

ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT



For

ELECTRIC KIWI LIMITED

Prepared by: Steve Woods

Date audit commenced: 26 January 2020

Date audit report completed: 13 February 2020

Audit report due date: 16 February 2020

TABLE OF CONTENTS

Executive summary	5
Audit summary	6
Non-compliances	6
Recommendations	8
Issues 8	
1. Administrative	9
1.1. Exemptions from Obligations to Comply with Code (Section 11)	9
1.2. Structure of Organisation	9
1.3. Persons involved in this audit	9
1.4. Use of Agents (Clause 15.34)	10
1.5. Hardware and Software	11
1.6. Breaches or Breach Allegations	11
1.7. ICP Data	12
1.8. Authorisation Received	13
1.9. Scope of Audit	13
1.10. Summary of previous audit	14
2. Operational Infrastructure	16
2.1. Relevant information (Clause 10.6, 11.2, 15.2)	16
2.2. Provision of information (Clause 15.35)	18
2.3. Data transmission (Clause 20 Schedule 15.2)	19
2.4. Audit trails (Clause 21 Schedule 15.2)	19
2.5. Retailer responsibility for electricity conveyed - participant obligations (Clause 10.4) ..	20
2.6. Retailer responsibility for electricity conveyed - access to metering installations (Clause 10.7(2),(4),(5) and (6))	20
2.7. Physical location of metering installations (Clause 10.35(1)&(2))	21
2.8. Trader contracts to permit assignment by the Authority (Clause 11.15B)	21
2.9. Connection of an ICP (Clause 10.32)	22
2.10. Temporary Electrical Connection of an ICP (Clause 10.33(1))	23
2.11. Electrical Connection of Point of Connection (Clause 10.33A)	23
2.12. Arrangements for line function services (Clause 11.16)	24
2.13. Arrangements for metering equipment provision (Clause 10.36)	24
3. Maintaining registry information	26
3.1. Obtaining ICP identifiers (Clause 11.3)	26
3.2. Providing registry information (Clause 11.7(2))	26
3.3. Changes to registry information (Clause 10 Schedule 11.1)	27
3.4. Trader responsibility for an ICP (Clause 11.18)	29
3.5. Provision of information to the registry manager (Clause 9 Schedule 11.1)	30
3.6. ANZSIC codes (Clause 9 (1)(k) of Schedule 11.1)	31
3.7. Changes to unmetered load (Clause 9(1)(f) of Schedule 11.1)	31
3.8. Management of “active” status (Clause 17 Schedule 11.1)	32
3.9. Management of “inactive” status (Clause 19 Schedule 11.1)	33
3.10. ICPs at new or ready status for 24 months (Clause 15 Schedule 11.1)	33
4. Performing customer and embedded generator switching	34
4.1. Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3) ..	34

4.2.	Losing trader response to switch request and event dates - standard switch (Clauses 3 and 4 Schedule 11.3)	35
4.3.	Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3).....	37
4.4.	Retailers must use same reading - standard switch (Clause 6(1) and 6A Schedule 11.3).....	38
4.5.	Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3)	40
4.6.	Disputes - standard switch (Clause 7 Schedule 11.3).....	41
4.7.	Gaining trader informs registry of switch request - switch move (Clause 9 Schedule 11.3)	41
4.8.	Losing trader provides information - switch move (Clause 10(1) Schedule 11.3)	43
4.9.	Losing trader determines a different date - switch move (Clause 10(2) Schedule 11.3)	44
4.10.	Losing trader must provide final information - switch move (Clause 11 Schedule 11.3).....	46
4.11.	Gaining trader changes to switch meter reading - switch move (Clause 12 Schedule 11.3)	48
4.12.	Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3)	50
4.13.	Losing trader provision of information - gaining trader switch (Clause 15 Schedule 11.3).....	51
4.14.	Gaining trader to advise the registry manager - gaining trader switch (Clause 16 Schedule 11.3)	52
4.15.	Withdrawal of switch requests (Clauses 17 and 18 Schedule 11.3).....	52
4.16.	Metering information (Clause 21 Schedule 11.3)	54
4.17.	Switch saving protection (Clause 11.15AA to 11.15AB).....	55
5.	Maintenance of unmetered load	56
5.1.	Maintaining shared unmetered load (Clause 11.14).....	56
5.2.	Unmetered threshold (Clause 10.14 (2)(b))	57
5.3.	Unmetered threshold exceeded (Clause 10.14 (5))	57
5.4.	Distributed unmetered load (Clause 11 Schedule 15.3, Clause 15.37B).....	58
6.	Gathering raw meter data	59
6.1.	Electricity conveyed & notification by embedded generators (Clause 10.13, Clause 10.24 and 15.13)	59
6.2.	Responsibility for metering at GIP (Clause 10.26 (6), (7) and (8)).....	60
6.3.	Certification of control devices (Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3).....	61
6.4.	Reporting of defective metering installations (Clause 10.43(2) and (3)).....	61
6.5.	Collection of information by certified reconciliation participant (Clause 2 Schedule 15.2).....	62
6.6.	Derivation of meter readings (Clause 3(1), 3(2) and 5 Schedule 15.2)	63
6.7.	NHH meter reading application (Clause 6 Schedule 15.2)	65
6.8.	Interrogate meters once (Clause 7(1) and (2) Schedule 15.2)	65
6.9.	NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2).....	65
6.10.	NHH meters 90% read rate (Clause 9(1) and (2) Schedule 15.2)	66
6.11.	NHH meter interrogation log (Clause 10 Schedule 15.2)	66
6.12.	HHR data collection (Clause 11(1) Schedule 15.2)	67
6.13.	HHR interrogation data requirement (Clause 11(2) Schedule 15.2)	67
6.14.	HHR interrogation log requirements (Clause 11(3) Schedule 15.2).....	68
7.	Storing raw meter data	70
7.1.	Trading period duration (Clause 13 Schedule 15.2).....	70
7.2.	Archiving and storage of raw meter data (Clause 18 Schedule 15.2)	70
7.3.	Non metering information collected / archived (Clause 21(5) Schedule 15.2).....	71

8.	Creating and managing (including validating, estimating, storing, correcting and archiving) volume information.....	72
8.1.	Correction of NHH meter readings (Clause 19(1) Schedule 15.2).....	72
8.2.	Correction of HHR metering information (Clause 19(2) Schedule 15.2).....	72
8.3.	Error and loss compensation arrangements (Clause 19(3) Schedule 15.2)	75
8.4.	Correction of HHR and NHH raw meter data (Clause 22(1) and (2) Schedule 15.2).....	75
9.	Estimating and validating volume information.....	77
9.1.	Identification of readings (Clause 3(3) Schedule 15.2).....	77
9.2.	Derivation of volume information (Clause 3(4) Schedule 15.2).....	77
9.3.	Meter data used to derive volume information (Clause 3(5) Schedule 15.2).....	78
9.4.	Half hour estimates (Clause 15 Schedule 15.2).....	78
9.5.	NHH metering information data validation (Clause 16 Schedule 15.2)	79
9.6.	Electronic meter readings and estimated readings (Clause 17 Schedule 15.2)	80
10.	Provision of metering information to the pricing manager in accordance with subpart 4 of Part 13 (clause 15.38(1)(f))	81
10.1.	Generators to provide HHR metering information (Clause 13.136)	81
10.2.	Unoffered & intermittent generation provision of metering information (Clause 13.137).....	81
10.3.	Loss adjustment of HHR metering information (Clause 13.138).....	82
10.4.	Notification of the provision of HHR metering information (Clause 13.140)	82
11.	Provision of submission information for reconciliation.....	83
11.1.	Buying and selling notifications (Clause 15.3).....	83
11.2.	Calculation of ICP days (Clause 15.6)	83
11.3.	Electricity supplied information provision to the reconciliation manager (Clause 15.7).....	86
11.4.	HHR aggregates information provision to the reconciliation manager (Clause 15.8)	87
12.	Submission computation	89
12.1.	Daylight saving adjustment (Clause 15.36)	89
12.2.	Creation of submission information (Clause 15.4).....	89
12.3.	Allocation of submission information (Clause 15.5)	90
12.4.	Grid owner volumes information (Clause 15.9)	91
12.5.	Provision of NSP submission information (Clause 15.10)	92
12.6.	Grid connected generation (Clause 15.11).....	92
12.7.	Accuracy of submission information (Clause 15.12)	93
12.8.	Permanence of meter readings for reconciliation (Clause 4 Schedule 15.2).....	94
12.9.	Reconciliation participants to prepare information (Clause 2 Schedule 15.3)	94
12.10.	Historical estimates and forward estimates (Clause 3 Schedule 15.3).....	95
12.11.	Historical estimate process (Clause 4 and 5 Schedule 15.3)	96
12.12.	Forward estimate process (Clause 6 Schedule 15.3)	96
12.13.	Compulsory meter reading after profile change (Clause 7 Schedule 15.3).....	97
13.	Submission format and timing.....	98
13.1.	Provision of submission information to the RM (Clause 8 Schedule 15.3)	98
13.2.	Reporting resolution (Clause 9 Schedule 15.3)	98
13.3.	Historical estimate reporting to RM (Clause 10 Schedule 15.3)	99
	Conclusion	100
	Participant response	101

EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Electric Kiwi Limited (Electric Kiwi)**, to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1. The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits version 7.1.

Electric Kiwi has improved the controls in many areas, resulting in an improvement in compliance and a reduction in re-work. In particular the switching read change process is now more streamlined. There have been improvements in registry accuracy and the timeliness of registry updates as a result of complete registry validation checks twice per month.

Most of the issues found in the switching and registry areas were minor, although there were 54 NW files sent later than two months from the event date.

There were issues in 2018 and early 2019 regarding submission against incorrect NSPs. This matter has not occurred since February 2019.

The main issues to be resolved in the reconciliation area are:

- some corrected data was overwritten by the MEP's replacement data file where correction had occurred for periods when meters were bridged; and
- some corrected data did not flow through to submission files.

The audit found 17 non-compliance issues, two recommendations are made, and no issues are raised. The audit risk rating is 21, indicating that the next audit be due in 12 months.

The matters raised are shown in the tables below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	11.2	Five corrections did not flow through to submission files.	Moderate	Low	2	Identified
Changes to registry information	3.3	10 of Schedule 11.1	Some late status and trader updates.	Strong	Low	1	Identified
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	Incorrect use of the AA switch response code.	Strong	Low	1	Investigating
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	At least two average daily consumption errors.	Strong	Low	1	Identified
Retailers must use the same readings	4.4	6(1) of Schedule 11.3	Two late RR files.	Strong	Low	1	Identified
Gaining trader informs registry of switch request - switch move	4.7	9 Schedule 11.3	Two late NT files.	Strong	Low	1	Identified
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	Three AN files had proposed dates later than 10 business after the NT. 12 AN files had event dates earlier than the proposed event date.	Strong	Low	1	Identified
Losing trader determines a different date - switch move	4.9	10(2) Schedule 11.3	Incorrect use of the AA switch response code.	Strong	Low	1	Investigating

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Losing trader must provide final information - switch move	4.10	11 Schedule 11.3	At least two average daily consumption errors.	Strong	Low	1	Identified
Gaining trader changes to switch meter reading – switch move	4.11	12 of Schedule 11.3	9 late RR files.	Strong	Low	1	Identified
Withdrawal of switch requests	4.15	17 and 18 Schedule 11.3	2 incorrect NW codes. 54 switch withdrawal requests were backdated greater than two months from the event date.	Strong	Low	1	Identified
Electricity conveyed	6.1	10.13 and clause 15.2	Energy is not metered and quantified according to the code where meters are bridged.	Strong	Low	1	Disputed
Correction of HHR metering information	8.2	19(2) Schedule 15.2	Five corrections did not flow through to submission files.	Weak	Low	3	Identified
ICP days	11.2	15.6	ICP days submitted for the incorrect NSP for approx. 100 ICPs	Strong	Low	1	Cleared
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information. Incorrect NSP used for approx. 100 ICPs in February 2019.	Strong	Low	1	Identified
Allocation of submission information	12.3	15.5	Incorrect NSP for approx. 100 ICPs in February 2019.	Strong	Low	1	Cleared
Accuracy of submission information	12.7	15.12	Five corrections did not flow through to submission files.	Moderate	Low	2	Identified
Future Risk Rating						21	

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	Clause	Recommendation
HHR correction	8.2	19(2) Schedule 15.2	Review and strengthen controls to ensure corrections flow through to submission files and that they cannot be overwritten.
HHR estimates	9.4	15 Schedule 15.2	Request replacement data and investigation results from SMCO regarding missing data for the second interval of 07/04/19.

ISSUES

Subject	Section	Description	Issue
		Nil	

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

Current code exemptions were reviewed on the Electricity Authority website.

