.

**Audit Commentary**

Metrix and AMS send Hunet notifications via email of meters that require a service request to be raised to investigate. No such requests have been received from AMS during the audit period. I sighted two such requests received from Metrix and both were actioned.

As reported in the last audit Hunet did not believe they are getting any event reporting from AMS. I provided a copy of an AMS report to Hunet. This contained a total of 16 events on it and none of these were tamper alerts. I recommend that Hunet work with AMS to determine where this reporting is being delivered to. Hunet also stated in their last report that the development team would assess the requirement and in the intervening time a manual process will be put in place. This does not appear to have been progressed. Therefore, as reported in the last audit, there is currently no adequate monitoring of event information in place for ICPs with AMI metering. This is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 17 of schedule 15.2<br><br>From/to: Entire audit period | AMI event information not adequately obtained and monitored.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach Risk Rating: 6 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Medium | 93% of sites are AMI read therefore the lack of event management effects almost all of Hunet's customer base, but Hunet's customer base is small. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| We will manually get it processed as the system cannot support at this stage. | 31 Aug 2017 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Data development team will see how the system can support the function | 28 Feb 2018 | |

# 10. Provision of metering information to the pricing manager in accordance with subpart 4 of Part 13 (clause 15.38(1)(f))

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

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

**Audit Observation**

A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**

Hunet does not deal with any HHR data.

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

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

**Audit Observation**

Hunet does not gave any grid connected generation.

**Audit Commentary**

Not applicable.

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

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

**Audit Observation**

A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**

Hunet does not deal with any HHR data

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

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

**Audit Observation**

A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**

Hunet does not deal with any HHR data.

# 11. Provision of submission information for reconciliation

## 11.1 Buying and selling notifications (Clause 15.3)

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

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

**Audit Observation**

A registry list was reviewed for the audit period to confirm that only the RPS profile was used.

**Audit Commentary**

As Hunet is only using the RPS profile trading notifications were not required.

## 11.2 Calculation of ICP days (Clause 15.6)

*Each retailer and direct purchaser (excluding direct consumers) must deliver a report to the reconciliation manager detailing the number of ICP days for each NSP for each submission file of submission information in respect of:*

*15.6(1)(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*

*15.6(1)(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

**Audit Observation**

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

I reviewed variances for nine months of GR100 reports, and investigated any large discrepancies.

**Audit Commentary**

The process for the calculation of ICP days was examined by checking five NSPs with a small number of ICPs. ICP days calculation was confirmed to be correct.

The following table shows the ICP days difference between Hunet files and the RM return file (GR100) for all available revisions for several months. Negative percentage figures indicate that the Hunet ICP days figures are higher than those contained on the registry. The discrepancies were increasing in the last audit but with the greater attention that has been given to status management this has improved this with a reduction in variance from July 2016 onwards.

| Month | Ri | R1 | R3 | R7 | R14 |
|---|---|---|---|---|---|
| October 2015 | -0.53% | -0.48% | -0.48% | -0.50% | 0.05% |
| November 2015 | -0.47% | -0.48% | -0.41% | -0.55% | 0.07% |
| December 2015 | -0.65% | -0.59% | -0.56% | -1.19% | 0.07% |
| June 2016 | -1.40% | -1.42% | -0.05% | 0.00% | - |
| July 2016 | -1.67% | -1.71% | -0.04% | -0.04% | - |
| September 2016 | -0.03% | -0.01% | 0.00% | - | - |
| October 2016 | -0.04% | -0.04% | -0.04% | | |
| November 2016 | -0.05% | -0.03% | -0.05% | - | - |
| January 2017 | -0.05% | -0.03% | - | - | - |

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

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

**Audit Observation**

The process for calculating and submitting electricity supplied information was examined by checking individual invoices for a selection of five NSPs with a small number of ICPs to ensure the billed amount equalled the figure in the ICP level file which forms the basis of the aggregate file sent to the RM.

