

**ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT**

For

Plus Energy Limited

Prepared by: Steve Woods

Date audit commenced: 20 March 2018

Date audit report completed: 3 April 2018

Audit report due date: 01-Mar-18

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EXECUTIVE SUMMARY

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

This is the first full audit for Plus Energy since they began trading. 12 non-compliances were identified with most relating to a small number of ICPs. Switching processes are manual and the issues identified in this area are mostly related to incorrect population of fields. One new connection was conducted and two of the non-compliances relate to late notification from the field of the electrical connection details.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The table below provides some guidance on this matter and contains a future risk rating score of 19, which results in an indicative audit frequency of 12 months. Considering this result along with the fact that three issues have resulted in six non-compliances, I believe 18 months is a more appropriate recommendation.

The matters raised are shown in the table below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	11.2, 15.2	Some registry and submission related errors	Moderate	Low	2	Identified
Registry population	3.5	9 of schedule 11.1	One status update was not processed within five business days of the event on the Registry. The incorrect event date was used.	Moderate	Low	2	Identified
MEP nomination	3.11	10.22(1)(a)(i)	One late MEP nomination.	Moderate	Low	2	Identified
Switching	4.2	3 of schedule 11.3	An incorrect AN response code was provided for two ICPs with AMI metering. AA was applied instead of AD.	Moderate	Low	2	Identified
	4.3	5 Schedule 11.3	Incorrect switch event meter reading or one ICP	Moderate	Low	2	Identified
	4.8	10(1) of schedule 11.3	An incorrect AN response code was provided for three ICPs with AMI metering. AA was applied instead of AD.	Moderate	Low	2	Identified

	4.10	11 of schedule 11.3	One CS file contained an inaccurate average daily consumption figure (3 instead of 6) Two CS files contained incorrect switch event meter readings	Moderate	Low	2	Identified
Electricity supplied	11.3	15.7 of part 15	One electricity supplied error	Moderate	Low	2	Identified
HHR aggregates	11.4	15.8 of part 15	Aggregates file contains submission information.	Strong	Low	1	Identified
Creation of submission information	12.2	15.5 of part 15	Late submission for one ICP.	Strong	Low	1	Identified
HE reporting	13.3	10 of schedule 15.3	HE targets not met for two NSPs for the 3 month revisions.	Strong	Low	1	Identified
Future Risk Rating						19	
Indicative Audit Frequency						12 months	

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

RECOMMENDATIONS

Subject	Section	Recommendation	Description
Event logs	9.6	Regarding: Clause 17 of Schedule 15.2	Check whether ARC Innovations has a compliant event management process

ISSUES

Subject	Section	Recommendation	Description

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

I checked the Authority's website to identify any relevant exemptions.

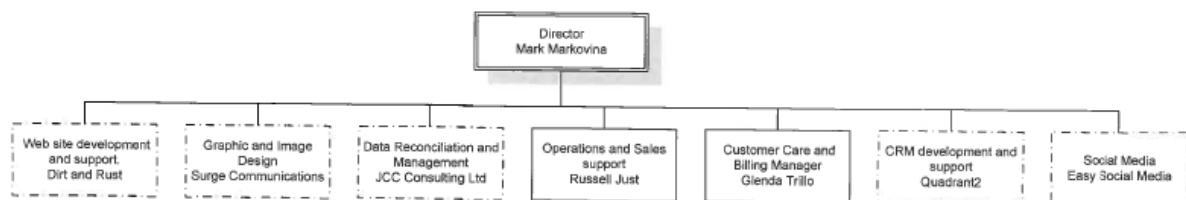
Audit commentary

Plus Energy does not have any exemptions in place.

1.2. Structure of Organisation

Plus Energy Limited (PLUS) trading as Community Power

Organisational chart February 2018



Note:



1.3. Persons involved in this audit

Personnel assisting in this audit were:

Name	Title
Russell Just	Operations and Sales Support
Glenda Trillo	Customer Care and Billing Manager
John Candy, JCC Consulting	Data Reconciliation and Management

1.4. Use of Agents (Clause 15.34)

Code reference

Clause 15.34

Code related audit information

A reconciliation participant who uses an agent

- *remains responsible for the contractors fulfillment of the participants Code obligations*
- *cannot assert that it is not responsible or liable for the obligation due to something the agent has or has not done*

Audit observation

This area was examined by interview to confirm Plus Energy understands their obligations.

Audit commentary

Plus Energy engages Wells for NHH meter reading and JC consulting for the performance of submission activities. The Wells audit report is attached as an appendix. All of the relevant tasks conducted by JC consulting were audited as part of this audit. Plus Energy understands their obligations in relation to this clause.

1.5. Hardware and Software

The main systems are as follows:

- Access Database (RM Tool) provided and run by JC Consulting for NHH and HHR submission
- The CRM interfaces with the registry to collect data
- Registry population is conducted manually

1.6. Breaches or Breach Allegations

There are no breach allegations recorded by the Electricity Authority during the audit period.

1.7. ICP Data

Plus Energy provided list file for each of their participant codes as at February 2018 and the information is summarised by metering category and status in the tables below.

Metering Category	2018
1	109
2	10
3	0
4	0
5	0
9	0
Blank	0

Status	Number of ICPs (2018)
Active (2,0)	118
Inactive - new connection in progress (1,12)	1
Inactive – vacant (1,4)	0
Inactive – AMI remote disconnection (1,7)	0
Inactive – de-energised due to meter disconnected (1,9)	0
Inactive – at pole fuse(1,8)	0
Inactive – de-energised at meter box fuse (1,10)	0
Inactive – at meter box switch (1,11)	0
Inactive – ready for decommissioning (1,6)	0
Inactive – reconciled elsewhere (1,5)	0
Decommissioned (3)	0

1.8. Authorisation Received

A letter of authorization was not required or sought.

1.9. Scope of Audit

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

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits version 7.2.

Some or part of the functions Plus Energy is certified for are conducted by agents, as shown in the table below. The functions performed by JC Consulting were audited at the same time as those conducted by Plus Energy.

The table below shows the tasks under clause 15.38 of part 15 for which Plus Energy requires certification.

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	Wells – NHH data collection	AMS ARC Innovations Metrix The Lines Company (FCLM) SMCO
(c)(iii) - Creation and management of HHR & NHH volume information	JC Consulting	
(d) – Calculation of ICP days	JC Consulting	
(da) - delivery of electricity supplied information under clause 15.7	JC Consulting	
(db) delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8	JC Consulting	
(e) – Provision of submission information for reconciliation	JC Consulting	

ARC Innovations, AMS, FCLM, SMCO and Metrix provide NHH AMI register reads as MEPs, not as agents to Plus Energy. They are subject to their own audit regime.

1.10. Summary of previous audit

Plus Energy provided a copy of the last audit, conducted in March 2017 by Steve Woods of Veritek Limited. The status of the issues identified in that audit are recorded below:

Table of Non-Compliance

Subject	Previous Report Section	Clause	Non-compliance	Status
			Nil	

Table of Recommendations

Subject	Section	Clause	Recommendation for Improvement	Status
NHH meter reading	6.6	5 of schedule 15.2	Confirm that Wells is checking for phase failure and missing seals during NHH manual meter reading	Cleared

Subject	Section	Clause	Recommendation for Improvement	Status
AMI event logs	9.6	17(4)(f) of schedule 15.2	Require MEPs to provide event logs in accordance with the Code	Still existing
HHR aggregates file	11.4	15.8 of part 15	Liaise with other participants and the Authority regarding a Code change or exemption in relation to the HHR Aggregates file.	Still existing

2. OPERATIONAL INFRASTRUCTURE

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

Code reference

Clause 10.6, 11.2, 15.2

Code related audit information

A participant must take all practicable steps to ensure that information that the participant is required to provide 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 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.

Audit commentary

The audit identified a small number of areas where information was not complete and accurate and where addition steps can be taken to improve accuracy. The areas are as follows:

- Some incorrect fields in switching files
- One late Active date update to the registry
- One minor error in an electricity supplied file

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clauses 11.2 & 15.2 From: 01-Apr-17 To: 28-Feb-18	Some registry and submission related errors Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because they mitigate risk most of the time but there are still some improvements to make. There is a minor impact on settlement and other participants therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status

For those ICPs that had an incorrect switch event meter reading we will include the one day of consumption for each of these ICPs in the next revision file so that there is a match between the switch read and what is submitted to the RM. No corrective action has been required on the other non-compliances due to the low/minor impact of the issues reported on.	26 Mar 2018	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Refresher training completed, process and procedure documentation reviewed and amended where required. In one instance an additional manual check has been implemented.	26 Mar 2018	

2.2. Provision of information (Clause 15.35)

Code reference

Clause 15.35

Code related audit information

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

Audit observation

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

Audit commentary

No late information was identified. Compliance is confirmed.