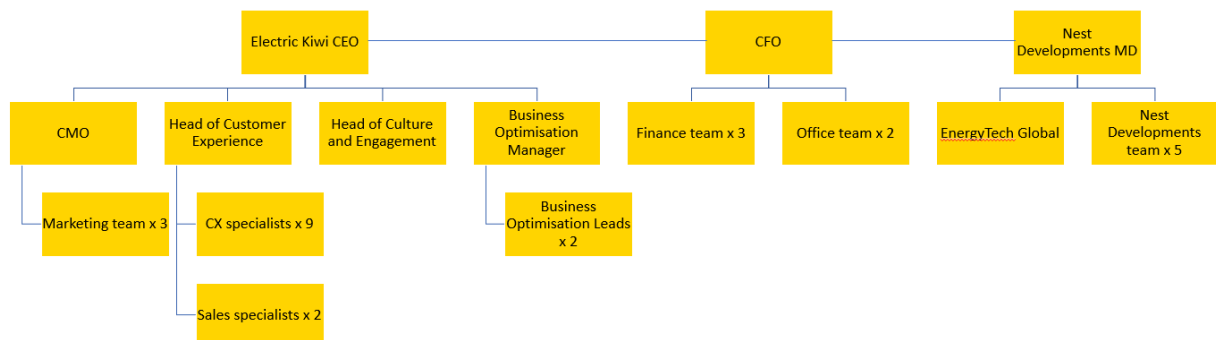
Audit commentary

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

1.2. Structure of Organisation

Electric Kiwi provided a copy of their organisation structure for the relevant parts of their business.

Electric Kiwi
Organisational Structure



1.3. Persons involved in this audit

Auditor:

Steve Woods

Veritek Limited

Electricity Authority Approved Auditor

Electric Kiwi personnel assisting in this audit were:

Name	Title
Cory Annable	Business Optimisation Manager

1.4. Use of Agents (Clause 15.34)

Code reference

Clause 15.34

Code related audit information

A reconciliation participant who uses an agent

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

Audit observation

Electric Kiwi receives HHR data provided by AMS (for AMS and Smartco), IntelliHUB (for IntelliHUB and Counties Power) and ARC as MEPs. HHR C&I data is provided by AMS as an agent for four Category 4 ICPs. A material change audit was conducted in December 2018 for the addition of the management of C&I ICPs.

During this audit I conducted additional checks of the AMS agent operation since their agent audit is greater than seven months old.

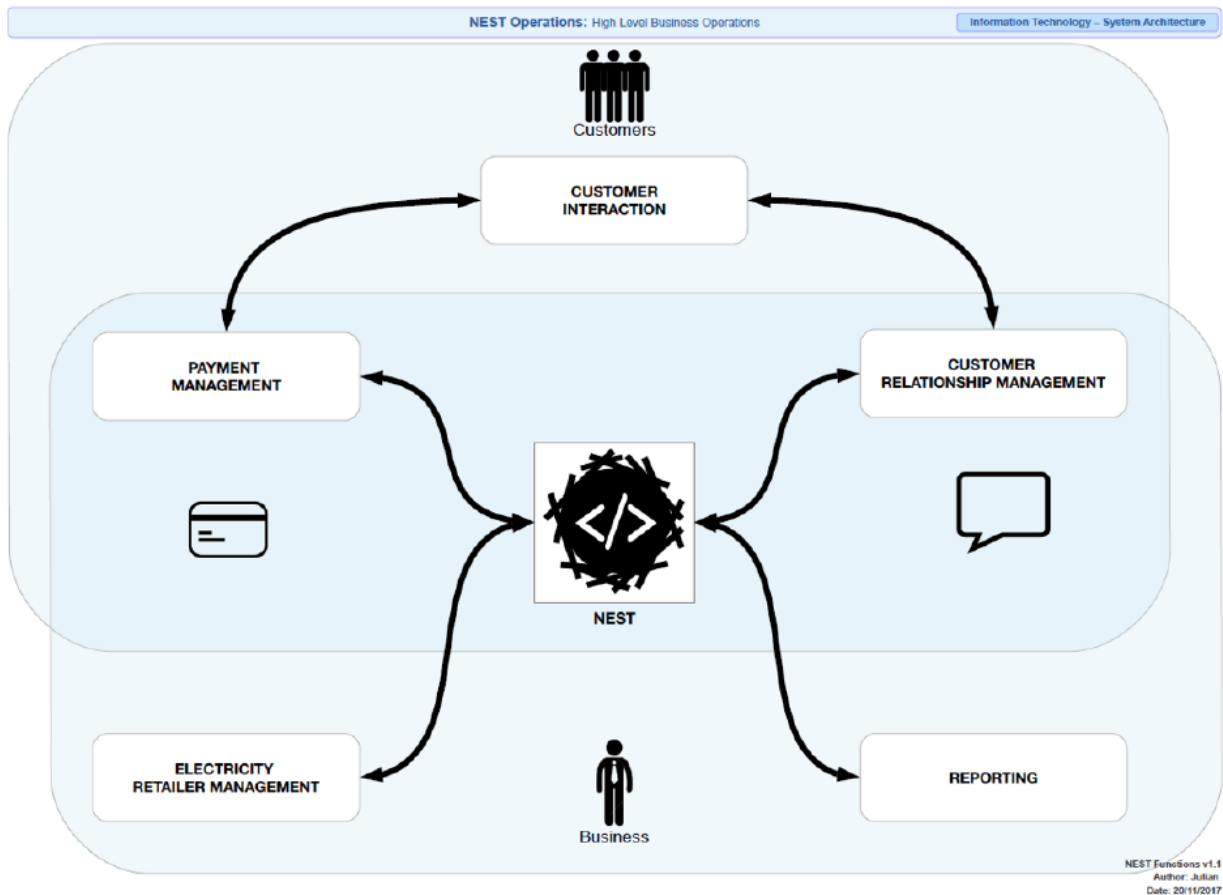
Audit commentary

Compliance is achieved.

1.5. Hardware and Software

Electric Kiwi uses an IT platform called “NEST”, developed in-house, which is used to manage their day to day operations, reconciliation, and billing.

This is a cloud-based system and is continuously backed up.



1.6. Breaches or Breach Allegations

There have been no alleged breaches relevant to the scope of this audit during the audit period.

1.7. ICP Data

Active ICPs are summarised by meter category in the table below.

Metering Category	2020	2019	2018	2016	2015
1	48,719	34,115	19,522	6,814	778
2	12	9	8	4	2
3	-	-	-	-	-
4	4	-	-	-	-
5	-	-	-	-	-
9	-	14	6	-	-

Status	Number of ICPs (2020)	Number of ICPs (2019)	Number of ICPs (2018)	Number of ICPs (2016)	Number of ICPs (2015)
Active (2,0)	48,735	33,858	19,141	6,675	771
Inactive – new connection in progress (1,12)	-	-	-	-	-
Inactive – electrically disconnected vacant property (1,4)	360	177	87	16	9
Inactive – electrically disconnected remotely by AMI meter (1,7)	61	65	289	125	0
Inactive – electrically disconnected at pole fuse (1,8)	1	1	2	1	0
Inactive – electrically disconnected due to meter disconnected (1,9)	-	-	-	-	-
Inactive – electrically disconnected at meter box fuse (1,10)	1	-	1	-	-
Inactive – electrically disconnected at meter box switch (1,11)	1	-	-	1	-
Inactive – electrically disconnected ready for decommissioning (1,6)	4	2	2	-	-
Inactive – reconciled elsewhere (1,5)	-	-	-	-	-
Decommissioned (3)	77	35	14	2	0

1.8. Authorisation Received

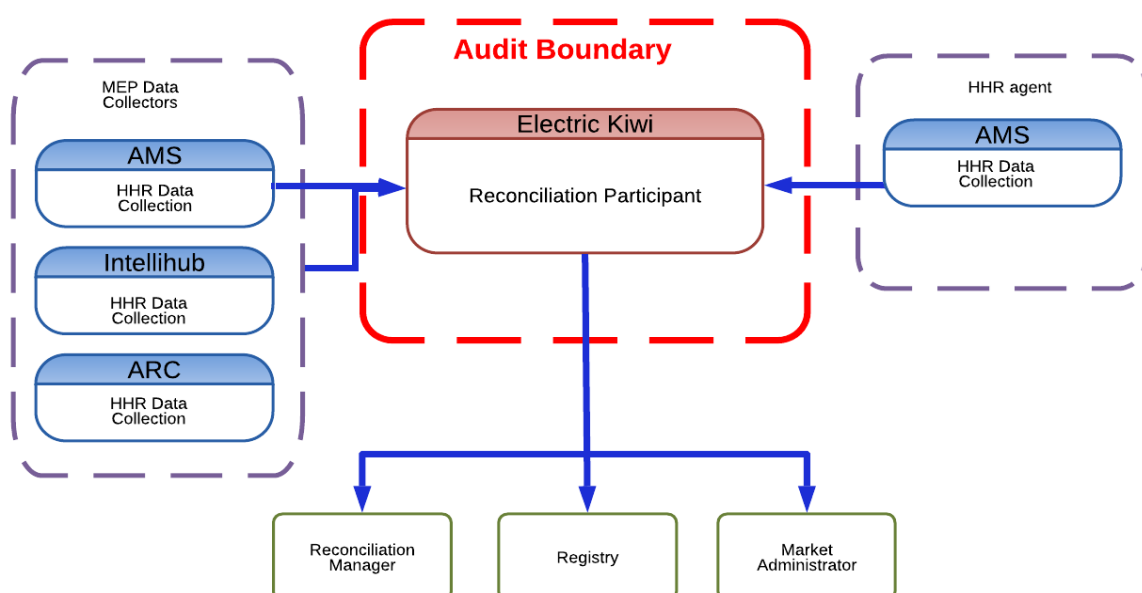
An authorisation letter was not required.

1.9. Scope of Audit

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of Electric Kiwi, to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1. The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.1.

The audit was carried out at Electric Kiwi's premises in Auckland on 29 and 30 January 2020.

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



The table below shows the tasks under clause 15.38 of part 15 for which Electric Kiwi requires certification. AMS, Arc and IntelliHUB provide AMI data as MEPs, not as agents. AMS provides HHR data as an agent.

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs Providing AMI data
(a) - Maintaining registry information and performing customer and embedded generator switching		
(b) – Gathering and storing raw meter data	AMS	AMS – HHR (AMI) Arc – HHR (AMI) IntelliHUB – HHR (AMI)

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs Providing AMI data
(c)(i) - Creation and management of volume information	AMS	AMS – HHR (AMI) Arc – HHR (AMI) IntelliHUB – HHR (AMI)
(d) – Calculation of ICP days		
(da) - delivery of electricity supplied information under clause 15.7		
(db) - delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8		
(e) – Provision of submission information for reconciliation		

1.10. Summary of previous audit

Electric Kiwi provided a copy of their previous audit conducted in January 2019 by Ewa Glowacka. The summary tables below show the status of the non-compliances and recommendations raised in the previous audit. Further comment is made in the relevant sections of this report.

Subject	Section	Clause	Non-compliance	Status
Relevant information	2.1	11.2	Registry discrepancies for some ICPs.	Cleared
Provision of information	2.2	15.35	NNHVOLS for June'18 was submitted one month late.	Cleared
Changes to registry information	3.3	10 of Schedule 11.1	Information related to trader information and ICPs' status was backdated.	Still existing
Management of "active" status	3.8	17(1)(a) of Schedule 11.1	Incorrect application of the "active" status" in the registry for some ICPs.	Cleared
Management of "inactive" status	3.9	19(a) of Schedule 11.1	Incorrect application of the "inactive" status" in the registry for some ICPs.	Cleared
Retailers must use the same readings	4.4	6(1) of Schedule 11.3	For some switches Electric Kiwi does not use the switch event read provided by the losing trader.	Cleared

Subject	Section	Clause	Non-compliance	Status
Gaining trader changes to switch meter reading – switch move	4.11	12 of Schedule 11.3	For some switches Electric Kiwi did not use the switch event read provided by the losing trader; 15 RR files sent after 4 months.	Cleared
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHRAGGR files do not contain electricity supplied information.	Still existing
Creation of submission information	12.2	15.4	NNHVOLS for June'18 was submitted one month late.	Cleared
Allocation of submission information	0	15.5	Submissions for some ICPs are not allocated to NSPs assigned in the registry.	Still existing

Subject	Section	Clause	Recommendation	Status
			Nil	

2. OPERATIONAL INFRASTRUCTURE

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

Code reference

Clause 10.6, 11.2, 15.2

Code related audit information

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

- a) complete and accurate*
- b) not misleading or deceptive*
- c) not likely to mislead or deceive.*

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

Audit observation

The process to find and correct incorrect information was examined. The registry validation process was examined in detail in relation to the achievement of this requirement. The list file as at 02/12/19 and audit compliance reporting were examined to identify any registry discrepancies and confirm that all information was correct and not misleading.