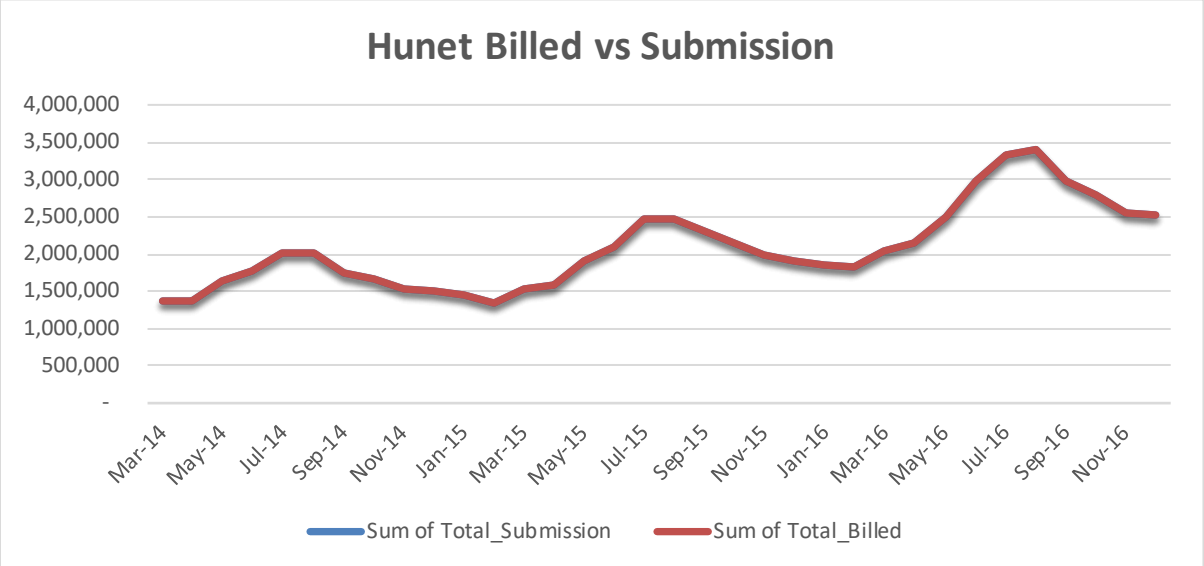
The electricity vs billed GR130 reports for May 2014 to November 2016 was reviewed.

**Audit Commentary**

The file is correct for the sample checked. Compliance is confirmed.

The table below shows a comparison between submissions and electricity supplied information. At an aggregate level, electricity billed data is lower than the submission data by 0.68% over a 32 month period.

**Comparison between Submitted Volumes and Electricity Supplied**




The issue identified in the last audit of active vacant consumption not being submitted still exists. Vacant consumption functionality is still under development. This has been found to be a more complex task than originally scoped. This is being done manually for now using a new function developed within Hunet"s system called "Power empty house management". This identifies all the properties that are

active vacant and tracks the actions taken to manage these – whether letters have been sent through to when the premise is de-energised. The status changes are managed manually on the registry. Hunet's system doesn't delineate between active vacant and de-energised vacant. Agents check the registry to confirm ICP status. There were 44 active vacant ICPs identified on the list provided to me. Two examples were checked and I found that one had the active vacant consumption submitted but the incorrect de-energise date was used (see the Electricity supplied NSPs to check for examples). Vacant consumption prior to September 2016 has not been submitted in all instances. This is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 15.7 of schedule 15<br><br>From/to: Entire audit period | Consumption on active vacant not being submitted prior to September 2016.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Twice previously<br>Controls: Weak<br>Breach Risk Rating: 3 |
| Audit Risk Rating | Rationale for audit risk rating |
| Low | This is now being captured post September 2016, but was not prior to this time. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| Data development team is working on system amendment. | 30 Nov 2017 | Investigating |
| Preventative actions taken to ensure no further issues will occur | Completion date | |
| Data development team will review report files once new logic applied. | 30 Nov 2017 | |

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

*A retailer or direct purchaser (excluding direct consumers) must deliver to the reconciliation manager its total monthly quantity of electricity supplied for each half hourly metered ICP for which it has provided submission information to the reconciliation manager, including:*
*15.8(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*
*15.8(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

**Audit Observation**

A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**

Hunet does not deal with any HHR data.

# 12. Submission computation

## 12.1 Daylight saving adjustment (Clause 15.36)

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

**Audit Observation**

A registry list was reviewed for the audit period to confirm that all HHR meters supplied by Hunet have AMI installed, and a submission type NHH.

**Audit Commentary**

Hunet does not deal with any HHR data.

## 12.2 Creation of submission information (Clause 15.4)

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

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

**Audit Observation**

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

Corrections were reviewed in **Section 8.1 Correction of NHH meter readings.**

**Audit Commentary**

All submissions were on time. No breaches had been recorded for late provision of submission information. Compliance is confirmed.

## 12.3 Allocation of submission information (Clause 15.5)

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

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

**Audit Observation**

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

The process to ensure that AV080 submissions are accurate was discussed. The process for aggregating the AV080 was examined by checking five NSPs with a small number of ICPs. Aggregation is checked under **Section 13.2 Provision of submission information**.

