

ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT



For

AWHITU WINDFARMS LTD

Prepared by: Steve Woods

Date audit commenced: 20 April 2021

Date audit report completed: 7 May 2021

Audit report due date: 23 May 2021

TABLE OF CONTENTS

Executive summary	6
Audit summary	6
Non-compliances	6
Recommendations	7
Issues 7	
1. Administrative	8
1.1. Exemptions from Obligations to Comply with Code (Section 11)	8
1.2. Structure of Organisation	8
1.3. Persons involved in this audit	8
1.4. Use of Agents (Clause 15.34)	9
1.5. Hardware and Software	9
1.6. Breaches or Breach Allegations	9
1.7. ICP Data	10
1.8. Authorisation Received	10
1.9. Scope of Audit	11
1.10. Summary of previous audit	11
2. Operational Infrastructure	12
2.1 Relevant information (Clause 10.6, 11.2, 15.2)	12
2.2 Provision of information (Clause 15.35)	13
2.3 Data transmission (Clause 20 Schedule 15.2)	14
2.4 Audit trails (Clause 21 Schedule 15.2)	14
2.5 Retailer responsibility for electricity conveyed - participant obligations (Clause 10.4)	15
2.6 Retailer responsibility for electricity conveyed - access to metering installations (Clause 10.7(2),(4),(5) and (6))	15
2.7 Physical location of metering installations (Clause 10.35(1)&(2))	16
2.8 Trader contracts to permit assignment by the Authority (Clause 11.15B)	17
2.9 Connection of an ICP (Clause 10.32)	17
2.10 Temporary Electrical Connection of an ICP (Clause 10.33)	18
2.11 Electrical Connection of Point of Connection (Clause 10.33A)	18
2.12 Arrangements for line function services (Clause 11.16)	19
2.13 Arrangements for metering equipment provision (Clause 10.36)	19
2.14 Connecting ICPs then withdrawing switch (Clause 10.33A(5))	20
2.15 Electrical disconnection of ICPs (Clause 10.33B)	20
2.16 Removal or breakage of seals (Clause 48(1C), 48 (1D), 48 (1E), 48 (1F) of Schedule 10.7)	21
2.17 Meter bridging (Clause 10.33C and 2A of Schedule 15.2)	21
2.18 Use of ICP identifiers on invoices (Clause 11.30)	22
2.19 Provision of information on dispute resolution scheme (Clause 11.30A)	22
2.20 Provision of information on electricity plan comparison site (Clause 11.30B)	23
3. Maintaining registry information	24
3.1. Obtaining ICP identifiers (Clause 11.3)	24
3.2. Providing registry information (Clause 11.7(2))	25
3.3. Changes to registry information (Clause 10 Schedule 11.1)	25
3.4. Trader responsibility for an ICP (Clause 11.18)	26
3.5. Provision of information to the registry manager (Clause 9 Schedule 11.1)	27
3.6. ANZSIC codes (Clause 9 (1(k) of Schedule 11.1)	27