Audit commentary

This clause requires that Electric Kiwi must check the list file against their own records and correct records as soon as practicable.

To meet compliance with above clauses, Electric Kiwi has daily and weekly monitoring reports, as follows:

- exception reporting for various part of the business e.g. metering management (Flight Path) which is monitored daily, weekly, or monthly,
- LIS file checker which is run weekly based on the LIS file.
- NEST pulls in EDA file daily with audit trail recorded,
- tech team monitors the Live Logs for any exceptions which are reported daily and resolved via Powerhouse prioritisation dashboard; and
- Billed Vs Supplied is monitored monthly.

All exceptions identified are resolved as soon as possible.

The table below shows the discrepancies identified during the audit.

Issue	2020 Qty	2019 Qty	Comments
ICP Status = 002, MEP = blank, UNM Flag = N	0	0	
Highest Metering Category >2 with residential ANZSIC code assigned (000000)	3	0	All 3 ICPs appear to be correctly recorded as residential.
ANZSIC code = blank or T994, T994000, T99, T999, T999999, T995, T995000, T997, T997000, T998, T998000	0	0	
ICP with B or G Inst Type, or non-null Fuel or Gen Capacity that do not have a corresponding Injection Register	2	3	Submission is occurring correctly. The HHR channels are incorrectly recorded by the MEP.
Highest Metering Category greater than 2, Submission Type HHR = No	0	0	
Highest Metering Category = 9, UNM Flag=N	0	0	
All active ICPs with Initial Energisation Date populated during a defined period	0	0	No new connections.
All Active ICPs (ICP Status = 2) with Shared ICP List not blank	0	0	
All ICPs at ICP Status 001,12	0	0	
Submission Type HHR = Y, Profile does not contain HH	0	0	
Submission Type HHR and Submission Type NHH both = Y	0	0	
All active ICPs where Distributor has indicated UML (UML Load Details not NULL) but Retailer has none (UNM Flag = N)	0	0	
All active ICPs with load in excess of 6kWh (Daily Unmetered kWh greater than 16.4 daily)	0	0	
All active ICPs with load between 3-6k kWh (Daily Unmetered kWh between 8.2-16.4 daily)	0	0	
All active ICPs with Engineered profile (Daily Unmetered kWh = ENG)	0	0	
Remotely disconnected without AMI metering	9	-	All were genuinely remotely disconnected. The MEP's AMI field was incorrect.

The controls for registry accuracy are very strong and no discrepancies were found.

As recorded in **section 8.2**, HHR corrections are not always being reflected in the submission files.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 10.6, 11.2, 15.2 From: 01-Jan-19 To: 02-Dec-19	Five corrections did not flow through to submission files. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are 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
For the ICPs identified as issues, we will correct the data in NEST and ensure this is reflected in the next reconciliation submissions.		March 2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Once we have performed future HHR corrections in NEST, we will manually check the next reconciliation submissions to ensure that the changes have flowed through correctly.		March 2020	

2.2. Provision of information (Clause 15.35)

Code reference

Clause 15.35

Code related audit information

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

Audit observation

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

Audit commentary

This area is discussed in several sections in this report and compliance is confirmed.

Audit outcome

Compliant

2.3. Data transmission (Clause 20 Schedule 15.2)

Code reference

Clause 20 Schedule 15.2

Code related audit information

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

Audit observation

HHR data is provided by AMS (for AMS and Smartco), IntelliHUB (for IntelliHUB and Counties Power) and ARC via SFTP.

To confirm the process, I traced a sample of reads and volumes for one ICP per MEP from the source files to NEST.

Audit commentary

All read and volume data is transferred from the MEP to Electric Kiwi via SFTP.

I traced a sample of data for one ICP per MEP from the source files to NEST to confirm the data transmission process. All volumes 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 manager*
- *provided to and received from the reconciliation manager*
- *provided and received from other reconciliation participants and their agents.*

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

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

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

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

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

Audit observation

A complete audit trail was checked for all data gathering, validation and processing functions. I viewed audit trails in NEST for a small sample of events.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10.4

Code related audit information

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

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

Audit observation

I reviewed Electric Kiwi's current customer terms and conditions.

Audit commentary

Electric Kiwi's terms and conditions include consent to access for authorised parties for the duration of the contract.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

The trader must use its best endeavours to provide access:

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

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

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

Audit observation

I reviewed Electric Kiwi's current customer terms and conditions and discussed compliance with these clauses.

Audit commentary

Electric Kiwi's terms and conditions include consent to access for authorised parties for the duration of the contract. Electric Kiwi confirmed that they have been able to arrange access for other parties when requested.

Audit outcome

Compliant

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

Code reference

Clause 10.35(1)&(2)

Code related audit information

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

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

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

Audit observation

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

Review of a registry list as at 02/12/19 confirmed that Electric Kiwi supplied four ICPs with metering category 3 or above during the audit period.

Audit commentary

There were no ICPs where loss compensation occurs.

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 Electric Kiwi's current customer terms and conditions.

Audit commentary

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

Audit outcome

Compliant

2.9. Connection of an ICP (Clause 10.32)

Code reference

Clause 10.32

Code related audit information

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

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

Audit observation

The new connection process was examined in detail to evaluate the strength of controls.

The event detail report for the audit period was reviewed to identify all new connections and confirm process controls and compliance.

Audit commentary

Electric Kiwi did not complete any new connections during the audit period, and they have no intention of conducting any in the future.

Audit outcome

Compliant

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

Code reference

Clause 10.33(1)

Code related audit information

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

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

Audit observation

The event detail report for the audit period was reviewed to identify all new connections and confirm process controls and compliance.

Audit commentary

Electric Kiwi did not complete any new connections during the audit period, and they have no intention of conducting any in the future.

Audit outcome

Compliant

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

Code reference

Clause 10.33A(1)

Code related audit information

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

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

Audit observation

The new connection and reconnection processes were discussed.

The audit compliance report for the period 01/01/19 to 02/12/19 was examined to identify any uncertified metering installations.

Audit commentary

Electric Kiwi does not conduct new connections. All reconnected ICPs had certified metering installations.

Audit outcome

Compliant

2.12. Arrangements for line function services (Clause 11.16)

Code reference

Clause 11.16

Code related audit information

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

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

Audit observation

The process to ensure an arrangement is in place before trading commences on a network was examined, along with the application process.

The registry list for 01/01/19 to 02/12/19 was reviewed to identify all networks Electric Kiwi has traded on during the audit period.

Audit commentary

Electric Kiwi has arrangements in place for line function services where they intend to trade.

MEP arrangements are in place with all relevant MEPs.

Audit outcome

Compliant

2.13. Arrangements for metering equipment provision (Clause 10.36)

Code reference

Clause 10.36

Code related audit information

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

Audit observation

The process to ensure an arrangement is in place with the metering equipment provider before an ICP can be created or switched in was checked.

The registry list for 01/01/19 to 02/12/19 was reviewed to identify the MEPs for Electric Kiwi ICPs during the audit period.

Audit commentary

Electric Kiwi demonstrated that arrangements are in place with all relevant MEPs.

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 event detail report for the audit period was reviewed to identify all new connections and confirm process controls and compliance.

Audit commentary

Electric Kiwi did not complete any new connections during the audit period, and they have no intention of conducting any in the future.

Audit outcome

Compliant

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

Code reference

Clause 11.7(2)

Code related audit information

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

Audit observation

The new connection, MEP nomination, and switching processes were examined in detail.

The event detail report for 01/01/19 to 02/12/19 was analysed in relation to updating of the registry. This clause links directly to **sections 3.3** and **3.5** below, where findings on the timeliness of updates are recorded.

Audit commentary

Electric Kiwi's processes are designed to ensure that trader information is populated as required by this clause. Late updates are recorded as non-compliance in **sections 3.3** and **3.5**.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 11.1

Code related audit information

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

Audit observation

The process to manage status changes is discussed in detail in **sections 3.8** and **3.9**. In this section, the event detail and audit compliance reports for 01/01/19 to 02/12/19 was analysed determine the overall performance for that period.

A sample of late updates were reviewed to determine why they were delayed, including:

- 20 late active updates,
- 20 late inactive updates; and
- 15 late trader updates.

Audit commentary

The event detail and audit compliance reports were examined to confirm whether the registry is notified within five business days when information referred to in clause 9 of schedule 11.1 changes.

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Status updates						
Change to active (2,0)	2019	1,715	1,455	260		85%
	2020	1,836	1,616	220	3.83	88.02%
Change to electrically disconnected	2019	1,516	1,454	62		96%
	2020	1,903	1,856	47	1.41	97.53%

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Trader updates						
Trader updates	2020	444	358	86	5.72	80.63%

Status updates

A sample of 20 late status changes to active were reviewed and were found to be caused by:

- five processing errors identified by validation checks,
- four backdated switches in; and
- 11 examples of the losing trader changing the status to inactive for a period prior to Electric Kiwi being the trader, Electric Kiwi then had to correct the status.

A sample of 20 late updates to inactive were reviewed and were found to be caused by:

- 13 errors when processing the disconnection, including not updating the event date, these were found through validation,
- three examples where Electric Kiwi re-entered a “ready for decommissioning” status once the distributor’s decommissioning status had replaced their original status, this extra status doesn’t seem to be warranted and appears to have the incorrect event date - it was identified during the audit that this was a process issue and the process has now been changed to avoid unwarranted status changes; and
- four examples of complex investigations to determine the correct status.

The late updates are recorded as non-compliance.

Trader updates

Late trader updates include MEP nominations and profile changes. I checked 15 late updates and found they were caused by:

- two examples of profile changes without the event date being changed,
- seven examples of late MEP nomination following a meter change or a switch; and
- six examples of profile changes following a meter change.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.3 With: Clause 10 Schedule 11.1 From: 01-Dec-19 To: 02-Dec-19	Some late status and trader updates. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as strong. They have been improved during the audit period they now mitigate risk to an acceptable level.</p> <p>The impact on settlement and participants is minor; therefore, the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Post our audit in 2018, we implemented a monthly LIS file checker to compare the LIS file and NEST for any period between R14 and the latest month.</p> <p>At the time of our 2019 audit, we changed the frequency to twice per month so that we would catch discrepancies faster.</p> <p>By February/March 2019, we had gotten through a large backlog of ICPs that needed correction, and since then, the number of changes > 5 business days has significantly decreased. The checker now ensures that nearly all discrepancies between NEST and the registry are corrected within the initial reconciliation period or R1.</p>		March 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will continue to perform the above validations twice per month.		Ongoing	

3.4. Trader responsibility for an ICP (Clause 11.18)

Code reference

Clause 11.18

Code related audit information

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

A trader ceases to be responsible for an ICP if:

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

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

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

Audit observation

Retailers Responsibility to Nominate and Record MEP in the Registry

The audit compliance report, registry list as at 02/12/19 and event detail report for 01/01/19 to 02/12/19 were examined to identify:

- any active ICPs that do not have an MEP recorded; and
- any MEP nomination rejections.

ICP Decommissioning

The process for the decommissioning of ICPs was examined. A typical sample of six decommissioned ICPs were checked to prove the process and confirm controls are in place.

Audit commentary

Retailers Responsibility to Nominate and Record MEP in the Registry

All active ICPs have a valid MEP recorded.

Electric Kiwi nominates the MEP based on notification of meter changes by relevant MEPs.

There were no MEP nominations rejected during the audit period.

Late MEP nominations are recorded as non-compliance in **section 3.3**.

ICP Decommissioning

Electric Kiwi continue with their obligations under this clause. ICPs that are vacant and active, or inactive are maintained in NEST.

Electric Kiwi had met their obligation to arrange a meter interrogation prior to or upon meter removal and notify the MEP.

Audit outcome

Compliant

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

Code reference

Clause 9 Schedule 11.1

Code related audit information

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

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

- *except if the ICP exists for the purposes of reconciling an embedded network or the ICP has distributor status, the trader must provide the relevant business classification code applicable to the customer (clause 9(1)(k)).*

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

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

Audit observation

The audit compliance report from 02/12/19 was examined was examined to identify all examples of missing registry data.

Audit commentary

There were no new connections conducted and the audit compliance report did not identify any missing data.

Audit outcome

Compliant

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

Code reference

Clause 9 (1)(k) of Schedule 11.1

Code related audit information

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

Audit observation

The process to capture and manage ANZSIC codes was examined. The audit compliance report and list file as at 02/12/19 were reviewed to check ANZSIC codes.

To confirm the validity of the ANZSIC codes selected I checked a diverse sample of 40 ICPs, including all ICPs with ANZSIC code 0 with metering category 2.