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

The GR170 to AV080 files for three months were compared, to confirm zeroing occurs.

**Audit Commentary**

GR170 and AV080 files for three month revisions for September – November 2016 were compared, and found to contain the same NSPs, the two active vacant ICPs were included and zeroing had occurred.

As noted in **Section 11.3 Electricity supplied information**, consumption on active vacant ICPs is not being submitted. This is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: 15.5<br><br>From/to: July 15- Sept 16 | Consumption on active vacant ICPs is not being included in submission for period prior to September 2016.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Twice previously<br>Controls: Weak<br>Breach Risk Rating: 3 |
| Audit Risk Rating | Rationale for audit risk rating |
| Low | This is now being captured post September 2016, but was not prior to this time. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| Data development team is working on system amendment. | 30 Nov 2017 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Data development team will review report files once new logic applied. | 30 Nov 2017 | |

## 12.4 Grid owner volumes information (Clause 15.9)

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

**Audit Observation**

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

**Audit Commentary**

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

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

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

**Audit Observation**
Hunet is not a local or embedded network owner.

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

## 12.6 Grid connected generation (Clause 15.11)

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

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

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

## 12.7 Accuracy of submission information (Clause 15.12)

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

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

A sample of corrections were reviewed to ensure that they flowed through to revision submissions.

**Audit Commentary**

NHH corrections were reviewed in **Section 8.1 Correction of NHH meter readings**. The consumption for the two corrections checked has been calculated correctly in both instances but the apportionment between the meter reads is incorrect. This is recorded as non-compliance in **Section 12.11 Historical estimate process**.

As recorded in **Section 8.1 Correction of NHH meter readings** the active vacant consumption has not been corrected and therefore is not the most accurate information available. This is recorded as non-compliance below.

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

| Non-compliance | Description |
|---|---|
| With: 15.12<br><br>From/to: July 15 to Sept 2016 | Corrections for consumption on active vacant ICPs is not being included in submission for sites prior to September 2016. .<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Twice previously<br>Controls: Weak<br>Breach Risk Rating: 3 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | This is now being captured post September 2016, but was not prior to this time. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| Data development team is working on system amendment. | 30 Nov 2017 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Data development team will review report files once new logic applied. | 30 Nov 2017 | |

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

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

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

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

**Audit Observation**

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

**Audit Commentary**

Review of AV080 14 month revisions showed forward estimates remained at the time of the 14 month revision. This is due to meter changes not being actioned by Hunet. This is discussed in detail in **Section 13.4 Historical estimate reporting**.

This is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 4 of schedule15.2<br><br>From/to: Entire audit period | Some FE still exists at 14 months.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Four times previously<br>Controls: Weak<br>Breach Risk Rating: 3 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | The volume overall of HE is low at revision 14 but would be fixed if meter changes were managed. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| The process for the management of the no read files is that they are checked on a daily basis and are worked through on a priority basis. We have reviewed all the ICPs failed to read and we plan to request smart meter installation or meter fault for no read ICPs. | 28 Feb 2018 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| System now reports us the list of ICPs failed to read on a daily basis but we haven't gone further investigation of no read ICPs. However, we will actively go investigation of those ICPs from now on and try our best to reduce number of no read ICPs. | 28 Feb 2018 | |

## 12.9 Creation of submission information (Clause 2 Schedule 15.3)

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

**Audit Observation**

The registry list with history was reviewed for the audit period to confirm that Hunet does not supply any ICPs with

- submission type HHR
- distributed generation
- a profile apart from RPS
- a compensation factor.

Aggregation of the AV080 submission was reviewed in **Section 12.3 Allocation of submission information**.

**Audit Commentary**

Hunet prepares submission information for each NSP for the relevant consumption periods in accordance with these clauses; the submission information includes NHH volume information only. Compliance is confirmed.

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

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

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

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

**Audit Observation**

I reviewed three AV080 submissions to confirm that historic estimates are included and identified.

The permanence of meter readings is reviewed in **Section 12.8 Permanence of meter readings**. The methodology to create forward estimates is reviewed in **Section 12.11 Historical estimate process**.

**Audit Commentary**

I reviewed three AV080 submissions and confirm that forward and historic estimates are included, and identified as such.

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

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

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

**Audit Observation**

To assist with determining compliance of the Historical Estimate (HE) processes, Hunet was supplied with a list of scenarios, and for some individual ICPs a manual HE calculation was conducted, and compared to the result from Hunet's system.