3.7.	Changes to unmetered load (Clause 9(1)(f) of Schedule 11.1)	28
3.8.	Management of “active” status (Clause 17 Schedule 11.1)	28
3.9.	Management of “inactive” status (Clause 19 Schedule 11.1)	29
3.10.	ICPs at new or ready status for 24 months (Clause 15 Schedule 11.1)	29
4.	Performing customer and embedded generator switching	30
4.1.	Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3)	30
4.2.	Losing trader response to switch request and event dates - standard switch (Clauses 3 and 4 Schedule 11.3)	30
4.3.	Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3)	31
4.4.	Retailers must use same reading - standard switch (Clause 6(1) and 6A Schedule 11.3)	31
4.5.	Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3)	32
4.6.	Disputes - standard switch (Clause 7 Schedule 11.3)	33
4.7.	Gaining trader informs registry of switch request - switch move (Clause 9 Schedule 11.3)	33
4.8.	Losing trader provides information - switch move (Clause 10(1) Schedule 11.3)	34
4.9.	Losing trader determines a different date - switch move (Clause 10(2) Schedule 11.3)	34
4.10.	Losing trader must provide final information - switch move (Clause 11 Schedule 11.3)	35
4.11.	Gaining trader changes to switch meter reading - switch move (Clause 12 Schedule 11.3)	35
4.12.	Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3)	36
4.13.	Losing trader provision of information - gaining trader switch (Clause 15 Schedule 11.3)	37
4.14.	Gaining trader to advise the registry manager - gaining trader switch (Clause 16 Schedule 11.3)	37
4.15.	Withdrawal of switch requests (Clauses 17 and 18 Schedule 11.3)	38
4.16.	Metering information (Clause 21 Schedule 11.3)	39
4.17.	Switch saving protection (Clause 11.15AA to 11.15AB)	39
5.	Maintenance of unmetered load	40
5.1.	Maintaining shared unmetered load (Clause 11.14)	40
5.2.	Unmetered threshold (Clause 10.14 (2)(b))	41
5.3.	Unmetered threshold exceeded (Clause 10.14 (5))	41
5.4.	Distributed unmetered load (Clause 11 Schedule 15.3, Clause 15.37B)	42
6.	Gathering raw meter data	43
6.1.	Electricity conveyed & notification by embedded generators (Clause 10.13, Clause 10.24 and 15.13)	43
6.2.	Responsibility for metering at GIP (Clause 10.26 (6), (7) and (8))	44
6.3.	Certification of control devices (Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3)	44
6.4.	Reporting of defective metering installations (Clause 10.43(2) and (3))	45
6.5.	Collection of information by certified reconciliation participant (Clause 2 Schedule 15.2)	45
6.6.	Derivation of meter readings (Clause 3(1), 3(2) and 5 Schedule 15.2)	46
6.7.	NHH meter reading application (Clause 6 Schedule 15.2)	48
6.8.	Interrogate meters once (Clause 7(1) and (2) Schedule 15.2)	49
6.9.	NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2)	49
6.10.	NHH meters 90% read rate (Clause 9(1) and (2) Schedule 15.2)	50
6.11.	NHH meter interrogation log (Clause 10 Schedule 15.2)	50
6.12.	HHR data collection (Clause 11(1) Schedule 15.2)	51
6.13.	HHR interrogation data requirement (Clause 11(2) Schedule 15.2)	51
6.14.	HHR interrogation log requirements (Clause 11(3) Schedule 15.2)	52
7.	Storing raw meter data	53