Audit commentary

ANZSIC codes are set based on information provided on the customer application. ANZSIC codes are checked when ICPs switch in, with specific emphasis on non-residential codes, where communication occurs with the customer for all ICPs to confirm the ANZSIC code.

Analysis of the registry list confirmed that no T99 series codes were present.

The accuracy of the ANZSIC codes for 40 ICPs were checked using google streetview and they were all correct.

Audit outcome

Compliant

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

Code reference

Clause 9(1)(f) of Schedule 11.1

Code related audit information

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

- *the code ENG - if the load is profiled through an engineering profile in accordance with profile class 2.1 (clause 9(1)(f)(i)); or*
- *the daily average kWh of unmetered load at the ICP - in all other cases (clause 9(1)(f)(ii)).*

Audit observation

The process to identify and monitor unmetered load was discussed. The registry list for 01/01/19 to 02/12/19 was reviewed to identify all ICPs with unmetered load.

Audit commentary

Electric Kiwi does not currently supply any ICPs with unmetered load.

Applications to become a customer are not expected to be accepted if the ICP has unmetered load connected.

One ICP with unmetered load was with Electric Kiwi from 12/10/19 until 23/10/19. There were no changes made during that period. Submission occurred in accordance with the Code.

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

Reconnections

The ICP reconnection process was examined. The event detail report for 01/01/19 to 02/12/19 was analysed, and the findings on the timeliness of registry updates are recorded in **section 3.3**.

Audit commentary

A full validation occurs between NEST and the registry twice per month to ensure status information is correct. I also checked ICPs where consumption was present on inactive ICPs. Reporting is in place to identify these examples and the status is corrected as required. Submission occurs for all ICPs regardless of 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

The event detail report for 01/01/19 to 02/12/19 was examined to identify all status changes to inactive. A typical sample of five ICPs at each inactive status (or all ICPs if less than five were available) were checked. The findings in relation to the timeliness of updates to registry are recorded in **section 3.3**.

Audit commentary

Electric Kiwi conducts disconnections remotely and updates the registry once confirmation of the disconnection is provided by the MEP.

Electric Kiwi provided a list of ten ICPs which had consumption recorded during an inactive period.

No incorrect statuses were identified.

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

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 I checked the process to manage these requests.

Audit commentary

Electric Kiwi does not conduct new connections and they have not had any queries in relation to “new” or “ready” ICPs.

Audit outcome

Compliant

4. PERFORMING CUSTOMER AND EMBEDDED GENERATOR SWITCHING

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

Code reference

Clause 2 Schedule 11.3

Code related audit information

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

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

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

Audit observation

The switch gain process was examined to determine when Electric Kiwi deem all conditions to be met.

I checked all three backdated NT files to confirm they were sent within two business days of customer contact.

Audit commentary

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

Customer application is made via the Electric Kiwi website. An automated check is conducted to ensure appropriate metering (AMI) is installed. The customer is asked to confirm a meter serial number to avoid switching the wrong ICP.

The three backdated NT files checked were sent within two business days of pre-conditions being cleared.

Audit outcome

Compliant

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

Code reference

Clauses 3 and 4 Schedule 11.3

Code related audit information

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

- *provide acknowledgement of the switch request by (clause 3(a) of Schedule 11.3):*
- *providing the proposed event date to the registry manager and a valid switch response code (clause 3(a)(i) and (ii) of Schedule 11.3); or*
- *providing a request for withdrawal of the switch in accordance with clause 17 (clause 3(c) of Schedule 11.3).*

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

Audit observation

An event detail report for 01/01/19 to 02/12/19 was reviewed to:

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

A sample of five AN files per response code were reviewed to determine whether the response codes had been correctly applied.

The switch breach report was examined for the audit period.

Audit commentary

AN timeliness

The switch breach report confirmed all AN files were sent within the allowable timeframes.

AN content

Event dates set by losing trader must be no more than 10 business days after receipt of an NT file. Over a 12-month period 50% of event dates must be within five business days.

All event dates were within five business days.

The response code of AA is incorrectly used when in most cases, AD should be used. 4,444 AN files had AA as a response code. The Authority provided a memo to participants on 05/08/16 clarifying the correct use of response codes. The memo contained the following clarification regarding the use of the AA code:

AA response code can only be used when no other code applies

The explanation of use for the response code 'AA' is: *Switch is accepted; there are no relevant issues*. Within the context of the switch response codes, 'no relevant issues' means that none of the other response codes applies.

If another switch response code would be valid then the losing trader cannot use the response code 'AA'.

In Electric Kiwi's case, the AD response code will be more applicable than AA in most cases.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: Clauses 3 and 4 Schedule 11.3 From: 01-Jan-19 To: 02-Dec-19	Incorrect use of the AA switch response code. Potential impact: None Actual impact: None 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 Electric Kiwi sought clarification from the Authority and the advice was that the AA code could be used. There is no impact because the presence of AMI metering is a registry field and the content of the AN file is not normally used as a source of information to confirm the presence of AMI.		
Actions taken to resolve the issue		Completion date	Remedial action status
The topic of using AA vs AD in the AN code was discussed during our last audit. We reached out to the EA to seek clarification and were originally told that using AA was fine. We did not change our processes, and at a later date, it was mentioned that there was not alignment between staff at the Authority on which code was to be used. It was advised that the EA would send a memo to participants clarifying which code to us in mid 2019. We have still not seen a memo.		Early/mid-2019	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
We cannot justify the time and cost of any system changes until the EA clarifies their stance on which code is most appropriate to use. We believe AA is more appropriate than AD, as the only ICPs we service have smart meters. Therefore, AD is unnecessary.		N/A	

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

Code reference

Clause 5 Schedule 11.3

Code related audit information

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

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

Audit observation

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

An event detail report for the period from 01/01/19 to 02/12/19 was reviewed, to identify CS files issued by Electric Kiwi. The accuracy of the content of CS files was confirmed by checking a sample of five records. The content checked included:

- correct identification of meter readings and correct date of last meter reading,
- accuracy of meter readings; and
- accuracy of average daily consumption.

CS files with average daily kWh that was negative, zero, or over 100 kWh were identified. A sample of 18 of these CS files were checked to determine whether the average daily consumption was correct.

A sample of eight ICPs were checked where the readings were estimated, to ensure the estimates were correct.

Audit commentary

CS timeliness

No late CS files were identified.

CS content

The accuracy of the content of CS files was confirmed by checking a sample of five transfer CS files. The information recorded in the files was correct, apart from average daily consumption.

The Registry Functional Specification v22.21 states that average daily consumption within the CS file should be the average kWh per day for the last read period. Electric Kiwi receives daily readings, so the last read period is technically one day. Estimated daily consumption is calculated as the average daily consumption over the past billing period. While this is not technically consumption for the last read to read period, it provides a reasonable indication of the average daily consumption. Analysis of the estimated daily kWh identified the following:

- all zero daily kWh was correct,
- all kWh over 100 per day was correct; and

- average daily consumption for two of five ICPs checked was incorrect when compared to the last read period and the last billing period; one was recorded as 31 and should have been approx. 45 and another was recorded as 30 and should have been approx. 50.

All readings were correctly labelled as estimates or actuals.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.3 With: Clause 5 Schedule 11.3 From: 01-Jan-19 To: 02-Dec-19	At least two average daily consumption errors. 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 ensure most CS content is accurate. 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
New staff had joined the company in winter 2019, which caused a small number of CS average consumptions to be calculated incorrectly. Additional training was provided, and the error has not reoccurred since.		2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing refresher training to be provided to staff to prevent user error. CS average consumptions are automatically calculated in NEST, and users are trained to not overwrite these auto calculations.		Ongoing	

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

Code reference

Clause 6(1) and 6A Schedule 11.3

Code related audit information

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

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

- *the gaining trader may dispute the switch meter reading if the validated meter reading or permanent estimate provided by the losing trader differs by 200 kWh or more (clause 6(b)).*

If the gaining trader disputes a switch meter reading because the switch event meter reading provided by the losing trader differs by 200 kWh or more, the gaining trader must, within 4 calendar months of the actual event date, provide to the losing trader a changed switch event meter reading supported by two validated meter readings.

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

Audit observation

The process for the management of read change requests was examined.

The event detail report for 01/01/19 to 02/12/19 was reviewed to identify all read change requests and acknowledgements during the audit period.

- 68 RR files were issued to Electric Kiwi by other traders for transfer switches. 32 of those were rejected. I reviewed five rejected files to confirm the reasons for rejection were valid and confirm that Electric Kiwi's system reflected the outcome of the RR process, and ten accepted files to confirm that Electric Kiwi's system reflected the outcome of the RR process.
- 3,722 RR files were issued by Electric Kiwi for transfer switches. 1,005 of those were rejected. I reviewed 10 rejected and ten accepted files to confirm that the requests were supported by at least two actual readings, that the content of the files was accurate, and that Electric Kiwi's system reflected the outcome of the read change process.

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

Audit commentary

Switch reads are checked by comparing actual AMI data to the switch read to determine whether an RR is required. Sometimes an AMI midnight read may not be available and so it's derived by deducting the sum of the trading periods for that day to determine the expected start read.

I checked the content of rejected and accepted files and Electric Kiwi data was correct in all cases. There were some RR files incorrectly rejected by other traders and Electric Kiwi correctly used their actual reading as a start reading. There were many examples where the difference between the CS read and the RR read was less than 1 kWh because some retailers truncate and some round.

I checked five rejections by Electric Kiwi and in all cases the rejection was valid.

Timeliness of RR and AC files

The switch breach history report was examined. There were two late files during the audit period.

Summary

Electric Kiwi implemented the changes they stated in the last audit report, which were as follows:

- sending an RR anytime the switch read in the CS file differs by 1 kWh or more,
- sending RRs multiple times for an ICP when the losing retailer continues to reject our RR (despite us sending a validated AMI read); and
- automated the sending of RRs from NEST to the registry since 23 January 2019.

These changes have resulted in less re-work and a higher level of compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: Clause 6(1) and 6A Schedule 11.3 From: 24-May-19 To: 17-Jul-19	Two late RR files. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong because they have been improved since the last audit and they minimise risk to an acceptable level. The impact on settlement and participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
N/A		N/A	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We aim to send all RRs as soon as we have reads, but unfortunately, there will always be delays to receiving certain reads from MEPs and due to backdated switches. We believe it is best to send the RR late than not at all, and will continue to follow this practice, even when it results in a non-compliance for doing the right thing.		Ongoing	

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

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

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

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 6(2)(b));*
- *the gaining trader within five business days after receiving final information from the registry manager, may provide the losing trader with a switch event meter reading from that meter. The losing trader must use that switch event meter reading.*

Audit observation

The event detail report for the period from 01/01/19 to 02/11/19 was reviewed to identify all read change requests and acknowledgements where clause 6(2) and (3) of schedule 11.3 applied.

Audit commentary

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

517 RR files sent within five business days were rejected. In this scenario Electric Kiwi uses their read because it is based on an actual AMI read. There were a small number of examples where the RR was sent greater than five business days and the other traders' CS read was used with the first day being estimated.

Audit outcome

Compliant

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

Code reference

Clause 7 Schedule 11.3

Code related audit information

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 9 Schedule 11.3

Code related audit information

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

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

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

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

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

Audit observation

The switch gain process was examined to determine when Electric Kiwi deem all conditions to be met.

A typical sample of 10 switch moves were checked to confirm that they were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

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

Customer application is made via the Electric Kiwi website. An automated check is conducted to ensure appropriate metering (AMI) is installed. The customer is asked to confirm a meter serial number to avoid switching the wrong ICP.

I checked ten backdated NT files and two were not sent within two business days because they required reconnection and the manual step of initiating the NT once the reconnection was complete was missed.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.7 With: Clause 9 Schedule 11.3 From: 10-Feb-19 To: 15-Apr-19	Two late NT files. 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 the twice monthly registry checks will now identify these issues sooner. 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
Through our regular LIS file reconciliation with NEST, these missing NTs were caught. We sent NTs to the registry as soon as they were identified.		2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

Refresher training will continue to be provided to all staff which will help minimize these types of manual errors.	Ongoing	
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4.8. Losing trader provides information - switch move (Clause 10(1) Schedule 11.3)

Code reference

Clause 10(1) Schedule 11.3

Code related audit information

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

- *10(1)(a) If the losing trader accepts the event date proposed by the gaining trader, the losing trader must complete the switch by providing to the registry manager:

 - o *confirmation of the switch event date; and*
 - o *a valid switch response code; and*
 - o *final information as required under clause 11; or**
- *10(1)(b) If the losing trader does not accept the event date proposed by the gaining trader, the losing trader must acknowledge the switch request to the registry manager and determine a different event date that—

 - o *is not earlier than the gaining trader's proposed event date, and*
 - o *is no later than 10 business days after the date the losing trader receives notice, or**
- *10(1)(c) request that the switch be withdrawn in accordance with clause 17.*

Audit observation

An event detail report for 01/01/19 to 02/12/19 was reviewed to:

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

The switch breach report was examined for the audit period.