**Audit Commentary**

| Test | Scenario | Test expectation | Result |
|---|---|---|---|
| A | ICP becomes Inactive part way through a month. | Consumption is only calculated for the Active portion of the month. | Not compliant |
| B | ICP becomes Active then Inactive within a month. | Consumption is only calculated for the Active portion of the month. | Did not occur |
| C | ICP becomes Inactive, then Active, then Inactive again within a month. | Consumption is only calculated for the Active portion of the month. | Did not occur |
| D | Network/GXP/Connection (POC) alters partway through a month. | Consumption is separated and calculated for the separate portions of where it is to be reconciled to. | Did not occur |
| E | ICP Starts on the 1st day of a month. | Consumption is calculated to include the 1st day of responsibility. | Compliant |
| F | ICP Ends on the Last Day of the month. | Consumption is calculated to include the last day of responsibility. | Compliant |
| G | ICP Starts part way through a month. | Consumption is calculated to include the 1st day of responsibility. | Compliant |
| H | ICP Ends part way through a month. | Consumption is calculated to include the last day of responsibility. | Did not occur |
| I & J | ICP is Lost and Won Back in a month. | Consumption is calculated for each day of responsibility. | Compliant |
| K | Unmetered load for a full month | Consumption is calculating based on daily unmetered kWh for full month. | Did not occur |
| L | Unmetered load for a part month | Consumption is calculating based on daily unmetered kWh for active days of the month. | Did not occur |
| M | ICP Starts on 1st and Ends on Last day of month. | Consumption is calculated for each day of responsibility. | Did not occur |
| N | Rollover Reads | Consumption is calculated correctly in the instance of meter rollovers. | Compliant |

All were compliant with the exception of Scenario A which found that two examples checked were calculated incorrectly as these included shape files for the inactive period and therefore the allocation was incorrect for this month. This was also evident in the examples checked for the NHH corrections in **Section 8.1 Correction of NHH readings**. This is recorded as non-compliance.

| Non-compliance | Description |
|---|---|
| With: Clause 4 & 5 of schedule 15.3<br><br>From/to: Entire audit period | HE scenario not working correctly for Scenario A - ICP becomes Inactive part way through a month.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Moderate<br>Breach Risk Rating: 2 |
| **Audit Risk Rating** | **Rationale for audit risk rating** |
| Low | All scenarios that had occurred worked except one. |

| Actions taken to resolve the issue | Completion date | Remedial action Status |
|---|---|---|
| This was pointed out in the last audit process and data development team amended some of system logics but further improvements are required. Data development team will review this again to make an improvement. | 28 Feb 2018 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Data development team will add this to their development project and will announce what to fix and expected completion date. | 28 Feb 2018 | |

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

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

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

**Audit Observation**

The process to create forward estimates was reviewed.

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

**Audit Commentary**

Hunet's forward estimate process remains unchanged during the audit period and is based on a "straight line" methodology, and where no historical information is available, the average daily consumption from the CS file is used. As a last resort, a "forward default" estimate of 22 units per day is used.

The accuracy of the initial submission, in comparison to each subsequent revision is required to be within 15% and within 100,000kWh. The table below shows the target was met for all revisions. Compliance is recorded.

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

| Month | Revision 1 | Revision 3 | Revision 7 | Revision 14 | Total Balancing Areas |
|---|---|---|---|---|---|
| May 2015 | 0 | 0 | 0 | 0 | 13 |
| June 2015 | 0 | 0 | 0 | 0 | 15 |
| Jul 2015 | 0 | 0 | 0 | 0 | 21 |
| Sept 2015 | 0 | 0 | 0 | 0 | 21 |
| Oct 2015 | 0 | 0 | 0 | 0 | 21 |
| Nov 2015 | 0 | 0 | 0 | - | 21 |
| Dec 2015 | 0 | 0 | 0 | - | 21 |
| Apr 2016 | 0 | 0 | 0 | - | 22 |
| May 2016 | 0 | 0 | 0 | - | 22 |
| June 2016 | 0 | 0 | 0 | - | 22 |
| Sept 2016 | 0 | 0 | - | - | 22 |
| Oct 2016 | 0 | 0 | - | - | 25 |
| Nov 2016 | 0 | 0 | - | - | 26 |