7.1.	Trading period duration (Clause 13 Schedule 15.2)	53
7.2.	Archiving and storage of raw meter data (Clause 18 Schedule 15.2)	53
7.3.	Non metering information collected / archived (Clause 21(5) Schedule 15.2)	54
8.	Creating and managing (including validating, estimating, storing, correcting and archiving) volume information.....	55
8.1.	Correction of NHH meter readings (Clause 19(1) Schedule 15.2).....	55
8.2.	Correction of HHR metering information (Clause 19(2) Schedule 15.2)	56
8.3.	Error and loss compensation arrangements (Clause 19(3) Schedule 15.2)	56
8.4.	Correction of HHR and NHH raw meter data (Clause 19(4) and (5) Schedule 15.2)	57
9.	Estimating and validating volume information.....	58
9.1.	Identification of readings (Clause 3(3) Schedule 15.2).....	58
9.2.	Derivation of volume information (Clause 3(4) Schedule 15.2)	58
9.3.	Meter data used to derive volume information (Clause 3(5) Schedule 15.2).....	59
9.4.	Half hour estimates (Clause 15 Schedule 15.2).....	59
9.5.	NHH metering information data validation (Clause 16 Schedule 15.2)	60
9.6.	Electronic meter readings and estimated readings (Clause 17 Schedule 15.2)	60
10.	Provision of metering information to the GRID OWNER in accordance with subpart 4 of Part 13 (clause 15.38(1)(f))	62
10.1.	Generators to provide HHR metering information (Clause 13.136)	62
10.2.	Unoffered & intermittent generation provision of metering information (Clause 13.137)	62
10.3.	Loss adjustment of HHR metering information (Clause 13.138).....	63
10.4.	Notification of the provision of HHR metering information (Clause 13.140)	63
11.	Provision of submission information for reconciliation.....	64
11.1.	Buying and selling notifications (Clause 15.3).....	64
11.2.	Calculation of ICP days (Clause 15.6)	64
11.3.	Electricity supplied information provision to the reconciliation manager (Clause 15.7).....	65
11.4.	HHR aggregates information provision to the reconciliation manager (Clause 15.8)	66
12.	Submission computation	68
12.1.	Daylight saving adjustment (Clause 15.36)	68
12.2.	Creation of submission information (Clause 15.4).....	68
12.3.	Allocation of submission information (Clause 15.5)	69
12.4.	Grid owner volumes information (Clause 15.9)	70
12.5.	Provision of NSP submission information (Clause 15.10)	70
12.6.	Grid connected generation (Clause 15.11).....	71
12.7.	Accuracy of submission information (Clause 15.12)	71
12.8.	Permanence of meter readings for reconciliation (Clause 4 Schedule 15.2)	72
12.9.	Reconciliation participants to prepare information (Clause 2 Schedule 15.3)	72
12.10.	Historical estimates and forward estimates (Clause 3 Schedule 15.3).....	73
12.11.	Historical estimate process (Clause 4 and 5 Schedule 15.3)	74
12.12.	Forward estimate process (Clause 6 Schedule 15.3)	74
12.13.	Compulsory meter reading after profile change (Clause 7 Schedule 15.3).....	75
13.	Submission format and timing	76
13.1.	Provision of submission information to the RM (Clause 8 Schedule 15.3)	76
13.2.	Reporting resolution (Clause 9 Schedule 15.3)	77
13.3.	Historical estimate reporting to RM (Clause 10 Schedule 15.3)	78

Conclusion	79
Participant response	79

EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Awhitu Windfarms Limited (Awhitu Windfarms)**, 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 V7.2.

Awhitu Windfarms has two participant codes; AWFL for the HHR generation at ICP 1099578842CN302 and MYST for two NHH load only ICPs.

HHR submission and registry management is completed by EMS for AWFL, and compliance is recorded in their audit report, apart from a technical non-compliance relating to the HHR aggregates submission.

AWFL has one further non-compliance; an electricity supplied file is not provided to the Reconciliation Manager for the load kWh at the generation ICP.

NHH submission, registry information management and switching is completed by JC Consulting for MYST. One issue was found for MYST, information provided for ICP 0071551401CNEF2 was not complete and accurate because the read dispute process was not used to replace an incorrect estimate from the losing trader, meaning volume was allocated to incorrect time periods. One recommendation is made regarding the NHH interrogation log.

Based on my analysis and Awhitu Windfarms's comments, I recommend that the next audit is due in 18 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, 15.2	No electricity supplied file for AWFL. Information provided for ICP 0071551401CNEF2 was not complete and accurate because the read dispute process was not used to replace an incorrect estimate from the losing trader.	Moderate	Low	2	Identified
Electricity supplied	11.3	15.7	An AV120 file is not provided for AWFL.	Moderate	Low	2	Identified
HHR aggregates	11.4	15.8	HHR aggregates file does not contain electricity supplied information.	Strong	Low	1	Identified
Future Risk Rating						5	

Future risk rating	0	1-3	4-14	16-40	41-55	55+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Recommendation	Remedial action
NHH interrogation log	6.11	Ensure the ICP identifier is included in the title of the email for the manually read ICP.	Identified

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

Awhitu Windfarms provided a copy of their structure:

1.3. Persons involved in this audit

Auditor:

Steve Woods

Veritek Limited

Electricity Authority Approved Auditor

Awhitu Windfarms personnel assisting with this audit:

Name	Title	Company
John Sturgess	Chief Operating Officer	Awhitu Windfarms Ltd
Ian Martin	Metering Services Manager	EMS
Sunny Feng	Data Analyst	EMS
John Candy	Director	JC Consulting Ltd
Chrissy Burrows	Director/Consultant	Momentous Consulting Ltd

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

Use of agents was discussed with Awhitu Windfarms.