Audit outcome

Compliant

2.3. Data transmission (Clause 20 Schedule 15.2)

Code reference

Clause 20 Schedule 15.2

Code related audit information

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

Audit observation

NHH readings are provided by Wells

Meter reading information is provided via SFTP. I observed the SFTP folders, and traced a typical sample of six readings from the source into the billing system during the CS file checks.

Audit commentary

AMI read data from MEPs is transmitted to Plus Energy via SFTP, which ensures the security and integrity of the data.

The sample of six NHH readings traced from the source files to the billing system matched.

Audit outcome

Compliant

2.4. Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

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

The audit trail must include details of information:

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

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

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

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

The logs must include (at a minimum) the following:

- *an activity identifier (clause 21(4)(a))*
- *the date and time of the activity (clause 21(4)(b))*
- *the operator identifier (clause 21(4)(c)).*

Audit observation

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

Audit commentary

The logs for the following activities were reviewed.

- **Meter readings:** a compliant audit trail is recorded within the RM Tool
- **Registry notifications:** a compliant audit trail is recorded within the registry.
- **Switching files:** a compliant audit trail is recorded within the registry.
- **Reconciliation reports:** a compliant audit trail is recorded within the allocation portal.

Audit outcome

Compliant

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

Code reference

Clause 10.4

Code related audit information

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

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

Audit observation

I reviewed Plus Energy's current terms and conditions.

Audit commentary

Plus Energy's current terms and conditions with their customers includes consent to access for authorised parties for the duration of the contract. The detail is in the "Access to your Premises" section.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

- *the Authority*
- *an ATH*
- *an auditor*
- *an MEP*
- *a gaining metering equipment provider.*

The trader must use its best endeavours to provide access:

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

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10.35(1)&(2)

Code related audit information

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

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

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

Audit observation

The registry list files for were reviewed to confirm whether metered ICPs had an MEP recorded.

Loss compensation processes were discussed.

Audit commentary

The list file confirmed that all ICPs have a valid MEP recorded.

Loss compensation is not required for any Plus Energy ICPs.

Audit outcome

Compliant

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

Code reference

Clause 11.15B

Code related audit information

A trader must at all times ensure that the terms of each contract between a customer and a trader permit:

- the Authority to assign the rights and obligations of the trader under the contract to another trader if the trader commits an event of default under paragraph (a) or (b) or (f) or (h) of clause 14.41 (clause 11.15B(1)(a)); and*
- the terms of the assigned contract to be amended on such an assignment to—*
- the standard terms that the recipient trader would normally have offered to the customer immediately before the event of default occurred (clause 11.15B(1)(b)(i)); or*

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

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

Audit observation

I reviewed Plus Energy's current terms and conditions.

Audit commentary

Plus Energy's terms and conditions contain the appropriate clauses to achieve compliance with this requirement. This is contained in Section 27 "About this Contract".

Audit outcome

Compliant

2.9. Electrical connection of an ICP (Clause 10.32)

Code reference

Clause 10.32

Code related audit information

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 event detail report for the audit period was reviewed, which confirmed that Plus Energy had dealt with one new connection during the audit period. The electrical connection process for this ICP was examined.

Audit commentary

Plus Energy approved the electrical connection of ICP 0000569457NRABA and they have an arrangement with the MEP.

Audit outcome

Compliant

2.10. Metering certification (Clause 10.33(2))

Code reference

Clause 10.33(2)

Code related audit information

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 event detail report for the audit period was reviewed, to identify new connections during the audit period. One new connection was completed and this was examined.

Audit commentary

ICP 0000569457NRABA was electrically connected and certified on 31/01/18.

Audit outcome

Compliant

2.11. Arrangements for line function services (Clause 11.16)

Code reference

Clause 11.16

Code related audit information

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

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

Audit observation

A registry list file with history for the audit period was reviewed to identify all the networks Plus Energy traded on during the audit period. Arrangements for line function services with these networks were discussed.

Audit commentary

Plus Energy confirmed there are arrangements in place with all networks they currently trade on.

Audit outcome

Compliant

2.12. Arrangements for metering equipment provision (Clause 10.36)

Code reference

Clause 10.36

Code related audit information

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

Audit observation

A registry list file with history for the audit period was reviewed to identify all MEPs for Plus Energy ICPs during the audit period. Arrangements for MEP services with these MEPs were discussed.

Audit commentary

Plus Energy confirmed there are arrangements in place with all MEPs for Plus Energy ICPs.

Audit outcome

Compliant

3. MAINTAINING REGISTRY INFORMATION

3.1. Obtaining ICP identifiers (Clause 11.3)

Code reference

Clause 11.3

Code related audit information

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

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

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

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

Audit observation

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

Audit commentary

This requirement is well understood and managed by Plus Energy. One new connection has been processed and it has an ICP as required by the Code.

Audit outcome

Compliant

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

Code reference

Clause 11.7(2)

Code related audit information

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

Audit observation

The new connection process was examined in section 2.9. Timeliness of new connections is discussed in section 3.5.

The process to update the registry was reviewed for the only new connection processed.

Audit commentary

I walked through the registry update process for the only new connection. The information on the registry is complete and accurate.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 11.1

Code related audit information

If information provided by a trader to the registry 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 new connection process is discussed in section 3.5, the reconnection process is discussed in section 3.8, and the disconnection process is discussed in section 3.9.

In this section, I have examined the event detail report for the audit period to determine the overall performance. There were only three updates and all three were examined.

Audit commentary

The table below shows that the registry was updated within five business days for all three ICPs.

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Changes to active - reconnections	2018	2	2	0	2	100%
Change to de-energised	2018	0	-	-	-	-

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Change to de-energised NC in progress (1,12)	2018	1	1	0	3	100%

Audit outcome

Compliant

3.4. Trader responsibility for an ICP (Clause 11.18)

Code reference

Clause 11.18

Code related audit information

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

A trader ceases to be responsible for an ICP if:

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

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

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

Audit observation

The new connection process was discussed and the list file, as at February 2018, was examined to confirm that all active metered ICPs have an MEP recorded. This analysis found all ICPs have a valid MEP recorded.

The process for the decommissioning of ICPs was discussed. No ICPs have yet been decommissioned.

Audit commentary

Review of the registry list file found that all ICPs have a valid MEP recorded. Compliance is confirmed.

ICPs that are vacant and active, or inactive, are still maintained in the database.

Audit outcome

Compliant

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

Code reference

Clause 9 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

I examined the event detail report for the audit period to determine the overall performance.

The new connection process was examined. I checked for ICPs with a variance between the active date and the initial electrical connection date, and I checked for ICPs with a variance between the active date and meter certification date.

Audit commentary

The table below shows that the registry was not updated within five business days for the one new connection ICP (0000569457NRABA). The registry update was made on 06/03/18 for an electrical connection date of 31/01/18. The event date is showing as 15/01/18 and it should be 31/01/18.

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	2018	1	0	1	21	0%

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: Clause 9 of schedule 11.1 From: 31-Jan-18 To: 06-Mar-18	One status update was not processed within five business days of the event on the Registry. The incorrect event date was used. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because Plus Energy was monitoring this new connection but had difficulty getting information from the field. Settlement did not occur for January or February on Day 4 of the month following, therefore there is a minor impact. The audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Requirement to update within 5 business days has been noted. In this instance we were waiting for advice back from the Distribution Company managing this new connection through their contractor as to the status of this installation. Our processes also required as to sight evidence of the Certificate of Compliance and/or Record of Inspection, neither of which have been provided to us. We updated the registry once we received notice that the ICP was live, however this was beyond the 5-day requirement.		26 Mar 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will in future update the registry within 5 days even if we have not received copies of the Certificate of Compliance (COP) and/or Record of Inspection (ROI), to be compliant with this requirement. We have updated our process and procedure document to remove the requirement to site the COC and/or ROI before updating the registry.		26 Mar 2018	

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

Code reference

Clause 9 (1(k) of Schedule 11.1

Code related audit information

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

Audit observation

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

Audit commentary

No missing or unknown ANZSIC codes were identified.