## Total Variation between Revisions

| Month | Revision 1 | Revision 3 | Revision 7 | Revision 14 |
|---|---|---|---|---|
| May 2015 | 2.50% | -0.07% | -0.17% | -0.40% |
| June 2015 | 2.37% | -0.20% | -0.82% | -1.06% |
| Jul 2015 | 3.61% | 0.84% | 0.23% | -2.32% |
| Sept 2015 | 3.40% | 1.65% | 1.37% | -2.85% |
| Oct 2015 | 3.93% | 3.22% | 3.22% | -0.79% |
| Nov 2015 | 2.53% | 2.00% | 2.10% | - |
| Dec 2015 | 2.07% | 1.38% | 1.54% | - |
| Apr 2016 | 1.46% | 0.09% | 0.08% | - |
| May 2016 | 0.22% | -0.61% | -0.50% | - |
| June 2016 | 0.25% | -0.09% | -0.44% | - |
| Sept 2016 | 1.13% | 1.25% | - | - |
| Oct 2016 | 1.24% | 0.13% | - | - |
| Nov 2016 | 3.96% | 3.06% | - | - |

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

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

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

**Audit Observation**

A registry list with history was reviewed for the audit period to confirm that Hunet has only used the RPS profile during the audit period.

**Audit Commentary**

Examination of the list file found that Hunet has only used the RPS profile, and there have been no profile changes. In the event of a profile change, Hunet will use a validated meter reading or a permanent estimate on the day that the change is effective. Currently, they only use the RPS profile.

# 13. Submission format and timing

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

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

**Audit Observation**

I reviewed meter reading reports for January to March 2017, to confirm that they meet the meter reading frequency report requirements.

Review processes to ensure the reports are accurate and submitted on time, and the timeliness of submission for a sample of reports.

**Audit Commentary**

I reviewed meter reading reports for December 2016 to March 2017, and confirmed that they met the meter reading frequency report requirements and were submitted in the required timeframe. The report content was found to be inaccurate and this is recorded as non-compliance in **Section 6.9 NHH meters interrogated annually**. Compliance with this clause is confirmed.

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

*Submission information provided to the reconciliation manager must be aggregated to the following level:*
*- NSP code (clause 8(a))*
*- reconciliation type (clause 8(b))*
*- profile (clause 8(c))*
*- loss category code (clause 8(d))*
*- flow direction (clause 8(e))*
*- dedicated NSP (clause 8(f))*
*- trading period for half hour metered ICPs and consumption period or day for all other ICPs. (clause 8(g))*

**Audit Observation**

The process to ensure that AV080 submissions are accurate was discussed. The process for aggregating the AV080 was examined by checking five NSPs with a small number of ICPs.

**Audit Commentary**

Compliance is confirmed with the requirement to use correct aggregation factors.

## 13.3 Reporting resolution (Clause 9 Schedule 15.3)

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

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

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

**Audit Observation**

Aggregation of the AV080 was reviewed for five small NSPs in **Section 12.3 Allocation of submission information**. As part of these checks, I verified that the data provided for submission was correctly rounded.

Review three AV080 submissions to confirm that data is rounded to two decimal places.

**Audit Commentary**

Review of the three AV080 submissions confirmed that data is rounded to two decimal places.

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

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

**Audit Observation**

The timeliness of submissions of historic estimate was reviewed **in Section 12.2. Creation of submission information.**

I reviewed 13 months of GR170 reports to confirm that historic estimate requirements were met.

**Audit Commentary**

The quantity of historical estimates is contained in the submission file and is not a separate report. Historic estimate targets were not met for all revisions, as detailed in the tables below.

I examined the two NSPs where the HE percentage was 8.32% and 4.82% respectively. These were checked and found that meter changes are not being managed and therefore meter readings are not being gathered for these ICPs resulting in a low level of HE being present at 14 months. These ICPs were all in embedded networks where FCLM are the metering provider. These are manually read by Datacol who notify Hunet where there is a meter change, but meter changes are not being actioned by Hunet. Without the updated meter details Datacol are unable to register the new reads.

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

| Month | Revision 3 80% Met | Revision 7 90% Met | Revision 14 100% Met | Total |
|---|---|---|---|---|
| May 2015 | 26 | 26 | 15 | 30 |
| June 2015 | 26 | 27 | 15 | 32 |
| Jul 2015 | 28 | 33 | 21 | 38 |
| Sept 2015 | 31 | 31 | 22 | 38 |
| Oct 2015 | 32 | 30 | 19 | 37 |
| Nov 2015 | 32 | 31 | - | 37 |
| Dec 2015 | 32 | 31 | - | 38 |
| Apr 2016 | 34 | 34 | - | 39 |
| May 2016 | 34 | 34 | | 39 |
| June 2016 | 34 | 35 | - | 39 |

| Month | Revision 3 80% Met | Revision 7 90% Met | Revision 14 100% Met | Total |
|---|---|---|---|---|
| Sept 2016 | 32 | - | - | 39 |
| Oct 2016 | 37 | - | - | 42 |
| Nov 2016 | 36 | - | - | 41 |