Audit commentary

AN timeliness

The switch breach report confirmed all AN files were sent within the allowable timeframes.

AN content

All switch move AN files were examined on the event detail report and I found:

- three ANs had proposed event dates later than 10 business days after receipt of the NT, and
- 12 ANs had a proposed transfer date earlier than the gaining trader's proposed date.

in all but two examples, the actual event date matched that proposed by the gaining trader and for one of those the switch was then withdrawn and for the other example, the date was only three days different to the proposed date.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.8 With: Clause 10(1) Schedule 11.3 From: 01-Jan-19 To: 02-Dec-19	Three AN files had proposed dates later than 10 business after the NT. 12 AN files had event dates earlier than the proposed event date. 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 and participants is minor because in all but two examples, the actual event date matched that proposed by the gaining trader and for one of those the switch was then withdrawn and for the other example, the date was only three days different to the proposed date.		
Actions taken to resolve the issue		Completion date	Remedial action status
Sending AN transactions, including the proposed effective date, in response to an NT request has been automated since 2018. Although this eliminates the majority of these errors, these examples were manually changed. It appears that we fixed the date error when sending a CS though, so there was no impact on the switch date.		2018/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Refresher training will continue to be provided to all staff which will help minimize these types of manual errors.		Ongoing	

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

Code reference

Clause 10(2) Schedule 11.3

Code related audit information

If the losing trader determines a different date, the losing trader must also complete the switch by providing to the registry manager as described in 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

An event detail report for 01/01/19 to 02/12/19 was reviewed to identify AN files issued by Electric Kiwi during the period.

A sample of five AN files per response code were reviewed to determine whether the response codes had been correctly applied.

Audit commentary

The PD, OC and AD response codes were used correctly, but the response code of AA is incorrectly used when in most cases, AD should be used. 4,412 AN files had AA as a response code. The Authority provided a memo to participants on 05/08/16 clarifying the correct use of response codes. The memo contained the following clarification regarding the use of the AA code:

AA response code can only be used when no other code applies

The explanation of use for the response code 'AA' is: *Switch is accepted; there are no relevant issues*. Within the context of the switch response codes, 'no relevant issues' means that none of the other response codes applies.

If another switch response code would be valid then the losing trader cannot use the response code 'AA'.

In Electric Kiwi's case, the AD response code will be more applicable than AA in most cases.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.9 With: Clause 10(2) Schedule 11.3 From: 01-Jan-19 To: 02-Dec-19	Incorrect use of the AA switch response code. Potential impact: None Actual impact: None 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 Electric Kiwi sought clarification from the Authority and the advice was that the AA code could be used. There is no impact because the presence of AMI metering is a registry field and the content of the AN file is not normally used as a source of information to confirm the presence of AMI.		
Actions taken to resolve the issue		Completion date	Remedial action status
The topic of using AA vs AD in the AN code was discussed during our last audit. We reached out to the EA to seek clarification and were originally told that using AA was fine. We did not change our processes, and at a later date, it was mentioned that there was not alignment between staff at the Authority on which code was to be used. It was advised that the EA would send a memo to participants clarifying which code to us in mid 2019. We have still not seen a memo.		Early/mid-2019	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
We cannot justify the time and cost of any system changes until the EA clarifies their stance on which code is most appropriate to use. We believe AA is more appropriate than AD, as the only ICPs we service have smart meters. Therefore, AD is unnecessary.		N/A	

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

Code reference

Clause 11 Schedule 11.3

Code related audit information

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

- *the event date (clause 11(a)); and*

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

Audit observation

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

An event detail report for the period from 01/01/19 to 02/12/19 was reviewed, to identify CS files issued by Electric Kiwi. The accuracy of the content of CS files was confirmed by checking a sample of five records. The content checked included:

- correct identification of meter readings and correct date of last meter reading,
- accuracy of meter readings; and
- accuracy of average daily consumption.

CS files with average daily kWh that was negative, zero, or over 100 kWh were identified. A sample of 18 of these CS files were checked to determine whether the average daily consumption was correct.

A sample of 10 ICPs were checked where the readings were estimated, to ensure the estimates were correct.

Audit commentary

CS timeliness

No late CS files were identified.

CS content

The accuracy of the content of CS files was confirmed by checking a sample of five transfer CS files. The information recorded in the files was correct, apart from average daily consumption.

The Registry Functional Specification v22.21 states that average daily consumption within the CS file should be the average kWh per day for the last read period. Electric Kiwi receives daily readings, so the last read period is technically one day. Estimated daily consumption is calculated as the average daily consumption over the past billing period. While this is not technically consumption for the last read to read period, it provides a reasonable indication of the average daily consumption. Analysis of the estimated daily kWh identified the following:

- all zero daily kWh was correct,
- all kWh over 100 per day was correct; and
- average daily consumption for two of five ICPs checked was incorrect when compared to the last read period and the last billing period, one was recorded as 23 and should have been approx. 10 and another was recorded as 16 and should have been approx. 10.

All readings were correctly labelled as estimates or actuals.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.10 With: Clause 11 Schedule 11.3 From: 01-Jan-19 To: 02-Dec-19	At least two average daily consumption errors. 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 ensure most CS content is accurate. 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
New staff had joined the company in winter 2019, which caused a small number of CS average consumptions to be calculated incorrectly. Additional training was provided, and the error has not reoccurred since.		2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing refresher training to be provided to staff to prevent user error. CS average consumptions are automatically calculated in NEST, and users are trained to not overwrite these auto calculations.		Ongoing	

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

Code reference

Clause 12 Schedule 11.3

Code related audit information

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

- *if the switch meter reading established by the gaining trader differs by less than 200 kWh from that provided by the losing trader, both traders must use the switch event meter reading provided by the gaining trader (clause 12(2)(a)); or*
- *if the switch event meter reading provided by the losing trader differs by 200 kWh or more from a value established by the gaining trader, the gaining trader may dispute the switch meter reading. In this case, the gaining trader, within four calendar months of the actual event date, must provide to the losing trader a changed validated meter reading or a permanent estimate*

supported by two validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):

- *advise the gaining trader if it does not accept the switch event meter reading and the losing trader and the gaining trader must resolve the dispute in accordance with the disputes procedure in clause 15.29 (with all necessary amendments) (clause 12(3)(a)); or*
- *if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader. (clause 12(3)(b)).*

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

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

Audit observation

The process for the management of read change requests was examined.

The event detail report for 01/01/19 to 02/12/19 was reviewed to identify all read change requests and acknowledgements during the audit period.

- 129 RR files were issued to Electric Kiwi by other traders for move switches. 60 of those were rejected. I reviewed five rejected files to confirm the reasons for rejection were valid and confirm that Electric Kiwi's system reflected the outcome of the RR process, and ten accepted files to confirm that Electric Kiwi's system reflected the outcome of the RR process.
- 6,791 RR files were issued by Electric Kiwi for move switches. 1,435 of those were rejected. I reviewed 10 rejected and ten accepted files to confirm that the requests were supported by at least two actual readings, that the content of the files was accurate, and that Electric Kiwi's system reflected the outcome of the read change process.

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

Audit commentary

Switch reads are checked by comparing actual AMI data to the switch read to determine whether an RR is required. Sometimes an AMI midnight read may not be available and so it's derived by deducting the sum of the trading periods for that day to determine the expected start read.

I checked the content of rejected and accepted files and Electric Kiwi data was correct in all cases. There were some RR files incorrectly rejected by other traders and Electric Kiwi correctly used their actual reading as a start reading. There were many examples where the difference between the CS read and the RR read was less than 1 kWh because some retailers truncate and some round.

I checked five rejections by Electric Kiwi and in all cases the rejection was valid.

Timeliness of RR and AC files

The switch breach history report was examined. There were nine late files during the audit period. These mostly related to backdated switches where compliance was not possible because the backdating was for more than four months.

Summary

Electric Kiwi implemented the changes they stated in the last audit report, which were as follows:

- sending an RR anytime the switch read in the CS file differs by 1 kWh or more,

- sending RRs multiple times for an ICP when the losing retailer continues to reject our RR (despite us sending a validated AMI read); and
- automated the sending of RRs from NEST to the registry since 23 January 2019

These changes have resulted in less re-work and a higher level of compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.11 With: Clause 12 Schedule 11.3 From: 01-Jan-19 To: 02-Dec-19	9 late RR files. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong because they have been improved since the last audit and they minimise risk to an acceptable level. The impact on settlement and participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
N/A		N/A	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We aim to send all RRs as soon as we have reads, but unfortunately, there will always be delays to receiving reads from MEPs and due to backdated switches. We believe it is best to send the RR late than not at all, and will continue to follow this practice, even when it results in a non-compliance for doing the right thing.		Ongoing	

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

Code reference

Clause 13 Schedule 11.3

Code related audit information

The gaining trader switch process applies when a trader has an arrangement with a customer or embedded generator to trade electricity through or assume responsibility for:

- a half hour metering installation (that is not a category 1 or 2 metering installation) at an ICP with a submission type of half hour in the registry and an AMI flag of “N”; or
- a half hour metering installation at an ICP that has a submission type of half hour in the registry and an AMI flag of “N” and is traded by the losing trader as non-half hour; or
- a non half hour metering installation at an ICP at which the losing trader trades electricity through a half hour metering installation with an AMI flag of “N”.

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

A gaining trader must advise the registry manager of the switch and expected event date no later than three business days after the arrangement comes into effect.

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

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

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

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

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

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

Audit observation

An event detail report for 01/01/19 to 02/12/19 was reviewed to determine whether any HH switches occurred during the period.

Audit commentary

Four HH switches occurred, and in all cases, the NT was sent within three business days.

Audit outcome

Compliant

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

Code reference

Clause 15 Schedule 11.3

Code related audit information

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

15(a) - provide to the registry manager a valid switch response code as approved by the Authority; or

15(b) - provide a request for withdrawal of the switch in accordance with clause 17.

Audit observation

An event detail report for 01/01/19 to 02/12/19 was reviewed to determine whether any HH switches occurred during the period.

Audit commentary

There were four HH AN files sent during the audit period and they were all on time and compliant.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 11.3

Code related audit information

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

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

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

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

Audit observation

An event detail report for 01/01/19 to 02/12/19 was reviewed to determine whether any HH switches occurred during the period.

Audit commentary

There were four HH CS files sent during the audit period and they were all on time and compliant.

Audit outcome

Compliant

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

Code reference

Clauses 17 and 18 Schedule 11.3

Code related audit information

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

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

- for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*

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

Audit observation

The switch withdrawal process was examined.

The event detail report for 01/01/19 to 02/12/19 was reviewed to:

- identify all switch withdrawal requests (NWs) issued by Electric Kiwi; and check the content of a sample of two withdrawals per withdrawal code,
- identify all switch withdrawal acknowledgements (AWs) issued by Electric Kiwi; and check a sample of ten AW rejections to confirm whether they were validly rejected; and
- confirm timeliness of withdrawal requests, as this is not currently being identified on the switch breach report (an extreme case sample of ten late withdrawal requests were checked).

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

Audit commentary

NW

2,352 NWs were issued by Electric Kiwi; 248 (10.5%) were rejected by the other trader. The content of a sample of 13 files were checked. Two had the incorrect withdrawal advisory codes.

The switch breach report did not record any late NW files. Analysis of the event detail report found 54 NWs were issued more than two months after the switch date. 36 of these late withdrawals used the code for wrong premises, and I note that this issue often does not become apparent for an extended period after a switch completes.

AW

2,701 NWs were issued to Electric Kiwi, and 458 (18%) of these were rejected and the AW files were sent within five business days.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.15 With: Clauses 17 and 18 Schedule 11.3 From: 01-Jan-19 To: 02-Dec-19	2 incorrect NW codes. 54 switch withdrawal requests were backdated greater than two months from the event date. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong as they are sufficient to mitigate risk most of the time. The audit risk rating is low, a small number of files were affected.		
Actions taken to resolve the issue		Completion date	Remedial action status
We aim to send all NWs within the allowed time frame and will continue to closely monitor this in the future. As noted above in the audit commentary, many of the late NWs are only done because of wrong premises, and these are often discovered late due to the customer not knowing which property they signed up.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
While we aim to send an NWs as soon as practically possible, we also recognize that sometimes late NWs are in the best interest of consumers. It also helps promote competition by ensuring that smaller retailers aren't forced to take on properties where they do not have an active customer. If both retailers agree to a withdrawal beyond two months, but within the 14 month reconciliation period, then we believe this should be allowed by the Code. We have commented the same in our Switch Process Review submissions.		Ongoing	

4.16. Metering information (Clause 21 Schedule 11.3)

Code reference

Clause 21 Schedule 11.3

Code related audit information

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

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

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

Audit observation

The meter reading process in relation to meter reads for switching purposes was examined.