I checked a sample of 20 ANZSIC codes, 10 residential and 10 business and they all appear to be correct. I used google maps streetview functionality to conduct this check.

Processes are in place to review ANZSIC codes on switch in.

Audit outcome

Compliant

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

Code reference

Clause 9(1)(f) of Schedule 11.1

Code related audit information

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

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

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

Audit observation

Plus Energy does not have any unmetered load.

Audit commentary

Plus Energy does not have any unmetered load.

Audit outcome

Not applicable

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

Code reference

Clause 17 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

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

The process for the management of ICP reconnection and new connections was examined. The event detail report for the audit period was analysed and the findings in relation to the timeliness of updates to registry are recorded in section 3.3 and 3.5.

Audit commentary

The status is updated to active when a new connection is completed, or an ICP is reconnected on switching in.

There were no examples of the incorrect use of the Active status.

Audit outcome

Compliant

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

Code reference

Clause 19 Schedule 11.1

Code related audit information

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

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

Audit observation

An event detail report for the 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.

Audit commentary

Plus Energy has not conducted any disconnection during the audit period.

One ICP is at de-energised NC in progress (1,12) and this status is correctly used.

Audit outcome

Compliant

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

Code reference

Clause 15 Schedule 11.1

Code related audit information

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

Audit observation

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

A review of Plus Energy's records confirmed there are no ICPs at New or Ready.

Audit outcome

Not applicable

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

Code reference

Clause 10.22(1)(a)(i)

Code related audit information

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, and identified four MEP changes.

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

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

Analysis found the MEP was not nominated within five business days of the event date for one of four ICPs. ICP 0015732538ELFE1 had an MEP nomination on 23/11/17 for an event date of 23/11/17 but this was replaced with a new nomination to the same MEP on 04/12/17 for an event date of 13/12/17 because that was the date the metering was installed and certified. This nomination was later than five business days.

Non-compliance	Description
Audit Ref: 3.11 With: Clause 10.22(1)(a)(i) From: 20-Nov-17 To: 04-Dec-17	One late MEP nomination. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	Rationale for audit risk rating

Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. There is a minor impact on the MEP because they could not update their details until they were nominated; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have changed our process so that we now update the registry with the nominated MEP when we raise the meter replacement request.		26 Mar 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Changed our process to update the registry at the time the meter replacement request is raised with the MEP		26 Mar 2018	

Audit outcome

Non-compliant

4. PERFORMING CUSTOMER AND EMBEDDED GENERATOR 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)

Code reference

Clause 2 Schedule 11.3

Code related audit information

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

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

A gaining trader must advise the registry 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 1 or more profile codes associated with that ICP.

Audit observation

The switch gain process was examined to determine when Plus Energy deems all conditions to be met. I checked all six ICPs where the switch was backdated to confirm compliance.

Plus Energy does not use direct sale processes.

Audit commentary

All six ICPs were with one customer. The customer's agent requested the switch event date and the NT files were sent within two business days of agreement.

Audit outcome

Compliant

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

Code reference

Clauses 3 and 4 Schedule 11.3

Code related audit information

Within three business days after 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 (clause 3(a) of Schedule 11.3):*
- *providing the proposed event date to the registry and a valid switch response code (clause 3(a)(i) and (ii) of Schedule 11.3); or*

- providing a request for withdrawal of the switch in accordance with clause 17 (clause 3(c) of Schedule 11.3).

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

Audit observation

An event detail report for the audit period was reviewed to identify AN files issued by Plus Energy 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 no late AN files.

The event detail report was analysed to assess compliance with the requirement to set event dates.

Audit commentary

No late AN files for transfer switches were identified on the switch breach history report.

The event detail report found no event dates for transfer switches set greater than 10 days. There were only two AN files sent during the audit period. One of the event dates was set within five business days of the NT notification (50%). The other one was seven days.

The content of both AN files for was reviewed. Both AN files had the incorrect AN response code. The ICPs had an advanced meter, but AA was applied instead of AD.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: Clause 3 of schedule 11.3 From: 13-Nov-17 To: 01-Jan-18	An incorrect AN response code was provided for two ICPs with AMI metering. AA was applied instead of AD. Potential impact: None Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact on participants is minor because they use the registry fields to determine whether and ICP is AMI or not, the AN file code is not used for this purpose; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
We had overlooked the requirement to apply the appropriate response code when we are the losing retailer.		26 Mar 2018	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
The auditor clarified the Authority's advice that "AA" should only be used when none of the other codes are valid, and that AD should be used if advanced metering is present. We have updated our process and procedures document to incorporate this step/requirement in the process.	26 Mar 2018	

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

Code reference

Clause 5 Schedule 11.3

Code related audit information

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

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

Audit observation

An event detail report for the audit period was reviewed, to identify CS files issued by Plus Energy during the audit period.

Three CS files were issued and they were all reviewed to determine whether the data provided was complete and accurate.

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

Audit commentary

No late CS files for transfer switches were identified on the switch breach history report.

The accuracy of the content of CS files was confirmed by checking all three records in Plus Energy's database. The content checked included:

- correct identification of meter readings and correct date of meter readings
- accuracy of meter readings
- accuracy of register content; and
- accuracy of average daily consumption

CS content was accurate for two files but ICP 0142573000LCC36 had an incorrect switch event meter reading. The NT was sent on 15/12/17 for 13/11/17 but it was assumed the switch date was 13/12/17, so the customer was billed to that date and a reading was provided for that date. It appears the event date in the NT file may have been incorrect so it should have been withdrawn for "date fail".

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.3 With: Clause 5 Schedule 11.3 From: 13-Dec-17 To: 13-Dec-17	Incorrect switch event meter reading or one ICP Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact on settlement and participants is minor; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
No action required, we believe the switch date supplied by the gaining retailer was incorrect and we have supplied the correct reading for the correct switch date.		26 Mar 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We accept the correct process going forward would be to reject the switch “date fail” and have the gaining retailer resubmit the switch with the correct switch date. Process update included with the use of AN response codes as per 4.2. above.		26 Mar 2018	

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

Code reference

Clause 6(1) and 6A Schedule 11.3

Code related audit information

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

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

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

- *the losing trader can choose not to accept the reading, however must advise the gaining trader no later than five business days after receiving the switch event meter reading from the gaining trader (clause 6A(a)); or*
- *if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader (clause 6A(b)).*

Audit observation

No read change requests were sent or received during the audit period.

Audit commentary

No read change requests were sent or received during the audit period.

Audit outcome

Not applicable

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

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

If the losing trader trades electricity from a non-half hour meter, with a switch event meter reading that is not from an AMI certified meter flagged Y on the registry: and

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 6(2)(b));*
- *the gaining trader within five business days after receiving final information from the registry, 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 was analysed to identify all read change requests and acknowledgements during the audit period.

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

Audit commentary

No read change requests were sent or received during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 7 Schedule 11.3

Code related audit information

A losing trader or gaining trader may 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 (with all necessary amendments).

Audit observation

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

Audit commentary

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

Audit outcome

Not applicable

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

Code reference

Clause 9 Schedule 11.3

Code related audit information

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

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

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

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

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

Audit observation

The switch gain process was examined to determine when Plus Energy deems all conditions to be met. I checked the event detail report for any backdates NT files.

Audit commentary

Plus Energy sends the NT files immediately and no backdates NT files were found.

Audit outcome

Compliant

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

Code reference

Clause 10(1) Schedule 11.3

Code related audit information

10(1) Within five business days after receipt of notification of the switch move from the registry, if the losing trader accepts the event date proposed by the gaining trader, the losing trader must complete the switch by providing to the registry:

- *confirmation of the switch event date; and*
- *a valid switch response code; and*
- *final information as required under clause 1; or*
- *10(1)(b) If the losing trader does not accept the event date proposed by the gaining trader, the losing trader must acknowledge the switch request. Determine an event date that is not earlier than the gaining traders proposed date and that date can be no later than 10 business days after the date of the notification. Alternatively, the losing trader may provide a request for a withdrawal of the switch in accordance with clause 17.*

Audit observation

An event detail report for the audit period was reviewed to identify AN files issued by Plus Energy during the audit period. I checked all three AN files to confirm the content was correct.

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

Audit commentary

No late AN files for transfer switches were identified on the switch breach history report.