The table below shows that the percentage HE at a summary level is below the required targets. This is recorded as non-compliance.

| Month | Revision 3 80% Target | Revision 7 90% Target | Revision 14 100% Target |
|---|---|---|---|
| May 2015 | 96.7% | 98.0% | 98.3% |
| June 2015 | 96.2% | 97.5% | 97.8% |
| Jul 2015 | 95.8% | 96.8% | 97.6% |
| Sept 2015 | 95.5% | 96.3% | 96.9% |
| Oct 2015 | 94.4% | 96.0% | 97.4% |
| Nov 2015 | 94.5% | 95.8% | - |
| Dec 2015 | 93.9% | 95.6% | |
| Apr 2016 | 94.5% | 96.3% | - |
| May 2016 | 95.6% | 97.2% | - |
| June 2016 | 96.5% | 97.3% | - |
| Sept 2016 | 95.6% | - | - |
| Oct 2016 | 95.0% | - | - |
| Nov 2016 | 94.4% | | |

| Non-compliance | Description | | |
|---|---|---|---|
| With: Clause 10 of schedule 15.3<br><br>From/to: Entire audit period | Some FE still exists at 14 months.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Moderate<br>Breach Risk Rating: 2 | | |
| Audit Risk Rating | Rationale for audit risk rating | | |
| Low | Only 7% of sites are manually read, hence the risk rating. | | |
| Actions taken to resolve the issue | | Completion date | Remedial action Status |
| Data development team will review this again to make an improvement. | | 28 Feb 2018 | Investigating |
| Preventative actions taken to ensure no further issues will occur | | Completion date | |
| Data development team will add this to their development project and will announce what to fix and expected completion date. | | 28 Feb 2018 | |

# Conclusions

This audit found 28 non-compliances, raises one issue and makes three recommendations. Registry validation is still in development, however the monitoring of registry notifications and status management has reduced the number of discrepancies found in this audit.

The issue identified in the last audit of active vacant consumption not being submitted has been corrected as of September 2016 but any ICPs with vacant consumption prior to this have not been corrected. I also found instances where the incorrect status of inactive vacant has been applied to active vacant ICPs.

In this audit I found that there are no checks in place for any AMI active sites with zero consumption. 93% of the Hunet's ICPs are being read by AMI. Event logs are being sent to Hunet from AMS but it is not known where these are being delivered to and are therefore not being actioned. This will be causing inaccuracies. Metrix actively send notifications for such sites and these are being actioned correctly. In addition to this meter reading notes relating to meter changes and access issues are either not being acted on, or not followed up in a timely way.

The indicative audit frequency table indicates the next audit should be in three months. This is too short a period for Hunet to make the changes required and therefore I recommend an audit in six months time.

The matters raised are shown in the tables below:

# Table of Non-Compliance

| Subject | Section | Clause | Non compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Relevant information | 2.1 | 10.6, 11.2, 15.2 | No registry validation in place resulting in discrepancies not being identified and corrected at the earliest opportunity | Weak | Medium | 6 | Investigating |
| Changes to registry | 3.3 | 10 of Schedule 11.1 | 32 status updates were not processed within 5 business days of the event on the Registry | Moderate | Medium | 4 | Identified |
| Trader responsibility for an ICP | 3.4 | 11.18 | ICP taken to ready for decommissioning status three days earlier than the final read date | Moderate | Low | 2 | Identified |
| Provision of information to the registry | 3.5 | 9 of Schedule 11.1 | Registry not updated within 5 days of commencement of trading for 27 ICPs | Moderate | Low | 2 | Identified |

| Subject | Section | Clause | Non compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| ANZSIC codes | 3.6 | 9(1)(k) of schedule 11.1 | Inaccurate ANZSIC codes populated for ten ICPs | Strong | Low | 1 | Identified |
| Management of "active" status | 3.8 | 17 of Schedule 11.1 | Recording of ICPs at the incorrect status | Moderate | Medium | 4 | Investigating |
| Management of "inactive" status | 3.9 | 19 of Schedule 11.1 | Recording of ICPs at the incorrect status | Weak | Medium | 6 | Investigating |
| Losing trader response to transfer switches | 4.2 | 3 of Schedule 11.3 | Incorrect AN response code was provided for one ICP with AMI metering. AA was applied instead of AD | Moderate | Low | 2 | Identified |
| Losing trader to provide final information | 4.3 | 5 of Schedule 11.3 and 15.2 | Incorrect standard CS file content including<br>• Incorrect and inaccurate switch readings, due to not using actual reads where they are available<br>• Incorrect read type.<br>• Incorrect last read date.<br>• Inaccurate average daily consumption | Weak | Medium | 6 | Investigating |
| Losing trader provides information-switch move | 4.8 | 10 of Schedule 11.3 | Incorrect AN response codes were provided for three ICPs<br>1 late AN file sent<br>1 AN file not sent<br>1 late CS file sent late | Weak | Medium | 6 | Identified |
| Losing trader determines a different switch date | 4.9 | 10(2) of Schedule 11.3 | Two switch event dates set one day earlier than requesting traders date | Moderate | Low | 2 | Identified |