Audit commentary

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

There were no examples of meter reading errors.

Electric Kiwi'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.

Win-back processes were examined to determine whether they are compliant. The event detail report for 01/01/19 to 02/12/19 was analysed to identify all withdrawn switches with a "CX" code applied prior to the switch completion date for any switch save protected retailer.

Audit commentary

Electric Kiwi is a switch save protected retailer.

The event detail report was checked and found no "CX" coded switch withdrawal requests were sent prior to the switch completion date.

When Electric Kiwi is notified that a customer wants to switch out, an email is sent to a customer asking for confirmation that it is a valid request and asking for the reason for the switch away. No special deal is offered. Electric Kiwi adopted this process to avoid switching the wrong premises and to ensure switching is not requested by a non-authorised person.

Audit outcome

Compliant

5. MAINTENANCE OF UNMETERED LOAD

5.1. Maintaining shared unmetered load (Clause 11.14)

Code reference

Clause 11.14

Code related audit information

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

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

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

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

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

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

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

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

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

Audit observation

The process to identify and monitor unmetered load was discussed. The registry list for 01/01/19 to 02/12/19 was reviewed to identify all ICPs with shared unmetered load during the period.

Audit commentary

Electric Kiwi does not currently supply any ICPs with unmetered load.

Applications to become a customer are not expected to be accepted if the ICP has unmetered load connected.

One ICP with unmetered load was with Electric Kiwi from 12/10/19 until 23/10/19. There were no changes made during that period. Submission occurred in accordance with the Code.

Audit outcome

Compliant

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

Code reference

Clause 10.14 (2)(b)

Code related audit information

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

Audit observation

The process to identify and monitor unmetered load was discussed. The registry list for 01/01/19 to 02/12/19 was reviewed to identify all ICPs with unmetered load during the period.

Audit commentary

Electric Kiwi does not currently supply any ICPs with unmetered load. The ICP with unmetered load temporarily recorded did not have unmetered load of over 3,000 kWh per annum.

Audit outcome

Compliant

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

Code reference

Clause 10.14 (5)

Code related audit information

If the unmetered load limit is exceeded the retailer must:

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

Audit observation

The process to identify and monitor unmetered load was discussed. The registry list for 01/01/19 to 02/12/19 was reviewed to identify all ICPs with unmetered load during the period.

Audit commentary

Electric Kiwi does not currently supply any ICPs with unmetered load. The ICP with unmetered load temporarily recorded did not have unmetered load of over 3,000 kWh per annum.

Audit outcome

Compliant

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

Code reference

Clause 11 Schedule 15.3, Clause 15.37B

Code related audit information

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

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

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

Audit observation

The registry list for 01/01/19 to 02/12/19 was reviewed to identify all ICPs with unmetered load during the period.

Audit commentary

Electric Kiwi does not supply any ICPs with distributed unmetered load and does not intend to.

Audit outcome

Compliant

6. GATHERING RAW METER DATA

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

Code reference

Clause 10.13, Clause 10.24 and Clause 15.13

Code related audit information

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

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

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

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

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

Audit observation

Processes for distributed generation were reviewed. The audit compliance report as at 02/12/19 was reviewed to confirm whether Electric Kiwi had supplied any ICPs with generation during the audit period and whether there were any registry discrepancies.

Audit commentary

Metering installations installed

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

Distributed Generation

Analysis of the registry list found that Electric Kiwi supplies 354 ICPs with generation entered by the distributor, all of which have import/export metering installed.

Submission data was checked to ensure generation kWh were submitted. Compliance is confirmed.

Bridged meters

Electric Kiwi provided a list of six ICPs where remote disconnection had occurred then the meter had been bridged to reconnect. This is recorded as non-compliance below. I reviewed the bridged meters and noted that they had all later been unbridged.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.1 With: Clause 10.13 and clause 15.2 From: 18-Jan-19 To: 12-Nov-19	Energy is not metered and quantified according to the code where meters are bridged. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong as they are sufficient to mitigate risk most of the time. Bridging only occurs where a soft reconnection cannot be performed after hours and the customer urgently requires their energy supply for health and safety reasons.		
Actions taken to resolve the issue		Completion date	Remedial action status
We are unsure why this is a non-compliance against the retailer, when we did not request the bridging and it was the only option by the MEP/contractor to get the power turned on for the customer.		N/A	Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	
We do not see how bridging can be avoided. However, we always aim to get the meter unbridged ASAP. We have several exception reports that help us identify bridged meters, and these are checked daily.		N/A	

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

Code reference

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

Code related audit information

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

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

The participant responsible for the metering installation must:

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

Audit observation

The NSP table was reviewed to confirm whether Electric Kiwi is responsible for any GIPs.

Audit commentary

Review of the NSP table confirmed that Electric Kiwi are not responsible for any GIPs.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

Audit observation

The registry list for 01/01/19 to 02/12/19 was reviewed, to identify any ICPs with profiles that require certification of the control device.

Audit commentary

Examination of the list file found that Electric Kiwi has only used the HHR and HHZ profiles, and control devices are not used for reconciliation purposes.

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.

A list of four defective meters and six bridged meters were provided. All examples were reviewed to determine whether the MEP was advised and if appropriate action was taken.

Audit commentary

Defective meters are typically identified through the validation process, or from information provided by the MEP or customer. Upon identifying a possible defective meter, Electric Kiwi raises a field services job to investigate.

I reviewed 10 examples of potential defective meters, including bridged meters. In all cases a field services job was raised, and the MEP advised.

Corrections related to the meter faults are discussed in **section 8.2**.

Audit outcome

Compliant

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

Code reference

Clause 2 Schedule 15.2

Code related audit information

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

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

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

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

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

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

2(6) – The interrogation systems must record:

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

Audit observation

HHR data is provided by MEPs and by AMS as an agent. Interrogation requirements and clock synchronisation were reviewed as part of MEP audits and AMS's agent audit. The AMS report is older than seven months so I conducted additional compliance checks.

Audit commentary

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

The MEPs provide clock synchronisation and event reports.

When clock synchronisation notifications are received, they are used to determine whether any action is required. No clock synchronisation events requiring action by Electric Kiwi were identified during the audit period.

AMS confirmed that the only relevant events for the C&I installations were power outages.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

All validated meter readings must be derived from meter readings.

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

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

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

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

Audit observation

The data collection process was examined.

Electric Kiwi also considers photo readings when preparing estimates where actual AMI data cannot be obtained due to communications issues.

Audit commentary

AMI data is provided by MEPs. Validated readings are derived from actual meter readings.

Electric Kiwi is aware of the requirements to ensure that photo readings are validated against a set of validated actual reading from another source. If photo readings are used to calculate consumption, the interval data is labelled as estimated. Examples were checked to confirm this.

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

Electric Kiwi has not submitted any NHH metered volumes.

Switch event meter readings in CS files were reviewed in **sections 4.3 and 4.10**.

Switch event meter readings in RR files were reviewed in **sections 4.4, 4.5 and 4.11**.

Audit commentary

All reads are correctly applied in accordance with this clause.

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 registry list for 01/01/19 to 02/12/19 was reviewed to identify all ICPs with NHH non-AMI metering.

Audit commentary

There are no NHH non-AMI metering installations.

Audit outcome

Not applicable

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

Code reference

Clause 8(1) and (2) Schedule 15.2

Code related audit information

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

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

Audit observation

The registry list for 01/01/19 to 02/12/19 was reviewed to identify all ICPs with NHH non-AMI metering.

Audit commentary

There are no NHH non-AMI metering installations.

Audit outcome

Not applicable

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

Code reference

Clause 9(1) and (2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

The registry list for 01/01/19 to 02/12/19 was reviewed to identify all ICPs with NHH non-AMI metering.

Audit commentary

There are no NHH non-AMI metering installations.

Audit outcome

Not applicable

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

Code reference

Clause 10 Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

The registry list for 01/01/19 to 02/12/19 was reviewed to identify all ICPs with NHH non-AMI metering.

Audit commentary

There are no NHH non-AMI metering installations.

Audit outcome

Not applicable

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

Code reference

Clause 11(1) Schedule 15.2

Code related audit information

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

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

Audit observation

HHR data is provided by MEPs. Compliance was assessed as part of their MEP audits.

Audit commentary

MEPs are responsible for HHR data collection, and compliance is recorded in their audit reports.

Audit outcome

Compliant

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

Code reference

Clause 11(2) Schedule 15.2

Code related audit information

The following information is collected during each interrogation:

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

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

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

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

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

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

Audit observation

HHR data is provided by MEPs and by AMS as an agent. Interrogation requirements and clock synchronisation were reviewed as part of MEP audits and AMS's agent audit. The AMS report is older than seven months so I conducted additional compliance checks.

Audit commentary

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

The AMS audit report confirms compliance and there have not been any system or process changes since their audit was conducted.

Audit outcome

Compliant

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

Code reference

Clause 11(3) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

HHR data is provided by MEPs and by AMS as an agent. Interrogation requirements and clock synchronisation were reviewed as part of MEP audits and AMS's agent audit. The AMS report is older than seven months so I conducted additional compliance checks.

Audit commentary

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

The AMS audit report confirms compliance and there have not been any system or process changes since their audit was conducted.

Audit outcome

Compliant

7. STORING RAW METER DATA

7.1. Trading period duration (Clause 13 Schedule 15.2)

Code reference

Clause 13 Schedule 15.2

Code related audit information

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

Audit observation

HHR data is provided by MEPs and by AMS as an agent. Interrogation requirements and clock synchronisation were reviewed as part of MEP audits and AMS's agent audit. The AMS report is older than seven months so I conducted additional compliance checks.

Audit commentary

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

The AMS audit report confirms compliance and there have not been any system or process changes since their audit was conducted.

Audit outcome

Compliant

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

Code reference

Clause 18 Schedule 15.2

Code related audit information

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

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

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

Audit observation

Raw meter data is retained by MEPs, and compliance is assessed as part of their MEP audits.

Processes to archive and store raw meter data were reviewed.

Audit commentary

Compliance is recorded in the MEP audit reports.

Review of audit trails confirmed that reads cannot be modified without an audit trail being created. This is discussed further in **section 2.4**. Access to modify readings is restricted through log on privileges.

All meter reading data is archived and is retained by Electric Kiwi for at least 48 months.

Audit outcome

Compliant

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

Code reference

Clause 21(5) Schedule 15.2

Code related audit information

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

Audit observation

Processes to record non-metering information were discussed.

Audit commentary

Non metering information is not collected by Electric Kiwi; therefore, compliance was not assessed.

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

Electric Kiwi has not submitted any NHH metered volumes.

Audit commentary

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

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

Processes for correction and estimation were reviewed.

A list of four defective meters and six bridged meters were provided. All defective meters and all bridged meters were reviewed to confirm the correction process.

Audit commentary

Errors are identified through the data validation process, missing reads process, or information provided by the customer or MEP.

Where errors are detected, replacement data is estimated in accordance with the code. The estimation process is discussed in **section 9.4**.

The process for estimation and correction is as follows:

- if register reads are available, the intervals are estimated so that the total kWh matches the difference between register reads, the profile for the intervals is the same as the same day of the previous week,
- if register reads are not available, the consumption is estimated based on consumption history for the ICP; or
- if there is no profile history, the residual profile shape is used.

I reviewed all ten defective meters and found the calculation methodology was sound, but two issues were identified regarding submission accuracy, as follows:

1. corrected consumption for two defective meters did not appear in the submission files; and
2. corrected consumption for three bridged meters was subsequently overwritten by the MEP's replacement data file, which contained "actual" zeros for the period the meter was bridged.

I recommend the controls are reviewed and improved to ensure corrections flow through to submission files and that they cannot be overwritten.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 19(2) Schedule 15.2	Review and strengthen controls to ensure corrections flow through to submission files and that they cannot be overwritten.	<p>As there are two issues identified which we were unaware of prior to the audit, we are taking the following actions:</p> <ol style="list-style-type: none">1. Once we have performed future HHR corrections in NEST, we will manually check the next reconciliation submissions to ensure that the changes have flowed through correctly. This is being implemented during the next reconciliation run.2. Regarding MEPs sending "catch up" data which overwrites bridged meter estimations, we are discussing internally on how to implement a solution into our system. Our initial assessment assumes that the development may be quite complex and need further time to identify the most accurate solution.	Identified

Clause 19(5) of Schedule 15.2 requires that if a reconciliation participant corrects or alters data under this clause, the reconciliation participant must generate and archive a journal that contains the following information:

- (a) the date of the correction or alteration; and

- (b) the time of the correction or alteration; and
- (c) the operator identifier for the person within the reconciliation participant who made the correction or alteration; and
- (d) the half hour meter reading data or the non half hour meter reading data corrected or altered, and the total difference in volume of such corrected or altered data; and
- (e) the technique used to arrive at the corrected data; and
- (f) the reason for the correction or alteration.