All three ICPs had the “AA” code and should have had the AD code. Plus Energy intends to change their process to use the AD code in future for AMI metered installations.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.8 With: Clause 10(1) of schedule 11.3 From: 01-Sep-17 To: 01-Feb-18	An incorrect AN response code was provided for three ICPs with AMI metering. AA was applied instead of AD. Potential impact: None Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	Rationale for audit risk rating
Low	The controls are recorded as moderate because they mitigate risk with regard to timeliness but there is room for improvement with regard to response codes. The impact on participants is minor because they use the registry fields to determine whether and ICP is AMI or not, the AN file code is not used for this purpose; therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Please refer to point 4.2. above, this is the same issue identified in point 4.2. above. We had overlooked the requirement to apply AN response codes, have since received training on this and have updated our processes accordingly.	26 Mar 2018	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Please refer to point 4.2. above, we have updated our process and procedures document to incorporate this step/requirement in the process.	26 Mar 2018	

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

Code reference

Clause 10(2) Schedule 11.3 (2)

Code related audit information

If the losing trader determines a different date, the losing trader must also complete the switch by providing to the registry as described in sub-clause (1)(a):

- *the event date proposed by the losing trader; and*
- *a valid switch response code; and*
- *final information as required under clause 1.*

Audit observation

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

Audit commentary

Review of the event detail report showed no ICPs had different dates set.

Audit outcome

Compliant

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

Code reference

Clause 11 Schedule 11.3

Code related audit information

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

- *provide the event date (clause 11(a)); and*
- *provide the switch event meter reading as at the event date for each meter or data storage device noted on the registry (clause 11(b)); and*

- if switch event meter reading is not a validated meter reading, provide the date of the last reading of the meter or storage device (clause (11(c))).

Audit observation

An event detail report for the audit period was reviewed to identify CS files issued by Plus Energy during the audit period. All three CS files were reviewed to determine whether the codes the data provided was complete and accurate.

The switch breach history report for the audit period was reviewed, and showed no late CS files for move in switches.

Audit commentary

The accuracy of the content of CS files was confirmed by checking all of Plus Energy's records. The content checked included:

- correct identification of meter readings and correct date of meter readings
- accuracy of meter readings
- accuracy of register content; and
- accuracy of average daily consumption

One CS file contained the incorrect average daily consumption and two ICPs had switch event meter readings for the incorrect date, the readings should have been for one day earlier. These fields are populated manually based on billing and meter reading records.

All CS files were sent on time. Plus Energy uses the daily switch breach report to track switching events.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.10 With: Clause 11 of schedule 11.3 From: 27-Sep-17 To: 31-Oct-17	One CS file contained an inaccurate average daily consumption figure (3 instead of 6) Two CS files contained incorrect switch event meter readings Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because they are effective with regard to timeliness but they need improvement with regard to content. The impact on settlement and participants is minor; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status

We will include the one day of consumption in the next revision file so that there is a match between the switch read and what is submitted to the RM	Next revision file submission	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Refresher training completed. Process document has been reviewed and amended to clearly state the date of final read to be used.	26 Mar 2018	

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

Code reference

Clause 12 Schedule 11.3

Code related audit information

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

- *if the switch meter reading established by the gaining trader differs by less than 200 kWh from that provided by the losing trader, both traders must use the switch event meter reading provided by the gaining trader (clause 12(2)(a)); or*
- *if the switch event meter reading provided by the losing trader differs by 200 kWh or more from a value established by the gaining trader, the gaining trader may dispute the switch meter reading. In this case, the gaining trader, within 4 calendar months of the actual event date, must provide to the losing trader a changed validated meter reading or a permanent estimate supported by 2 validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):*
- *notify the gaining trader if it does not accept the switch event meter reading and the losing trader and the gaining trader must resolve the dispute in accordance with the disputes procedure in clause 15.29 (with all necessary amendments) (clause 12(3)(a)); or*
- *if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader (clause 12(3)(b)).*

12(2A) If the losing trader trades electricity from a non-half hour meter, with a switch event meter reading that is not from an AMI certified meter flagged Y on the registry,

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 12(2A)(b));*
- *the gaining trader no later than 5 business days after receiving final information from the registry, may provide the losing trader with a switch event meter reading from that meter. The losing trader must use that switch event meter reading (clause 12(2B)).*

Audit observation

No read change requests were sent or received during the audit period.

Audit commentary

No read change requests were sent or received during the audit period.

Audit outcome

Not applicable

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

Code reference

Clause 14 Schedule 11.3

Code related audit information

The gaining trader switch process applies 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".*

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 the switch and expected event date no later than 3 business days after the arrangement comes into effect.

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

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

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

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

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

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

Audit observation

The event detail report and switch breach report were analysed to identify all switch files sent during the audit period.

No gaining trader switches were completed by Plus Energy.

Audit commentary

No gaining trader switches were completed by Plus Energy.

Audit outcome

Not applicable

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

Code reference

Clause 15 Schedule 11.3

Code related audit information

Within three business days after the losing trader is informed about the switch by the registry, 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

No gaining trader switches were completed by Plus Energy.

Audit commentary

No gaining trader switches were completed by Plus Energy.

Audit outcome

Not applicable

4.14. Gaining trader to notify registry - gaining trader switch (Clause 16 Schedule 11.3)

Code reference

Clause 16 Schedule 11.3

Code related audit information

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

If the ICP is being de-energised or if metering equipment is being removed, the gaining trader must either-

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

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

Audit observation

No gaining trader switches were completed by Plus Energy.

Audit commentary

No gaining trader switches were completed by Plus Energy.

Audit outcome

Not applicable

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

Code reference

Clauses 17 and 18 Schedule 11.3

Code related audit information

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

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

- *for each ICP, the trader withdrawing the switch request must provide the registry with (clause 18(c)):*
 - o *the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and*
 - o *the withdrawal advisory code published by the Authority. (clause 18(c)(ii))*
- *within five business days after receiving 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 (clause 18(d))*
- *on receipt of a rejection notification from the registry, in accordance with clause 18(d), a trader may re-submit the switch withdrawal request for an ICP in accordance with clause 18(c). All switch withdrawal requests must be resolved within 10 business days after the date of the initial switch withdrawal request (clause 18(e))*
- *if the trader requests that a switch request be withdrawn, and the resolution of that switch withdrawal request results in the switch proceeding, within 2 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 (clause 18(f)).*

Audit observation

The event detail report was analysed to identify all switch withdrawal and acknowledgement files sent during the audit period.

All 11 withdrawal requests rejected by Plus Energy were reviewed, and all four withdrawal requests rejected by Plus Energy were reviewed.

The switch breach history report for the audit period was reviewed. No late notifications of withdrawal were identified during the audit period.

Audit commentary

All 11 withdrawal requests were for genuine reasons and had supporting information to prove this.

I reviewed all withdrawal requests rejected by Plus Energy, and found all had been rejected for valid reasons. Accepted and rejected withdrawals had been processed as expected.

No late notifications of withdrawal were identified on the switch breach report.

Audit outcome

Compliant

4.16. Metering information (Clause 21 Schedule 11.3)

Code reference

Clause 21 Schedule 11.3

Code related audit information

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

21(a) - the trader who carries out the interrogation, switch event meter reading must ensure that the interrogation is as accurate as possible, or that the switch event meter reading is fair and reasonable.

21(b) and (c) - the cost of every interrogation or switch event meter reading carried out in accordance with clauses 5(b) or 11(b) or (c) must be met by the losing trader. The costs in every other case must be met by the gaining trader.

Audit observation

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

Audit outcome

Compliant

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

Code reference

Clause 11.15AA to 11.15AB

Code related audit information

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

If a protected trader enters into an arrangement with a customer of another trader (the losing trader), or a trader enters into an arrangement with a customer of a protected trader, to commence trading electricity with the customer, the losing trader must not, by any means, initiate contact with the customer to attempt to persuade the customer to terminate the arrangement during the period from the receipt of the NT to the event date of the switch including by:

11.15AB(4)(a) - making a counter offer to the customer; or

11.15AB(4)(b) - offering an enticement to the customer.

Audit observation

The Electricity Registry switch save protected retailer list was examined to confirm that Plus Energy is a save protected participant.

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

Plus Energy does not have a winback processes.

I checked the event detail report for all withdrawn switches from the audit period. There were five switches that were withdrawn with the code "CX" applied. All were sent after the switch completion date.

Audit outcome

Compliant

5. MAINTENANCE OF UNMETERED LOAD

5.1. Maintaining shared unmetered load (Clause 11.14)

Code reference

Clause 11.14

Code related audit information

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

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

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

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

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

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

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

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

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

Audit observation

A registry list file was reviewed for the audit period to confirm that Plus Energy has not supplied any ICPs with shared unmetered load.