| Subject | Section | Clause | Non compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Losing trader must provide final information- switch move | 4.10 | 11 of Schedule 11.3 and 15.2 | Incorrect standard CS file content including<br>• Incorrect last read date.<br>• Inaccurate average daily consumption | Weak | Low | 3 | Investigating |
| Changes to switch meter reading- switch move | 4.11 | 12(2A)&(2B) of Schedule 11.3 | One read request incorrectly rejected | Weak | Low | 3 | Disputed |
| Withdrawal of switches | 4.15 | 17 & 18 of Schedule 11.3 | Three switches withdrawn more than 2 months after the event date. | Moderate | Low | 2 | Identified |
| Derivation of meter readings | 6.6 | 5(b)&(c) of schedule 15.2 | Checks for phase failure not conducted and recorded. | Moderate | Low | 2 | Investigating |
| NHH meter reading application | 6.7 | 6 of Schedule 15.2 | The midnight read is not being correctly applied for transfer switches | Weak | Low | 3 | Identified |
| Interrogate meters once | 6.8 | 7(1) and 7(2) of Schedule 15.2 | No read process does not achieve best endeavours for any ICPs with Hunet for less than 12 months<br>Lack of accurate reporting<br>Three ICPs with no read gained during the period of supply and exceptional circumstances not met were identified | Weak | Medium | 6 | Investigating |
| NHH meters interrogated annually | 6.9 | 8(1) & (2) of schedule 15.2 | No access ICPs process and ICPs with a meter change sites will not meet the exceptional circumstance requirement within the 12 month period.<br>Incorrect monthly meter reading report being provided to the Electricity Authority | Weak | Low | 3 | Investigating |

| Subject | Section | Clause | Non compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| NHH meters 90% read rate | 6.10 | 9(1) & (2) of schedule 15.2 | No access ICPs process and ICPs with a meter change sites will not meet the exceptional circumstance requirement within the 12 month period | Weak | Low | 3 | Investigating |
| Correction of NHH meter readings | 8.1 | 19 (1) of schedule 15.2 | Consumption on active vacant prior to September 2016 has not being submitted in all instances, therefore corrections are not being applied correctly in all instances | Weak | Low | 3 | Investigating |
| NHH metering information data validation | 9.5 | 16 of schedule 15.2 | Meter mismatches are not being identified during validation.<br>No check for zero consumption on AMI metered sites | Weak | Medium | 6 | Investigating |
| Electronic meter readings & estimated reads | 9.6 | 17 of schedule 15.2 | AMI event information not adequately obtained and monitored | Weak | Medium | 6 | Investigating |
| Electricity supplied information | 11.3 | 15.7 of schedule 15 | Consumption on active vacant not being submitted prior to September 2016 | Weak | Low | 3 | Investigating |
| Allocation of submission information | 12.3 | 15.5 | Consumption on active vacant ICPs is not being included in submission for period prior to September 2016 | Weak | Low | 3 | Investigating |
| Accuracy of submission information | 12.7 | 15.12 | Corrections for consumption on active vacant ICPs is not being included in submission for sites prior to September 2016 | Weak | Low | 3 | Investigating |
| Permanence of meter readings | 12.8 | 4 of schedule15.2 | Some FE still exists at 14 months | Weak | Low | 3 | Investigating |

| Subject | Section | Clause | Non compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Historical estimate process | 12.11 | 4 & 5 of schedule 15.3 | HE scenario not working correctly for Scenario A- ICP becomes Inactive part way through a month | Moderate | Low | 2 | Investigating |
| Historical estimate reporting | 13.4 | 10 of schedule 15.3 | Some FE still exists at 14 months | Moderate | Low | 2 | Investigating |
| Breach Risk Rating Score | | | | | | 100 | |
| Indicative Audit Frequency | | | | | | 3 months | |