Audit commentary

Awhitu Windfarms uses EMS to conduct all HHR activities and JC consulting for NHH activities. The agent audit for EMS was outside the 7-month window, therefore I checked all relevant activities. JC Consulting does not have an agent audit; therefore, I checked the outputs of all relevant activities.

Counties is the MEP for all three MYST ICPs and they supply AMI data as an MEP.

1.5. Hardware and Software

JC Consulting uses the following software:

- switching is conducted via web interface, and
- an Access Database (RM TOOL) is provided and run by JC Consulting for NHH submissions.

EMS has provided a list of all manufacturers of hardware and software that assist with or are used in the processes to be audited:

- hardware Blade Server hardware,
- software list:
 - MV 90 interrogation software,
 - GMMS is a bespoke system, which is supported by YouDo,
 - the database used is PostgreSQL,
 - the application server layer is Ruby on Rails.

1.6. Breaches or Breach Allegations

There were no breach allegations during the audit period.

1.7. ICP Data

All active ICPs are summarised by metering category in the table below.

Metering Category	2021	2020
1	2	2
2	1	
3		
4		
5	1	1
9		

All ICPs on the list file are summarised on the table below.

Status	2021	2020
Active (2,0)	3	3
Inactive – new connection in progress (1,12)	0	0
Inactive – electrically disconnected vacant property (1,4)	0	0
Inactive – electrically disconnected remotely by AMI meter (1,7)	0	0
Inactive – electrically disconnected at pole fuse (1,8)	0	0
Inactive – electrically disconnected due to meter disconnected (1,9)	0	0
Inactive – electrically disconnected at meter box fuse (1,10)	0	0
Inactive – electrically disconnected at meter box switch (1,11)	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	0	0
Inactive – reconciled elsewhere (1,5)	0	0
Decommissioned (3)	1	0

1.8. Authorisation Received

All information was directly provided by Awhitu Windfarms, JC Consulting, and EMS.

1.9. Scope of Audit

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of Awhitu Windfarms, 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 V7.2.

The scope of the audit is shown below.

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

1.10. Summary of previous audit

Awhitu Windfarms' previous audit was conducted in June 2020 by Ewa Glowacka. The summary table below shows there was only one non-compliance, which is still existing.

Subject	Section	Clause	Non-compliance	Status
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information.	Still existing

2. OPERATIONAL INFRASTRUCTURE

2.1 Relevant information (Clause 10.6, 11.2, 15.2)

Code reference

Clause 10.6, 11.2, 15.2

Code related audit information

A participant must take all practicable steps to ensure that information that the participant is required to provide 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. I checked all registry fields and all submission files to confirm compliance.

Audit commentary

Two issues were identified.

1. As recorded in **section 11.3**, an electricity supplied report is not provided for AWFL and it should be because when generation is not occurring there is load kWh which is considered to be “supplied under any other arrangement”.
2. As recorded in **section 8.1**, ICP 0071551401CNEF2 switched in on 10 June 2020 with estimated reads of 9406 and 41218. The next readings were taken on 30 June 2020 and were 9406 and 39193, confirming the losing trader’s estimate was too high by at least 2025 kWh. The ICP was decommissioned on 19 February 2021 and by that time the consumption had not reached a reading exceeding 41218 on the only consuming register. A submission of minus 264 kWh was conducted to adjust the reading to match the decommissioning reading. Clause 11.2 requires that information provided to “...any person under this Part (including customers) is complete and accurate. In this case the consumption information was allocated to incorrect time periods and was therefore not accurate. The read dispute process in Schedule 11.4 should have been used as soon as it was found the losing trader had provided an inaccurate estimate.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 11.2, 15.2 From: 23-Jan-20 To: 27-Apr-21	No electricity supplied file for AWFL. Information provided for ICP 0071551401CNEF2 was not complete and accurate because the read dispute process was not used to replace an incorrect estimate from the losing trader. 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 data is recorded correctly most of the time. The impact on submission is minor, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The advice provided was that the costs in recovering the loss was greater than the reward			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
No comment			