I reviewed processes to identify shared unmetered load.

Audit commentary

Plus Energy does not supply any ICPs with shared unmetered load. Any new unmetered load will be identified through the registry checks at the time of switch in.

Audit outcome

Not applicable

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

Code reference

Clause 10.14 (2)(b)

Code related audit information

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

Audit observation

A registry list file was reviewed to confirm that Plus Energy has not supplied any ICPs with unmetered load.

Audit commentary

A registry list file was reviewed to confirm that Plus Energy has not supplied any ICPs with unmetered load.

Audit outcome

Not applicable

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

Code reference

Clause 10.14 (5)

Code related audit information

If the unmetered load limit is exceeded the retailer must:

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

Audit observation

A registry list file was reviewed to confirm that Plus Energy has not supplied any ICPs with unmetered load.

Audit commentary

A registry list file was reviewed to confirm that Plus Energy has not supplied any ICPs with unmetered load.

Audit outcome

Not applicable

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

Code reference

Clause 11 Schedule 15.3, Clause 15.37B

Code related audit information

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

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

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

Audit observation

A registry list file was reviewed to confirm that Plus Energy has not supplied any ICPs with unmetered load.

Audit commentary

A registry list file was reviewed to confirm that Plus Energy has not supplied any ICPs with unmetered load.

Audit outcome

Not applicable

6. GATHERING RAW METER DATA

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

Code reference

Clause 10.13, Clause 10.24 and 15.13

Code related audit information

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

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

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

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

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

Audit observation

A registry list file was reviewed for the audit period to identify all ICPs with distributed generation. ICP details were checked to confirm consistency.

Audit commentary

Review of the registry list identified seven active ICPs which had generation capacity recorded on the registry. All had correct metering, profiles and submission.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

- *provide to the grid owner a copy of the metering installation design (before ordering the equipment)*
- *provide at least three months for the grid owner to review and comment on the design*
- *respond within three business days of receipt to any request from the grid owner for additional details or changes to the design*
- *ensure any reasonable changes from the grid owner are carried out.*

The participant responsible for the metering installation must:

- *advise the reconciliation manager of the certification expiry date not later than 10 business days after certification of the metering installation*
- *become the MEP or contract with a person to be the MEP*
- *advise the reconciliation manager of the MEP identifier no later than 20 days after entering into a contract or assuming responsibility to be the MEP.*

Audit observation

Plus Energy is not responsible for any GIPs.

Audit commentary

Plus Energy is not responsible for any GIPs.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

Audit observation

A registry list file was reviewed to identify all ICPs with profiles reliant on control devices.

Audit commentary

Plus Energy does not use any profiles reliant on certified control devices.

Audit outcome

Not applicable

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

Code reference

Clause 10.43(2) and (3)

Code related audit information

If a participant becomes aware of an event or circumstance that lead it to believe a metering installation could be inaccurate, defective, or not fit for purpose they must:

- *advise the MEP*
- *include in the advice all relevant details.*

Audit observation

Processes relating to defective metering were examined. No examples of defective metering were identified during the audit.

Audit commentary

Defective meters are typically identified through the meter reading validation process, or from information provided by the meter read provider.

Upon identifying a possible defective meter, Plus Energy will raise a field services job to investigate. No defective meters were identified during the audit period, so it was not possible to review examples of this process.

Audit outcome

Compliant

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

Code reference

Clause 2 Schedule 15.2

Code related audit information

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

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

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

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

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

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

2(6) – The interrogation systems must record:

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

Audit observation

NHH readings are provided by Wells as an agent to Plus Energy and by MEPs who have their own compliance regime. I checked the compliance of Wells processes.

Audit commentary

The Wells report confirms data is collected from the services access interface.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

All validated meter readings must be derived from meter readings.

A meter reading provided by a consumer may be used as a validated meter reading only if another set of validated meter readings not provided by the consumer are used during the validation process.

During the manual interrogation of each NHH metering installation the reconciliation participant must:

- a) obtain the meter register*
- b) ensure seals are present and intact*
- c) check for phase failure (if supported by the meter)*
- d) check for signs of tampering and damage*
- e) check for electrically unsafe situations*

if the relevant parts of the metering installation are visible and it is safe to do so.

Audit observation

Data collection processes for Wells were reviewed during their agent audits. I reviewed examples of meter reading notes sent to Plus Energy.

Processes for customer reads were discussed.

Audit commentary

Wells has processes to conduct the checks required by this clause and a process is in place to pass on any meter reader's notes. I viewed these during the audit.

There were no examples of customer reads.

Audit outcome

Compliant

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

Code reference

Clause 6 Schedule 15.2

Code related audit information

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

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

Audit observation

The process of the application of meter readings was examined.

Audit commentary

AMI readings provided by Metrix, Smartco, ARC and AMS are all timestamped 23.59.59. Reads received from FCLM are timestamped with the time they were taken.

Reads received from Wells are date and time stamped with the time they were taken.

All reads received are applied as at 2400 hours on the day they were taken, with the exception of opening reads. Application of reads was reviewed as part of the historic estimate checks, discussed in section 12.11.

Audit outcome

Compliant

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

Code reference

Clause 7(1) and (2) Schedule 15.2

Code related audit information

Each reconciliation participant must ensure that a validated meter reading is obtained in respect of every meter register for every non half hour metered ICP for which the participant is responsible, at least once during the period of supply to the ICP by the reconciliation participant, and used to create volume information.

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

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

Audit observation

The process to manage missed reads was examined.

Audit commentary

There were no ICPs switched out on estimates, all ICPs had a read during the period of supply. Plus Energy is proactive in this area to ensure compliance with the Code and to minimise the use of estimates.

Audit outcome

Compliant

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

Code reference

Clause 8(1) and (2) Schedule 15.2

Code related audit information

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

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

Audit observation

The meter reading process was examined. Meter read frequency reports for the audit period were provided.

Audit commentary

All ICPs were read at four months and at 12 months.

Audit outcome

Compliant

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

Code reference

Clause 9(1) and (2) Schedule 15.2

Code related audit information

In relation to each NSP, each reconciliation participant must ensure that for each NHH ICP at which the reconciliation participant trades continuously for each 4 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. Meter read frequency reports for the audit period were provided.

Audit commentary

All ICPs were read at four months and at 12 months.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.2

Code related audit information

The following information must be logged as the result of each interrogation of the NHH metering:

10(a) - the means to establish the identity of the individual meter reader

10(b) - the ICP identifier of the ICP, and the meter and register identification

10(c) - the method being used for the interrogation and the device ID of equipment being used for interrogation of the meter.

10(d) - the date and time of the meter interrogation.

Audit observation

NHH readings are provided by MEPs and by Wells. The data collection processes were reviewed as part of their MEP and agent audits.

Audit reports confirm compliance.

Audit commentary

Compliance with this clause has been demonstrated by the agents and MEPs, and is discussed in their audit reports.

Audit outcome

Compliant

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

Code reference

Clause 11(1) Schedule 15.2

Code related audit information

Raw meter data from all electronically interrogated metering installations must be obtained via the services access interface.

This may be carried out by a portable device or remotely.

Audit observation

HHR data is collected by MEPs from the services access interface.

Audit commentary

HHR data is collected by MEPs from the services access interface.

Audit outcome

Compliant

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

Code reference

Clause 11(2) Schedule 15.2

Code related audit information

The following information is collected during each interrogation:

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

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

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

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

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

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

Audit observation

All HHR data is collected by MEPs.

Audit commentary

All HHR data is collected by MEPs.

Audit outcome

Not applicable

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

Code reference

Clause 11(3) Schedule 15.2

Code related audit information

The interrogation log forms part of the interrogation audit trail and, as a minimum, must contain the following information:

11(3)(a) - the date of interrogation

11(3)(b) - the time of commencement of interrogation

11(3)(c) - the operator identification (if available)

11(3)(d) - the unique identifier of the meter or data storage device

11(3)(e) - the clock errors outside the range specified in Table 1 of clause 2

11(3)(f) - the method of interrogation

11(3)(g) - the identifier of the reading device used for interrogation (if applicable).

Audit observation

All HHR data is collected by MEPs.

Audit commentary

All HHR data is collected by MEPs.