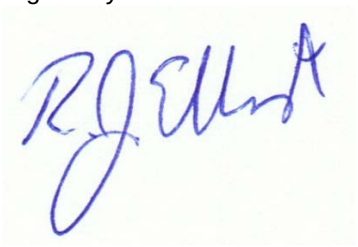
# Table of Recommendations

| Subject | Section | Clause | Recommendation for improvement | Remedial Action |
|---|---|---|---|---|
| Relevant information | 2.1 | 10.6, 11.2, 15.2 | Registry validation reporting be put in place ASAP. | Investigating |
| Maintaining shared unmetered load | 5.1 | 11.14 | Include a check for any shared unmetered load be included in the Registry validation reporting. | Investigating |
| NHH meters interrogated annually | 6.9 | 8(1) & (2) of schedule 15.2 | Hunet to work with Datacol to ensure that the file interchange is functioning as expected | Investigating |

# Table of Issues

| Subject | Section | Clause | Issue | Action |
|---|---|---|---|---|
| Metering information | 2.10 | 10.38(a) | ICP 1001294848LC724 had no certification from 26/11/16- 10/2/17. | To be raised at Metrix's next MEP audit |

Signed by:



**Rebecca Elliot**
**Veritek Limited**
Electricity Authority Approved Auditor

Signed by:

Electronic signature needed & name of signee
**Hunet Limited**

# 15. Hunet Response

Hunet acknowledges the issues mentioned above and some issues have not been resolved for a long-time due to lack of technical supports. There has been no monitoring and validation systems on manual works and it caused lots of human errors. In order to not repeat the past, new people who have good management skills will be involved in a project to analysis and investigate all the requirement advised from the auditor. We have always tried to use our own resources and we failed to complete our implementation to meet the requirement as they are easily interrupted by other projects. We will invest money in outsourcing development and we are guaranteed for the completion of the project this time.

this information can be used to address any issues immediately, or it can be used to identify training needs. Summary reporting is also prepared to ensure any training requirements are identified.

It is expected that a further level of validation will occur within retailers systems based on consumption history. It is also expected that this validation will include the additional requirements of this clause, including:

- checks for invalid dates and times
- confirmation there is no obvious corruption of the data, including unexpected zero values.

# 6. Storing, Archiving and Audit Trail of Volume Information

## 6.1 Correction of NHH Raw Meter Data (Clause 22 of Schedule 15.2)

As discussed in Section 1.12 raw meter data is securely archived and cannot be overwritten, nor can it be accessed by unauthorised personnel.

In the event working data is altered the raw meter data is not overwritten, as noted in Section 4.1 above. Although this is a rare event, and this clause is primarily concerned with “raw data”, when working data is altered the journal of this activity includes the technique used to correct the data, and the reason for the alteration.

# 7. Provision of Submission Information for Reconciliation

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

Datacol does not have responsibility for compliance with this clause; however, the service level agreements in place between Datacol and Retailers contain performance targets related to meter reading attainment, and the provision of non-read information to assist retailers with their compliance.

## 7.2 Market administrator Meter Reading Reports (Clauses 8 & 9 of Schedule 15.2)

The comments in Section 7.1 above also apply to this clause.

# 8. Conclusions

The audit found one issue leading to non-compliance for participants relying on this report. The Code requires that phase failure is recorded for CT metered metering installations, provided that the information is visible and it is safe to conduct the check. A process is not in place for the identification and recording of phase failure. Retailers will need to become involved in the solution to this matter to ensure appropriate instructions are provided to Datacol.

I have made one recommendation, regarding the need for Retailers to provide Datacol with sufficient instruction and detail regarding the identification, reading and recording of import and export registers. The more information Retailers can provide, the more likely it is that accuracy can be assured.

Datacol has strong controls in place to ensure the accuracy and timeliness of meter readings which are supplied to Retailers. The matters raised are shown in the tables below:

## Table of Non-Compliance

| Subject | Section | Clause | Non compliance | Impact | Audit History | Remedial Action |
|---|---|---|---|---|---|---|
| Phase failure checks | 2.3 | 5(b) & (c) of schedule 15.2 | Checks for phase failure not conducted and recorded. | Unknown | None | Identified |

## Table of Recommendations

| Subject | Section | Clause | Recommendation | Remedial Action |
|---|---|---|---|---|
| Import/export registers | 2.5 | 7, 8 and 9 of schedule 15.2 | Retailers should ensure they provide Datacol with sufficient instruction and detail regarding the identification, reading and recording of import and export registers. | Identified |

**Steve Woods**
**Veritek Limited**
**Electricity Authority Approved Auditor**