When Electric Kiwi conducts corrections, the journal contains the details listed above.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 8.2 With: Clause 19(2) Schedule 15.2 From: 01-Jan-19 To: 02-Dec-19	Five corrections did not flow through to submission files. Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as weak because they are not sufficient to identify corrections not flowing through to submission files. 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
For the ICPs identified as issues, we will correct the data in NEST and ensure this is reflected in the next reconciliation submissions.		March 2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Once we have performed future HHR corrections in NEST, we will manually check the next reconciliation submissions to ensure that the changes have flowed through correctly. We are also investigating a fix in our system which would stop NEST from loading MEP catch up files for ICPs/time periods which were identified as having a bridged meter.		March 2020 Estimated completion - Sept 2020	

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

Code reference

Clause 19(3) Schedule 15.2

Code related audit information

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

Audit observation

The registry list as at 02/12/19 was reviewed to identify any ICPs which require loss compensation.

Audit commentary

Electric Kiwi has not supplied ICPs error or loss compensation.

Audit outcome

Compliant

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

Code reference

Clause 22(1) and (2) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

Corrections are discussed in **section 8.2**. I confirmed that raw meter data is not overwritten as part of the correction process. Audit trails are discussed in **section 2.4**.

Raw meter data is collected by MEPs; data retention was reviewed as part of their MEP audits.

Audit commentary

Raw meter data is held by MEPs, and compliance is recorded in their MEP audits.

Electric Kiwi only corrects working data and they keep an appropriate audit trail.

Retention of raw metering data is discussed in **section 7.2** and audit trails are discussed in **section 2.4**.

Audit outcome

Compliant

9. ESTIMATING AND VALIDATING VOLUME INFORMATION

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

Code reference

Clause 3(3) Schedule 15.2

Code related audit information

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

Audit observation

Provision of estimated reads to other participants during switching was reviewed in **sections 4.3, 4.4, 4.5, 4.10 and 4.11.**

Correct identification of estimated reads, and review of the estimation process was completed in **sections 8.2 and 9.4.**

Audit commentary

Read types are recorded correctly in NEST. I checked approximately 15 examples to confirm compliance.

Audit outcome

Compliant

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

Code reference

Clause 3(4) Schedule 15.2

Code related audit information

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

3(4)(a) - validated meter readings

3(4)(b) - estimated readings

3(4)(c) - permanent estimates.

Audit observation

Processes for derivation of volumes were discussed and observed.

Audit commentary

Data provided by MEPs and agents is considered “actual”. Estimates created by Electric Kiwi are identified as estimates. Some estimates become permanent if they are not replaced. All readings and interval data are correctly identified.

Audit outcome

Compliant

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

Code reference

Clause 3(5) Schedule 15.2

Code related audit information

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

Audit observation

A sample of submission data was reviewed in **sections 11** and **12**, to confirm that volume was based on readings as required.

HHR data is collected by MEPs and by AMS as an agent. Compliance was assessed as part of their MEP audits. The AMS audit is more than seven months old so I conducted addition checks to confirm compliance.

Audit commentary

The MEPs and AMS retain raw, unrounded data. Meter reading data is not rounded or truncated on import.

Audit outcome

Compliant

9.4. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

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

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

Audit observation

The HHR estimate process was examined, and a sample of seven estimates were reviewed. Revised data was compared to estimates where the estimates had been replaced.

Audit commentary

As discussed in **section 8.2**, the process for estimation and correction is as follows:

- if register reads are available, the intervals are estimated so that the total kWh matches the difference between register reads, the profile for the intervals is the same as the same day of the previous week,
- if register reads are not available, the consumption is estimated based on consumption history for the ICP; or
- if there is no profile history, the residual profile shape is used.

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

I checked 11 examples where MEPs were unable to supply complete data. In ten cases, “catchup” data was provided, and it was used. There was one example where “catchup” data was not provided. On 07/04/19 during the change from NZDT to NZST, the second interval was incorrectly recorded as zero for some ICPs where SMCO is the MEP. I recommend Electric Kiwi asks the MEP for replacement data and the results of any investigation into this matter in accordance with clauses 10.43 to 10.48. I couldn’t determine the impact of the missing data because this is a very low consumption interval and many zeros will be correct.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 15 Schedule 15.2	Request replacement data and investigation results from SMCO regarding missing data for the second interval of 07/04/19.	ELKI’s metering lead has reached out to AMS on 12/2/20 requesting the missing data and investigation results.	Identified

I checked 16 ICPs where the meter installation type was NHH. Electric Kiwi is a HHR only trader, therefore NHH certified metering installations are not expected. The analysis found the following:

- three customers have been asked to switch away and this has occurred, data was estimated for the final period of supply,
- HHR data is being provided for seven ICPs,
- two ICPs are vacant and disconnection processes have commenced; and
- comms issues are being worked on for four ICPs and estimation is occurring currently.

Electric Kiwi has monitoring in place to ensure these issues are identified and resolved as quickly as possible.

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 zero values.

Audit observation

Electric Kiwi has not submitted any NHH metered volumes.

Audit commentary

Electric Kiwi has not submitted any NHH metered volumes.

Audit outcome

Not applicable

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

Code reference

Clause 17 Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

I reviewed the HHR data validation process, including meter event logs, validation checks, and the sum-check process.

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

Audit commentary

Electronic meter reading information is provided by MEPs. Meters are interrogated regularly, and there is little risk that data can be overwritten. Data is held for a longer period at the meter and can be re-interrogated later if required.

NEST validates data on import. The validation includes:

- checks for missing data; and
- checks for invalid dates and times.

Any files that fail to import, or are imported with errors, are checked.

Additional validation steps include, sum-check validation, unexpected zeros, high and low consumption and a review of events.

Audit outcome

Compliant

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

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

Code reference

Clause 13.136

Code related audit information

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

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

Audit observation

The NSP table on the registry was reviewed.

Audit commentary

Electric Kiwi is not responsible for any NSPs. No information is provided to the grid owner in accordance with this clause.

Audit outcome

Not applicable

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

Code reference

Clause 13.137

Code related audit information

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

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

Audit observation

The NSP table on the registry was reviewed.

Audit commentary

Electric Kiwi is not responsible for any NSPs. No information is provided to the grid owner in accordance with this clause.

Audit outcome

Not applicable

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

Code reference

Clause 13.138

Code related audit information

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

Audit observation

The NSP table on the registry was reviewed.

Audit commentary

Electric Kiwi is not responsible for any NSPs. No information is provided to the grid owner in accordance with this clause.

Audit outcome

Not applicable

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

Code reference

Clause 13.140

Code related audit information

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

Audit observation

The NSP table on the registry was reviewed.

Audit commentary

Electric Kiwi is not responsible for any NSPs. No information is provided to the grid owner in accordance with this clause.

Audit outcome

Not applicable

11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

11.1. Buying and selling notifications (Clause 15.3)

Code reference

Clause 15.3

Code related audit information

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

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

Audit observation

Processes to create buying and selling notifications were reviewed.

A registry list for 01/01/19 to 02/12/19 was reviewed confirm the profiles used.

Audit commentary

Electric Kiwi uses the HHR profile, which does not require a trading notification.

Electric Kiwi also used the HHZ profile during the audit period, but submission uses the HHR profile. The RPS profile was used for one unmetered load ICP.

Audit outcome

Compliant

11.2. Calculation of ICP days (Clause 15.6)

Code reference

Clause 15.6

Code related audit information

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

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

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

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

Audit observation

The process for the calculation of ICP days was examined by checking 10 NSPs with a small number of ICPs to confirm the AV110 ICP days calculation was correct.

I reviewed variances for 16 months of GR100 reports.

Audit commentary

The process for the calculation of ICP days was examined by checking 10 NSPs a small number of ICPs against the active days for ICPs connected to the NSP on the registry list with history. The ICP days calculation was confirmed to be correct for the sample checked.

GR100 ICP comparison reports are reviewed by Electric Kiwi, and discrepancies are investigated. The GR100 differences for the past 15 months are set out below.

ICP Days difference between the registry and Electric Kiwi database

(Positive = Electric Kiwi data is lower than that on the registry).

Month	R0	R1	R3	R7	R14
Aug-18	-0.03%	-0.03%	0.01%	0.00%	0.00%
Sep-18	-0.06%	-0.02%	0.01%	0.00%	0.00%
Oct-18	0.02%	0.00%	0.01%	0.00%	
Nov-18	0.02%	0.00%	0.00%	0.00%	
Dec-18	0.01%	-0.01%	-0.02%	0.00%	
Jan-19	-0.06%	-0.04%	0.00%	0.00%	
Feb-19	-0.05%	-0.01%	0.00%	0.00%	
Mar-19	0.00%	0.01%	0.00%	0.00%	
Apr-19	0.01%	0.00%	0.00%	0.00%	
May-19	0.01%	0.00%	0.00%		
Jun-19	0.00%	-0.01%	0.00%		
Jul-19	0.00%	0.00%	0.00%		
Aug-19	0.00%	0.00%	0.00%		
Sep-18	0.01%	0.00%			
Oct-18	0.00%	0.00%			

I reviewed a sample of 16 ICP days discrepancies and found they were due to the following reasons:

- backdated NSP changes by the distributor,
- backdated switches,
- incorrect end dates for some ICPs: and
- NSP updates not being identified by Electric Kiwi.

The main issue was in February 2019 where approx. 100 ICPs had BRY0661 as the NSP in Electric Kiwi's ICP days file but they should have been against ISL0661. This was corrected by the 3-month revision. The twice monthly registry validation will now identify these types of issues and it doesn't appear they have been repeated in recent months.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.2 With: Clause 15.6 From: 01-Feb-19 To: 28-Feb-19	ICP days submitted for the incorrect NSP for approx. 100 ICPs. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong because they have been strengthened during the audit period. The impact is assessed to be low, as updated data was provided through the revision process.		
Actions taken to resolve the issue		Completion date	Remedial action status
The issue was identified within 1 month. Corrections were made in NEST and reconciliation wash ups with corrected NSP ICP days were submitted in R3.		March 2019	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Since the 2019 audit, we implemented a monthly check of the GR090 to ensure all ICPs and their NSPs are correct.		March 2019	

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

Code reference

Clause 15.7

Code related audit information

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

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

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

Audit observation

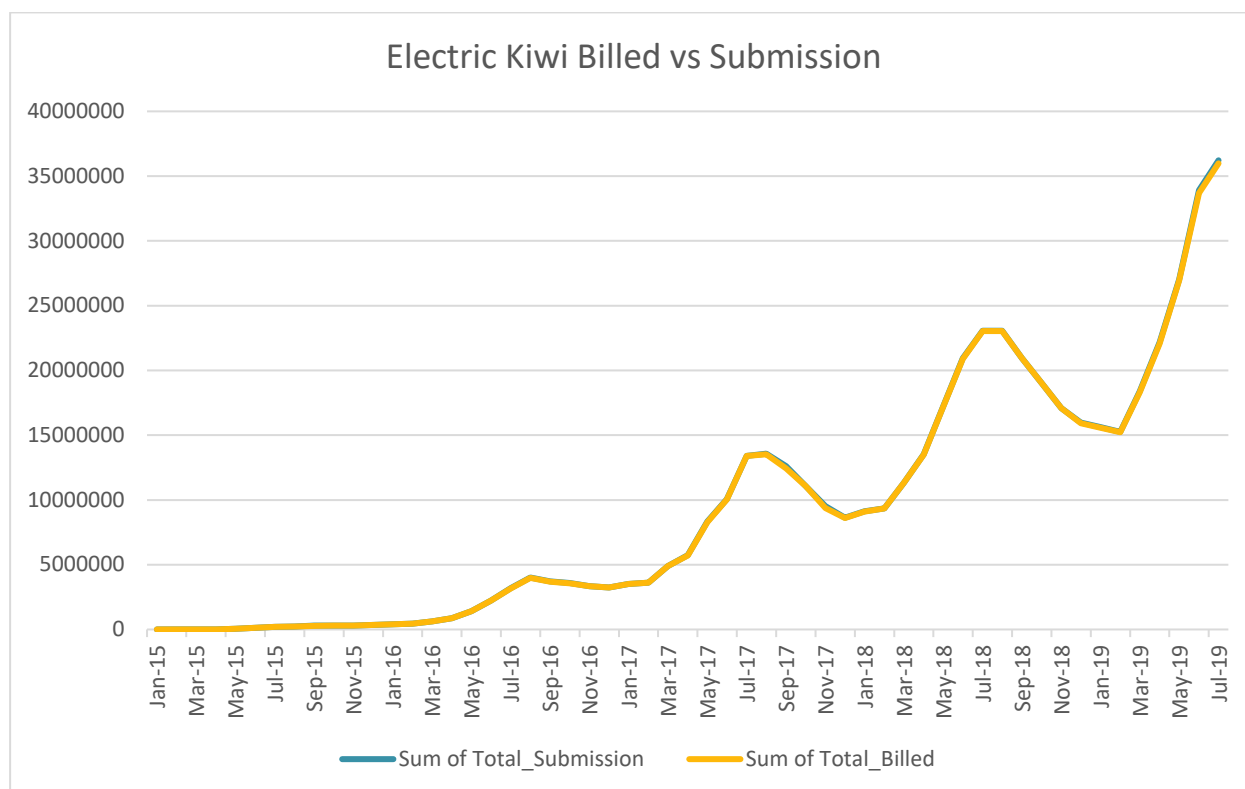
The process for the calculation of “as billed” volumes was examined.