Audit outcome

Not applicable

7. STORING RAW METER DATA

7.1. Trading period duration (Clause 13 Schedule 15.2)

Code reference

Clause 13 Schedule 15.2

Code related audit information

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

Audit observation

All HHR data is collected by MEPS.

Audit commentary

All HHR data is collected by MEPS.

Audit outcome

Not applicable

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

Code reference

Clause 18 Schedule 15.2

Code related audit information

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

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

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

Audit observation

Processes to archive and store raw meter data were reviewed in the agents reports. I checked that meter readings cannot be modified without an audit trail.

Audit commentary

The Wells report confirms compliance with this clause.

When this data reaches the RM submission tool, the level of security is also robust and unauthorised personnel cannot access raw meter data.

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.

Audit outcome

Compliant

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

Code reference

Clause 21(5) Schedule 15.2

Code related audit information

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

Audit observation

Plus Energy does not deal with any non-metering information.

Audit commentary

Plus Energy does not deal with any non-metering information.

Audit outcome

Not applicable

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

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

Code reference

Clause 19(1) Schedule 15.2

Code related audit information

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

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

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

19(1)(c) - if the original meter reading cannot be confirmed or replaced by a meter reading from another interrogation, then an estimated reading is substituted and the estimated reading is marked as an estimate and it is subsequently replaced in accordance with clause 4(2).

Audit observation

I conducted a walkthrough of this process to confirm compliance.

Audit commentary

There were no switch read changes or corrections due to faulty metering. The process documentation contains appropriate processes which achieves compliance. I could check two examples of estimates being replaced with different estimates, which were then replaced with actual reads. The process used is compliant.

Audit outcome

Compliant

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

Code reference

Clause 19(2) Schedule 15.2

Code related audit information

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

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

19(2)(b) - in the absence of any check meter or data storage device, data may be substituted from another period if the total of all substituted intervals matches the total consumption recorded on the meter, if available, and the pattern of consumption is considered materially similar to the period in error.

Audit observation

I checked five HHR estimate examples, including the audit trail and labelling.

Audit commentary

The estimation process varies depending on the scenario being dealt with. For the examples checked the following processes were employed:

- Creation of HHR data where the total kWh is known. In this case a typical profile for the customer type was used and it was scaled to match the total kWh.
- Filling of a “gap” for two trading periods where the total kWh was known. The total “missing” kWh was halved for each trading period.
- Estimation of a profile for sports field lights where the total kWh was known. The “on time” for the lights was estimated based on historic data and the profile was created to match the total kWh.

All data is created in an Excel tool then it is imported into the RM tool and labelled as “E” for estimated. The RM tool contains a record of file name, date and time.

Audit outcome

Compliant

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

Code reference

Clause 19(3) Schedule 15.2

Code related audit information

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

Audit observation

Plus Energy does not have an error or loss compensation arrangements.

Audit commentary

Plus Energy does not have an error or loss compensation arrangements.

Audit outcome

Not applicable

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

Code reference

Clause 22(1) and (2) Schedule 15.2

Code related audit information

In correcting a meter reading in accordance with clause 19, the raw meter data must not be overwritten. If the raw meter data and the meter readings are the same, an automatic secure backup of the affected data must be made and archived by the processing or data correction application.

If data is corrected or altered, a journal must be generated and archived with the raw meter data file. The journal must contain the following:

22(2)(a) - the date of the correction or alteration

22(2)(b) - the time of the correction or alteration

22(2)(c) - the operator identifier of the reconciliation participant

22(2)(d) - the half-hour metering data or the non-half hour metering data corrected or altered, and the total difference in volume of such corrected or altered data

22(2)(e) - the technique used to arrive at the corrected data

22(2)(f) - the reason for the correction or alteration.

Audit observation

Corrections are discussed in sections 8.1 and 8.2. Raw data is retained by the agents and MEPs and is not edited in any way by any process. Audit trails are discussed in section 2.3.

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

Audit commentary

There were no examples of corrections to raw meter data.

Audit outcome

Compliant

9. ESTIMATING AND VALIDATING VOLUME INFORMATION

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

Code reference

Clause 3(3) Schedule 15.2

Code related audit information

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

Audit observation

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

Audit commentary

Estimated readings are clearly identified as required by this clause.

Audit outcome

Compliant

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

Code reference

Clause 3(4) Schedule 15.2

Code related audit information

Volume information must be directly derived, in accordance with Schedule 15.2, from:

3(4)(a) - validated meter readings

3(4)(b) - estimated readings

3(4)(c) - permanent estimates.

Audit observation

A sample of submission data was reviewed in 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.

Audit outcome

Compliant

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

Code reference

Clause 3(5) Schedule 15.2

Code related audit information

All meter data that is used 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 data is not rounded or truncated.

Audit commentary

Data provided by the MEPS and agents is not rounded or truncated. Submission data is rounded to two decimal places.

Audit outcome

Compliant

9.4. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

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

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

Audit observation

As recorded in Section 8.2, compliance is achieved. The same process is used for estimation or correction.

Audit commentary

As recorded in Section 8.2, compliance is achieved. The same process is used for estimation or correction.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

I conducted a walk through of the validation processes.

Audit commentary

Points “a” and “b” above are conducted by JC Consulting when data is loaded into the RM tool. Loading cannot occur unless there is an ICP, meter, register and date match. Point “d” is conducted in the RM Tool where negative and zero consumption examples are identified and reported to Plus Energy. I checked the most recent zero consumption report, which had been received and checked by Plus Energy.

Point “c” above is managed by Plus Energy where they manually check each invoice before it is sent to ensure it is reasonable. All invoices contain a graph to assist with this check.

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 15.2

Code related audit information

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

Each validity check of a meter reading obtained by electronic interrogation or an estimated reading must include:

17(4)(a) - checks for missing data

17(4)(b) - checks for invalid dates and times

17(4)(c) - checks of unexpected 0 values

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

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

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

Audit observation

I checked the validation steps by conducting a walk-through of the process. I observed the AMI event logs where they were available.

Audit commentary

JC Consulting check for missing data, invalid dates and times, unexpected zeros and register readings are compared to the sum of intervals. There is also an invoice review by Plus Energy to ensure there are no unexpected changes to the consumption patterns. All invoices contain a graph to assist with this check.

Event files were viewed in the SFTP server directories and there were no events present that needed further action. Some MEPs send event files whether there are events or not. Other MEPs only send event files if there is an event. I recommend Plus Energy checks with ARC innovations to confirm whether they have a compliant event management process.

Audit outcome

Compliant

Recommendation	Description	Audited party comment	Remedial action
Clause 17 of Schedule 15.2	Check whether ARC Innovations has a compliant event management process	We have emailed ARC innovations seeking confirmation that ARC does have a compliant event management process as we are yet to receive any event management files from them.	Identified

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

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

Code reference

Clause 13.136

Code related audit information

The generator (and/or embedded generator) must provide to the pricing manager and the grid owner connected to the local network in which the embedded generator is located, half hour metering information in accordance with clause 13.138 in relation to generating plant that is subject to a dispatch instruction:

- *that injects electricity directly into a local network; or*
- *if the meter configuration is such that the electricity flows into a local network without first passing through a grid injection point or grid exit point metering installation.*

Audit observation

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

Audit commentary

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

Audit outcome

Not applicable

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

Code reference

Clause 13.137

Code related audit information

Each generator must provide the pricing manager and the relevant grid owner half-hour metering information for:

- *any unoffered generation from a generating station with a point of connection to the grid 13.137(1)(a)*
- *any electricity supplied from an intermittent generating station with a point of connection to the grid 13.137(1)(b).*

The generator must provide the pricing manager and the relevant grid owner with the half-hour metering information required under this clause in accordance with the requirements of Part 15 for the collection of that generator's volume information (clause 13.137(2)).

If such half-hour metering information is not available, the generator must provide the pricing manager and the relevant grid owner a reasonable estimate of such data (clause 13.137(3)).

Audit observation

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

Audit commentary

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

Audit outcome

Not applicable

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

Code reference

Clause 13.138

Code related audit information

The generator must provide the information required by clauses 13.136 and 13.137,

13.138(1)(a)- adjusted for losses (if any) relative to the grid injection point or, for embedded generators the grid exit point, at which it offered the electricity

13.138(1)(b)- in the manner and form that the pricing manager stipulates

13.138(1)(c)- by 0500 hours on a trading day for each trading period of the previous trading day.

The generator must provide the half-hour metering information required under this clause in accordance with the requirements of Part 15 for the collection of the generator's volume information.