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 evaluated throughout the audit.

Audit commentary

This area is discussed in several sections in this report. 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

I checked data transmission methodologies for the AWFL ICP and the two MYST ICPs.

Audit commentary

EMS collects and processes the data for ICP 1099578842CN302. This data is provided to the Reconciliation Manager using the RM portal.

ICP 0007155140CN800 is AMI. Data is collected by IntelliHUB and provided to JC Consulting via SFTP.

ICP 1099566453CN9C7 has a legacy meter. Data collection is conducted by Awhitu Windfarms and a photo is taken of the meter register and the entire metering installation and is emailed to JC Consulting.

Audit outcome

Compliant

2.4 Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

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

The audit trail must include details of information:

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

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

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

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

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

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

Audit observation

For NHH data, I evaluated audit trails in JC Consulting's RM Tool.

For HHR and generation data, the agent audit reports was reviewed.

Audit commentary

The RM TOOL used by JC Consulting contains a detailed audit trail for data gathering, validation, and correction.

Compliance is recorded in the EMS audit report.

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 Awhitu Windfarms' standard terms and conditions for the supply of energy.

Audit commentary

Awhitu Windfarms' standard terms and conditions with their customers includes 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 Awhitu Windfarms' standard terms and conditions for the supply of energy; and discussed compliance with these clauses.

Audit commentary

Awhitu Windfarms' current terms and conditions with their customers includes consent to access for authorised parties for the duration of the contract. Awhitu Windfarms confirmed that there have been no instances where access could not be arranged for other parties during the audit period.

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

I checked whether any metering installations had loss compensation and I checked the terms and conditions.

Audit commentary

AWFL has one Category 5 metering installation. EMS confirmed that loss compensation is not required.

The physical meter location point is not specifically mentioned in Awhitu Windfarms' terms and conditions, but the existing practices in the electrical industry achieve compliance with regards to the two MYST ICPs.

Audit outcome

Compliant

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

Code reference

Clause 11.15B

Code related audit information

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

- *the Authority to assign the rights and obligations of the trader under the contract to another trader if the trader commits an event of default under paragraph (a) or (b) or (f) or (h) of clause 14.41 (clause 11.15B(1)(a)); and*
- *the terms of the assigned contract to be amended on such an assignment to—*
- *the standard terms that the recipient trader would normally have offered to the customer immediately before the event of default occurred (clause 11.15B(1)(b)(i)); or*
- *such other terms that are more advantageous to the customer than the standard terms, as the recipient trader and the Authority agree (clause 11.15B(1)(b)(ii)); and*
- *the terms of the assigned contract to be amended on such an assignment to include a minimum term in respect of which the customer must pay an amount for cancelling the contract before the expiry of the minimum term (clause 11.15B(1)(c)); and*
- *the trader to provide information about the customer to the Authority and for the Authority to provide the information to another trader if required under Schedule 11.5 (clause 11.15B(1)(d)); and*
- *the trader to assign the rights and obligations of the trader to another trader (clause 11.15B(1)(e)).*

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

Audit observation

I reviewed Awhitu Windfarms' standard terms and conditions for the supply of energy.

Audit commentary

Awhitu Windfarms' terms and conditions have specific clauses covering this requirement.