GR130 reports for January 2015 to July 2019 were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

Audit commentary

There is a 0.31% difference for the period shown in the graph below. I checked the invoices for five NSPs and the totals matched electricity supplied file.

Comparison between Submitted Volumes and Electricity Supplied



Audit outcome

Compliant

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

Code reference

Clause 15.8

Code related audit information

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

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

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

Audit observation

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

The GR090 ICP missing files received during the audit period were examined. A sample of nine missing ICPs were reviewed to determine the reasons they were missing.

Audit commentary

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

I confirmed the process for aggregation of HHR data is correct, by:

- matching HHR aggregates information to the volumes for one submission, which confirmed that the differences between the volumes and aggregates were small - a detailed reconciliation at NSP level was completed for one submission which confirmed that the differences were very small at each NSP and related to rounding;
- matching HHR aggregates volumes to the source files received from the MEP for five ICPs - I found that the volumes matched; and
- checking 10 ICPs with vacant consumption since November 2018 to confirm that vacant consumption is reported - all ICPs with consumption while disconnected had been returned to active status or switched out.

Electric Kiwi reviews all GR090 (ICP missing) reports and investigates and corrects any data discrepancies. The GR090 ICP missing files received during the audit period were examined. A sample of nine differences were reviewed, and they were found to be caused by registry errors or NSP changes by Distributors. As mentioned in **section 11.2**, the incorrect NSP was used in February 2019 for approx. 100 ICPs. This was resolved by the 3-month revision.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.4 With: Clause 15.8 From: 01-Jan-19 To: 02-Dec-19	HHR aggregates file does not contain electricity supplied information. Incorrect NSP used for approx. 100 ICPs in February 2019. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong because they have been strengthened during the audit period. The impact is assessed to be low, as updated data was provided through the revision process.		
Actions taken to resolve the issue		Completion date	Remedial action status
The issue of incorrect NSPs was identified within 1 month. Corrections were made in NEST and reconciliation wash ups with corrected NSPs were submitted in R3.		March 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Since the 2019 audit, we implemented a monthly check of the GR090 to ensure all ICPs and their NSPs are correct.		March 2019	

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

HHR data is provided by MEPs and AMS as an agent. Compliance was assessed as part of their audits.

The daylight savings adjustment process was reviewed including viewing examples of ICPs moving into and out of daylight savings.

Audit commentary

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

I viewed the adjustment process for Metrix ICPs. I checked a sample of ICPs to confirm that where data is provided in NZST, data is correctly adjusted using the trading period run on technique.

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

A sample of HHR ICPs were checked to ensure that volumes were correctly recorded in **section 11.4**. Corrections are discussed in section **8.2**.

Electric Kiwi has submitted unmetered NHH volumes for one ICP.

I checked for alleged breaches regarding late files.

Audit commentary

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

I checked the accuracy of the HHR aggregates and HHR volumes files in **section 11.4** and confirm compliance. The AV080 file for the unmetered load ICP was accurate.

Audit outcome

Compliant

12.3. Allocation of submission information (Clause 15.5)

Code reference

Clause 15.5

Code related audit information

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

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

Audit observation

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

I walked through the HHR volumes and aggregates validation process, including reviewing historic validations.

Audit commentary

Electric Kiwi compares registry data to data in NEST twice per month to ensure aggregation factors are correct. This process has ensured accuracy since early 2019, but as recorded in **sections 11.2** and **11.4**, the incorrect NSP was used for approx. 100 ICPs in February 2019. There has not been a repeat of this issue since that month.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.3 With: Clause 15.5 From: 01-Feb-19 To: 28-Feb-19	Incorrect NSP for approx. 100 ICPs in February 2019. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong because they have been strengthened during the audit period. The impact is assessed to be low, as updated data was provided through the revision process.		
Actions taken to resolve the issue		Completion date	Remedial action status
The issue of incorrect NSPs was identified within 1 month. Corrections were made in NEST and reconciliation wash ups with corrected NSPs were submitted in R3.		March 2019	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Since the 2019 audit, we implemented a monthly check of the GR090 to ensure all ICPs and their NSPs are correct.		March 2019	

12.4. Grid owner volumes information (Clause 15.9)

Code reference

Clause 15.9

Code related audit information

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Not applicable

12.5. Provision of NSP submission information (Clause 15.10)

Code reference

Clause 15.10

Code related audit information

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

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

Audit observation

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

Audit commentary

Electric Kiwi is not required to provide NSP submission information.

Audit outcome

Not applicable

12.6. Grid connected generation (Clause 15.11)

Code reference

Clause 15.11

Code related audit information

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

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

Audit observation

The registry list and NSP table were reviewed.

Audit commentary

Electric Kiwi is not a grid connected generator; therefore, compliance was not assessed.

Audit outcome

Not applicable

12.7. Accuracy of submission information (Clause 15.12)

Code reference

Clause 15.12

Code related audit information

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

Audit observation

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

Corrections were reviewed in **sections 8.1** and **8.2**.

Audit commentary

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

The audit identified one issue where more accurate information was not provided at the next available opportunity. As recorded in **section 8.2**, there were three examples where corrected information was overwritten by subsequent AMI files and two examples where corrections did not flow through to submission files.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.7 With: Clause 15.12 From: 01-Jan-19 To: 02-Dec-19	Five corrections did not flow through to submission files. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as moderate as they are sufficient to ensure that submission data is accurate most of the time. In this section controls have been evaluated for the estimation and correction processes, that's why they are recorded as stronger than the controls for just corrections, which are recorded as weak in section 8.2 . The audit risk rating is low, because submission information can be corrected and washed up through the revision process.		
Actions taken to resolve the issue		Completion date	Remedial action status
For the ICPs identified as issues, we will correct the data in NEST and ensure this is reflected in the next reconciliation submissions.		March 2020	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Once we have performed future HHR corrections in NEST, we will manually check the next reconciliation submissions to ensure that the changes have flowed through correctly.	March 2020	
We are also investigating a fix in our system which would stop NEST from loading MEP catch up files for ICPs/time periods which were identified as having a bridged meter.	Estimated completion - Sept 2020	

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

Electric Kiwi has not submitted any metered NHH volumes.

I evaluated the issue of estimated HHR data still being present at 14 months.

Audit commentary

All ICPs were submitted as HHR. There is no NHH metered data submitted.

When estimates are created and used for submission, it is not possible to differentiate between estimate types or between estimates and corrections. If HHR data is calculated between register reads, the total kWh is correct, and this is a very low risk. 99.7% of data is “actual” at the 14-month revision.

Audit outcome

Compliant

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

Code reference

Clause 2 Schedule 15.3

Code related audit information

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

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

Audit observation

Aggregation and content of reconciliation submissions was reviewed.

Audit commentary

Compliance with this clause was assessed:

- all Electric Kiwi's metered ICPs are submitted as HHR,
- one ICP with unmetered load had accurate submission,
- no profiles requiring a certified control device are used,
- no loss or compensation arrangements are required; and
- aggregation of the AV090 and AV140 reports is compliant.

Audit outcome

Compliant

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

Code reference

Clause 3 Schedule 15.3

Code related audit information

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

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

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

Audit observation

Electric Kiwi has not submitted any NHH metered volumes.

Audit commentary

All ICPs were submitted as HHR, and this clause does not apply.

Audit outcome

Not applicable

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

Code reference

Clause 4 and 5 Schedule 15.3

Code related audit information

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

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

Audit observation

Electric Kiwi has not submitted any metered NHH volumes.

Audit commentary

All ICPs were submitted as HHR, and this clause does not apply.

Audit outcome

Not applicable

12.12. Forward estimate process (Clause 6 Schedule 15.3)

Code reference

Clause 6 Schedule 15.3

Code related audit information

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

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

Audit observation

Electric Kiwi has not submitted any NHH metered volumes.

Audit commentary

All ICPs were submitted as HHR, and this clause does not apply.

Audit outcome

Not applicable

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

Code reference

Clause 7 Schedule 15.3

Code related audit information

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

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

Audit observation

Review of the registry list for 01/01/19 to 02/12/19 and discussion with Electric Kiwi confirmed that all metered ICPs had submission type HHR.

Review of the event detail report for 01/01/19 to 02/12/19 confirmed that some ICPs have had a profile change.

Audit commentary

All ICPs were submitted as HHR, but some ICPs had the HHZ profile in the registry. I checked a sample of 10 changes, and they all occurred on a meter 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

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

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

Audit commentary

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

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

Audit outcome

Compliant

13.2. Reporting resolution (Clause 9 Schedule 15.3)

Code reference

Clause 9 Schedule 15.3

Code related audit information

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

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

Audit observation

I reviewed the rounding of data on the AV090 and AV140 reports as part of the aggregation checks.

Audit commentary

Submission information is appropriately rounded to no more than 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

Electric Kiwi has not submitted any NHH metered volumes.

Audit commentary

All ICPs were submitted as HHR, and this clause does not apply.

Audit outcome

Not applicable

CONCLUSION

Electric Kiwi has improved the controls in many areas, resulting in an improvement in compliance and a reduction in re-work. In particular the switching read change process is now more streamlined. There have been improvements in registry accuracy and the timeliness of registry updates as a result of complete registry validation checks twice per month.

Most of the issues found in the switching and registry areas were minor, although there were 54 NW files sent later than two months from the event date.

There were issues in 2018 and early 2019 regarding submission against incorrect NSPs. This matter has not occurred since February 2019.

The main issues to be resolved in the reconciliation area are:

- some corrected data was overwritten by the MEP's replacement data file where correction had occurred for periods when meters were bridged; and
- some corrected data did not flow through to submission files.

The audit found 17 non-compliance issues, two recommendations are made, and no issues are raised. The audit risk rating is 21, indicating that the next audit be due in 12 months.

PARTICIPANT RESPONSE

Electric Kiwi would like to thank the EA for taking the time to review our audit, as well as Steve Woods for taking the time to perform our audit and prepare the report.

As we have in the past, we would like to start by noting the significant & continued growth Electric Kiwi has achieved over the last 12 months, after several other years of sustained high growth. Although this does come with challenges, we believe that continuous improvement of our operational processes, agility, and significant investment in automation has proven that we can and will maintain high levels of compliance. This is exceptionally notable during high periods growth – and while focusing most importantly on ensuring consumers are happy and we’re doing what’s in their best interest. We recognize that this is a very delicate balance that we need to maintain and feel that we are doing well at it.

While we believe that we have achieved a very good level of compliance, especially looking at issues resolved and improvements implemented since previous audits, we recognize that a couple of new issues have been identified through this audit. We will work to address these as soon as practically possible and hope to show improved compliance next year.

As a final comment, Electric Kiwi would like to again encourage the EA to address two outstanding inefficiencies in the audit report process:

1. The “double counting” of non-compliances throughout this report, which adds inefficiency to the audit process and skews the true result. This year’s audit report for Electric Kiwi has yet again shown the inconsistency of having a single non-compliance which impacts a very small number of ICPs (5 in total) but results in 7 non-compliance points (2 + 3 + 2) across 3 Code references (2.1, 8.2 and 12.7 respectively).

Another example is where we had incorrect NSPs assigned to ICPs during reconciliation in February 2019, but was identified and corrected nearly 1 year ago, and has not reoccurred. This cost us 3 non-compliance points across 3 references.

We believe these 10 points noted in the two issues above are not reflective of our compliance levels and are over reported by at least 6 points.

2. Assigning non-compliance points where there were extremely small numbers of errors, for example 2 late NTs or 2 late RRs out of several thousand transactions sent.