Audit observation

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

Audit commentary

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

Audit outcome

Not applicable

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

Code reference

Clause 13.140

Code related audit information

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

Audit observation

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

Audit commentary

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

Audit outcome

Not applicable

11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

11.1. Buying and selling notifications (Clause 15.3)

Code reference

Clause 15.3

Code related audit information

Unless an embedded generator has given a notification in respect of the point of connection under clause 15.3, a trader must 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 which profiles were used and whether trading notifications were provided.

Audit commentary

There are no non-standard profiles used.

Audit outcome

Not applicable

11.2. Calculation of ICP days (Clause 15.6)

Code reference

Clause 15.6

Code related audit information

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

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

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

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

Audit observation

The process for the calculation of ICP days was examined by checking HHR and NHH variances for the period April 2017 to January 2018, and investigating any discrepancies.

Audit commentary

There were only three NSPs with discrepancies of 1, 5 and 18 days. All were NHH records and checks confirmed Plus Energy's ICP days were correct. The issue appears to be the timing of the production of the RM ICPCOMP report. The registry is used as the starting point for submission by the RM Tool, which

assists in getting the files accurate. No ICP days errors were detected, which is confirmed by there being no records in the ICPMISS reports for the audit period.

Audit outcome

Compliant

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

Code reference

Clause 15.7

Code related audit information

A retailer must deliver to the reconciliation manager its total monthly quantity of electricity supplied for each NSP, aggregated by invoice month, for which it has provided submission information to the reconciliation manager, including revised submission information for that period as non-loss adjusted values in respect of:

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

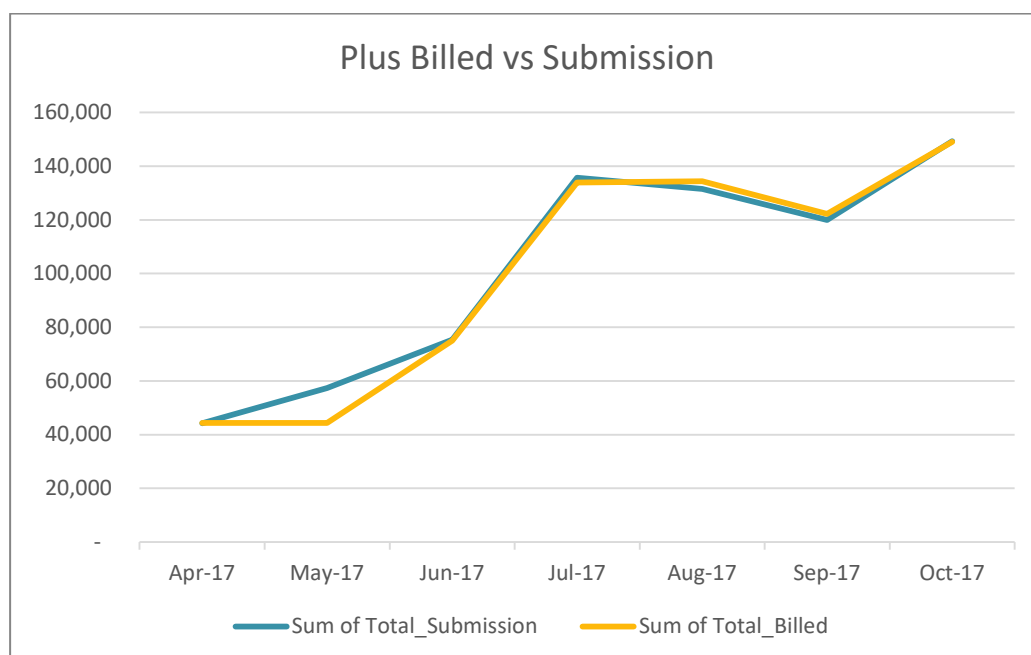
15.7(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.

Audit observation

The process for the calculation of as billed volumes was examined by reviewing the GR130 reports for April 2017 onwards to confirm whether the relationship between billed and submitted data appears reasonable.

Audit commentary

The billed totals have been “moved” back for one month to ensure a more reasonable comparison. The graph below shows the same figure was used for April and May (May and June in the raw files). This error will be resolved in the 14 month revision. The electricity supplied file is using the correct dates and is made up from the correct billed kWh.



Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.3 With: Clause 15.7 of part 15 From: 01-May-15 To: 31-Mar-16	One electricity supplied error Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because the process for file creation and aggregation is correct but there was one error for the second month of submission which was only identified during this audit. There is no impact on settlement or other participants therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have included an audit step in the process by way of having someone other then the person who submits the file check this.		26 Mar 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
In future we will have the submission file checked by someone other than the person who submits the file. This task will be added to our register of regular tasks and activities that need to be completed.		26 Mar 2018	

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

Code reference

Clause 15.8

Code related audit information

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

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

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

Audit observation

I checked variances between revisions for the aggregates file and I checked the ICPMISS report to identify any potential errors. I also compared the HHR vols totals to the HHR aggs totals for three months to confirm accuracy.

Audit commentary

The RM tool prepares a HHR Aggregates file at ICP level based on submission information.

Clause 15.8 states that the aggregates file should contain electricity supplied information rather than submission information and electricity supplied information is defined as shown below:

electricity supplied means, for any particular period, the information relating to the quantities of **electricity** supplied by **retailers** across **points of connection** to **consumers**, sourced directly from the **retailer's** financial records, including quantities—

- (a) that are metered or unmetered; and
- (b) supplied through normal **customer** supply and billing arrangements; and
- (c) supplied under sponsorship arrangements; and
- (d) supplied under any other arrangement

This differs from the Reconciliation Manager Functional Specification. In Section 3 of the Reconciliation Manager Functional Specification, HHR Aggregates information is described as: “...HHR submission information that is aggregated per ICP for the whole month (not half-hourly)”, which suggests an intention that this information should be sourced from submission information not electricity supplied information, which is covered by clause 15.7.

Type of information that is submission information	Description	Source	Classification in this document
information	electricity supplied information.		supplied
Monthly half-hour ICP aggregates	This is equivalent to the HHR submission information that is aggregated per ICP for the whole month (not half-hourly).	Purchasers (excluding direct consumers)	Monthly half-hour ICP aggregates

Data from the aggregates file is used to support other reporting by the Reconciliation Manager and will be of little value if it is based on Electricity Supplied data rather than submission data. Electricity Supplied data has a one month offset and invoicing is not required to occur within any specific timeframes.

Whilst the Code clearly states this file should be derived from financial records, I recommend Plus Energy liaises with the Authority regarding a Code change which will allow for the aggregates files used in the industry to remain unchanged.

The checks conducted did not find any discrepancies.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 11.4</p> <p>With: Clause 15.8 of part 15</p> <p>From: 01-Apr-17</p> <p>To: 28-Feb-18</p>	<p>Aggregates file contains submission information.</p> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: None</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as strong because the aggregates file is correct compared to the functional specification.</p> <p>There is no impact on settlement because the aggregates file is only used for reporting; therefore the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>As we understand this, in practice we are operating correctly and it's the code that does not reflect actual operating processes and requirements.</p> <p>The authority needs to change the code to match current day operating practices and procedures.</p> <p>We therefore believe we should not be recorded as being non-compliant here.</p>		Awaiting code change/update by Authority	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
None. Nothing we can do		Awaiting code change/update by Authority	

12. SUBMISSION COMPUTATION

12.1. Daylight saving adjustment (Clause 15.36)

Code reference

Clause 15.36

Code related audit information

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

Audit observation

Daylight saving adjustment is conducted by JC Consulting in a compliant manner.

Audit commentary

Daylight saving adjustment is conducted by JC Consulting in a compliant manner. I checked a HHR vols file to confirm this.

Audit outcome

Compliant

12.2. Creation of submission information (Clause 15.4)

Code reference

Clause 15.4

Code related audit information

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

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

Audit observation

This clause relates to the timeliness of files and whether they include all ICPs. I checked ICPCOMP reporting to confirm whether all NHH ICPs were included and I checked the ICPMISS reports for the audit period to confirm the completeness of HHR files.