Audit outcome

Compliant

2.9 Connection of an ICP (Clause 10.32)

Code reference

Clause 10.32

Code related audit information

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

- *accept responsibility for their obligations in Parts 10, 11 and 15 for the point of connection; and*
- *have an arrangement with an MEP to provide 1 or more metering installations for the point of connection.*

Audit observation

I checked whether MYST or AWFL had any new connections during the audit period.

Audit commentary

There were no new connections during the audit period, and there are no plans to deal with new connections in the future.

Audit outcome

Compliant

2.10 Temporary Electrical Connection of an ICP (Clause 10.33)

Code reference

Clause 10.33(1)

Code related audit information

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

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

Audit observation

I checked whether MYST or AWFL had any new connections during the audit period.

Audit commentary

There were no new connections during the audit period, and there are no plans to deal with new connections 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:

- *for a point of connection to the grid – the grid owner has approved the connection,*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection.*
- *for a point of connection that is an ICP, but is not as NSP:*

- *the trader is recorded in the registry as the trader responsible for the ICP or has an arrangement with the customer and initiates a switch within 2 business days of electrical connection,*
- *if the ICP has metered load, 1 or more certified metering installations are in place,*
- *if the ICP has not previously been electrically connected, the relevant distributor has given written approval of the electrical connection.*

Audit observation

I checked whether there were any ICPs electrically connected during the audit period.

Audit commentary

No ICPs were electrically connected during the audit period.

All ICPs are recorded as active with metering installed have an MEP recorded.

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

AWFL and MYST only operate on the Counties Power network. I checked the existence of a Use of System agreement by referring to the previous audit report.

Audit commentary

The previous audit report confirms an agreement is in place with Counties Power.

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

One ICP has Accucal as the MEP and two ICPs have Counties Power as the MEP. I checked the existence of metering agreements.

Audit commentary

Agreements are in place with both MEPs. The Counties Power agreement forms part of the UoSA.

Audit outcome

Compliant

2.14 Connecting ICPs then withdrawing switch (Clause 10.33A(5))

Code reference

Clause 10.33B

Code related audit information

If a trader electrically connects an ICP it is in the process of switching and the switch does not proceed or is withdrawn the trader must:

- *restore the disconnection, including removing any bypass and disconnecting using the same method the losing trader used,*
- *reimburse the losing trader for any direct costs incurred.*

Audit observation

I checked whether any ICPs had been electrically connected at the time of switch.

Audit commentary

No ICPs had been electrically connected at the time of switch. It's unlikely that this scenario will arise in future.

Audit outcome

Compliant

2.15 Electrical disconnection of ICPs (Clause 10.33B)

Code reference

Clause 10.33B

Code related audit information

Unless the trader is recorded in the registry or is meeting its obligation under 10.33A(5) it must not disconnect or electrically disconnect the ICP or authorise the metering equipment provider to disconnect or electrically disconnect the ICP.

Audit observation

I checked whether any ICPs had been electrically disconnected where Awhitu Windfarms was not recorded in the registry.

Audit commentary

No examples were identified and it's unlikely this scenario will occur.

Audit outcome

Compliant

2.16 Removal or breakage of seals (Clause 48(1C), 48 (1D), 48 (1E), 48 (1F) of Schedule 10.7)

Code reference

Clause 48(1C), 48 (1D), 48 (1E), 48 (1F) of Schedule 10.7

Code related audit information

A trader can remove or break a seal without authorisation from the MEP to:

- *reset a load control switch, bridge or un-bridge a load control switch – if the load control switch does not control a time block meter channel,*
- *electrically connect load or generation, of the load or generation has been disconnected at the meter,*
- *electrically disconnect load or generation, if the trader has exhausted all other appropriate methods of electrical disconnection,*
- *bridge the meter,*

A trader that removes or breaks a seal in this way must:

- *ensure personal are qualified to remove the seal and perform the permitted work and they replace the seal in accordance with the Code,*
- *replace the seal with its own seal,*
- *have a process for tracing the new seal to the personnel,*
- *update the registry (if the profile code has changed)*
- *notify the metering equipment provider.*

Audit observation

I checked whether any of the scenarios above had occurred or were likely to occur.