I checked the breach notifications to identify any late files

Audit commentary

There were no late files and the ICPMISS and ICPCOMP files confirmed that all ICPs were submitted. In Section 3.5 I recorded that one ICP was not recorded as Active and therefore submission was not occurring for it. This ICP was electrically connected on 31/01/18 but the registry was not updated until 06/03/18, meaning submission for January 2018 will occur in the 3-month revision and February 2018 submission occurred on Day 13 of February.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.2 With: Clause 15.5 of part 15 From: 31-Jan-18 To: 19-Mar-18	Late submission for one ICP. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong because they mitigate risk to an acceptable level. The impact on settlement is minor; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
This is the ICP reported on in point 3.5. above. To redcap we were waiting for confirmation that the site had been made live and we were seeking a copy of the COP and/or ROI by the distribution company managing this installation (new connection). We had not been advised the site was live and had not been provided with evidence of either the COP and/or ROI therefore we had not updated the register within the timeline required (5 business days).		26 Mar 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As per the preventative action set out in point 3.5. above we have updated our process and procedures so that we no longer require notification of the COP and/or ROI before updating the registry.		26 Mar 2018	

12.3. Allocation of submission information (Clause 15.5)

Code reference

Clause 15.5

Code related audit information

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

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

The process to ensure that AV080 submissions are accurate was discussed and observed. The process for aggregating the AV080 was examined by a walk-through of the controls in place.

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

Audit commentary

HHR submission files use the registry as the starting point. The ICPMISS reports confirm submission is accurate.

The ICP level AV080 file is prepared from the registry records and includes all possible combinations of aggregation factors. Zeros are populated where there are not active ICPs for a combination. This ensures there are no issues with “zeroing” of combinations where there were ICPs but they have had backdated registry changes to aggregation factors.

Audit outcome

Compliant

12.4. Grid owner volumes information (Clause 15.9)

Code reference

Clause 15.9

Code related audit information

The participant (if a grid owner) must deliver to the reconciliation manager for each point of connection for all of its GXPs, the following:

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.9(a))*
- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period (clause 15.9(b)).*

Audit observation

Plus Energy is not a grid owner.

Audit commentary

Plus Energy is not a grid owner.

Audit outcome

Not applicable

12.5. Provision of NSP submission information (Clause 15.10)

Code reference

Clause 15.10

Code related audit information

The participant (if a local or embedded network owner) must provide to the reconciliation manager for each NSP for which the participant has given a notification under clause 25(1) Schedule 11.1 (which relates to the creation, decommissioning, and transfer of NSPs) the following:

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.10(a))*
- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period (clause 15.10(b)).*

Audit observation

Plus Energy is not an embedded network owner.

Audit commentary

Plus Energy is not an embedded network owner.

Audit outcome

Not applicable

12.6. Grid connected generation (Clause 15.11)

Code reference

Clause 15.11

Code related audit information

The participant (if a grid connected generator) must deliver to the reconciliation manager for each of its points of connection, the following:

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.11(a))*
- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period. (clause 15.11(b))*

Audit observation

Plus Energy does not have any grid connected generation.

Audit commentary

Plus Energy does not have any grid connected generation.

Audit outcome

Not applicable

12.7. Accuracy of submission information (Clause 15.12)

Code reference

Clause 15.12

Code related audit information

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

Audit observation

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

Audit commentary

Review of submissions confirmed revisions were submitted as expected. Evidence was observed of revised consumption information where changes were made. Specifically I checked three balancing areas where there were large percentage differences between revisions. The reasons for the differences were that estimates were replaced with actuals.

Audit outcome

Compliant

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

Code reference

Clause 4 Schedule 15.2

Code related audit information

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

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

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

Audit observation

Plus Energy has not been operating for 14 months yet.

Audit commentary

Plus Energy has not been operating for 14 months yet.

Audit outcome

Not applicable

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

Code reference

Clause 2 Schedule 15.3

Code related audit information

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

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

Audit observation

The registry list file was reviewed for the audit period to confirm that Plus Energy supplies:

- HHR information
- NHH information
- Generation information under the PV1 profile and HHR profile

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

Audit commentary

The accuracy of submission information is discussed in a number of sections and compliance is recorded. All generation information is submitted using the PV1 or HHR profiles.

Audit outcome

Compliant

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

Code reference

Clause 3 Schedule 15.3

Code related audit information

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

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

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

Audit observation

I reviewed six AV080 submissions for revisions 1 to 7, to confirm that historic estimates are included and identified. I also checked the ICP level information used to create AV080 reports.

The methodology to create forward estimates is reviewed in section 12.11.

Audit commentary

All HE and FE is correctly identified.

Audit outcome

Compliant

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

Code reference

Clause 4 and 5 Schedule 15.3

Code related audit information

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

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

Audit observation

I concentrated on two scenarios for the analysis, as follows:

1. Switches in during a month
2. Continuous ICPs.

The reason for selecting these scenarios is that they were the only ones used during the audit period.

Audit commentary

A manual calculation was conducted for three ICPs for two different months and these calculations confirmed the system generated result was correct.

Audit outcome

Compliant

12.12. Forward estimate process (Clause 6 Schedule 15.3)

Code reference

Clause 6 Schedule 15.3

Code related audit information

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

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

Audit observation

The process to create forward estimates was reviewed.

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

Audit commentary

The forward estimate process is based on historic consumption or the average daily consumption from the losing trader's CS file is used. As a last resort a forward default estimate can be used.

There were no balancing areas with variances over 15% and over 100,000 kWh.

Audit outcome

Compliant

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

Code reference

Clause 7 Schedule 15.3

Code related audit information

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

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

Audit observation

I checked the event detail report to identify any profile changes.

Audit commentary

There were no profile changes made during the audit period; however Plus Energy understands the requirement to ensure these are conducted on an actual reading.

Audit outcome

Compliant

13. SUBMISSION FORMAT AND TIMING

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

Code reference

Clause 8 Schedule 15.3

Code related audit information

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

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

Audit observation

I checked the controls in place regarding aggregation factors and I checked the AV080 files against the GR170 files for five months to ensure there were no problems with “zeroing”.

I also checked the ICPMISS reports to identify incorrect aggregation factors.

Audit commentary

The controls in place confirm the correct aggregation factors are used. The other reports did not identify any issues.

Audit outcome

Compliant

13.2. Reporting resolution (Clause 9 Schedule 15.3)

Code reference

Clause 9 Schedule 15.3

Code related audit information

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

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

Audit observation

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

Audit commentary

Submissions are correctly rounded to two decimal places.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.3

Code related audit information

By 1600 hours on the 13th business day of each reconciliation period the reconciliation participant must report to the reconciliation manager the proportion of historical estimates per NSP contained within its non-half hour submission information.

The proportion of submission information per NSP that is comprised of historical estimates must (unless exceptional circumstances exist) be:

- *at least 80% for revised data provided at the month 3 revision (clause 10(3)(a))*
- *at least 90% for revised data provided at the month 7 revision (clause 10(3)(b))*
- *100% for revised data provided at the month 14 revision. (clause 10(3)(c)).*

Audit observation

The revision files were examined for eight separate months.

Audit commentary

The revision files were examined for five separate months, which showed that the targets were not met for two NSPs. The low proportion of HE is caused by lack of meter readings for a small number of ICPs.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
April 2017	4	4	-	4
May 2017	5	6		6
June 2017	11			12
July 2017	14			14
Aug 2017	15			16

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 13.3</p> <p>With: Clause 10 of schedule 15.3</p> <p>From: 01-May-17</p> <p>To: 31-Aug-17</p>	<p>HE targets not met for two NSPs for the 3 month revisions.</p> <p>Potential impact: Medium</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as strong because there are sound processes in place and very few ICPs are unread.</p> <p>There is a minor impact on settlement because the actual data is likely to be different to the estimated data; therefore the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
These are historical events and cannot be “resolved” it was caused by a combination of a small number of ICPs active on the NSP and that these ICPs were non-AMI.		26 Mar 18	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We have instituted scheduled monthly reads through WELLS to ensure that actual reads are obtained in a timely manner.		1 Feb 2018	

CONCLUSION

This is the first full audit for Plus Energy since they began trading. 12 non-compliances were identified with most relating to a small number of ICPs. Switching processes are manual and the issues identified in this area are mostly related to incorrect population of fields. One new connection was conducted and two of the non-compliances relate to late notification from the field of the electrical connection details.

PARTICIPANT RESPONSE

Following the non-compliances identified we have received user training in certain areas of registry management and have made changes to our relevant process and procedures documentation. In one instance we have also implemented an additional manual check process.

We were disappointed with ourselves to learn of some of the non-compliances as we pride ourselves on accuracy and compliance. We believe the training we have since undertaken and the amendments we have made to our processes and procedures documents have captured and addressed the areas of non-compliance.