Audit commentary

There were no examples of seals being removed or broken and there is no intention to deal with any of the scenarios above.

Audit outcome

Compliant

2.17 Meter bridging (Clause 10.33C and 2A of Schedule 15.2)

Code reference

Clause 10.33C and 2A of Schedule 15.2

Code related audit information

A trader, or a distributor or MEP which has been authorised by the trader, may only electrically connect an ICP in a way that bypasses a meter that is in place (“bridging”) if, despite best endeavours:

- *the MEP is unable to remotely electrically connect the ICP,*
- *the MEP cannot repair a fault with the meter due to safety concerns,*
- *the consumer will likely be without electricity for a period which would cause significant disadvantage to the consumer.*

If the trader bridges a meter, the trader must:

- *determine the quantity of electricity conveyed through the ICP for the period of time the meter was bridged,*
- *submit that estimated quantity of electricity to the reconciliation manager,*

- *within one business day of being advised that the meter is bridged, notify the MEP that they are required to reinstate the meter so that all electricity flows through a certified metering installation.*

The trader must determine meter readings as follows:

- *by substituting data from an installed check meter or data storage device*
- *if a check meter or data storage device is not installed, by using half hour data from another period where the trader considers the pattern of consumption is materially similar to the period during which the meter was bridged,*
- *if half hour data is not available, a non-half hour estimated reading that the trader considers is the best estimate during the bridging period must be used.*

Audit observation

I checked whether any meters had been bridged during the audit period.

Audit commentary

No meter bridging had occurred, and it is not likely this will occur given the scope of Awhitu Windfarm's operation.

Audit outcome

Compliant

2.18 Use of ICP identifiers on invoices (Clause 11.30)

Code reference

Clause 11.30

Code related audit information

Each trader must ensure the relevant ICP identifier is printed on every invoice or document relating to the sale of electricity.

Audit observation

I obtained a copy of the invoice template to confirm compliance.

Audit commentary

The invoice template includes the ICP.

Audit outcome

Compliant

2.19 Provision of information on dispute resolution scheme (Clause 11.30A)

Code reference

Clause 11.30A

Code related audit information

A retailer must provide clear and prominent information about Utilities Disputes:

- *on their website*
- *when responding to queries from consumers*
- *in directed outbound communications to consumers about electricity services and bills.*

If there are a series of related communications between the retailer and consumer, the retailer needs to provide this information in at least one communication in that series.

Audit observation

I obtained a copy of the invoice template to confirm compliance.

Audit commentary

The invoice template contains appropriate information regarding Utilities Disputes.

Audit outcome

Compliant

2.20 Provision of information on electricity plan comparison site (Clause 11.30B)

Code reference

Clause 11.30B

Code related audit information

A retailer that trades at an ICP recorded on the registry must provide clear and prominent information about Powerswitch:

- *on their website*
- *in outbound communications to residential consumers about price and service changes*
- *to residential consumers on an annual basis*
- *in directed outbound communications about the consumer's bill.*

If there are a series of related communications between the retailer and consumer, the retailer needs to provide this information in at least one communication in that series.

Audit observation

Awhitu Windfarms only has one residential ICP, which is the owner's ICP, and billing does not occur, therefore Awhitu Windfarms is both the customer and the trader, and this information is not required.

Audit commentary

Awhitu Windfarms only has one residential ICP, which is the owner's ICP, and billing does not occur, therefore Awhitu Windfarms is both the customer and the trader, and this information is not required.

Audit outcome

Not applicable

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

I checked whether any new connections had been conducted.

Audit commentary

No new connections were conducted, and none are planned. ICP 1099578842CN302 was a new connection during the previous audit period. An ICP was obtained in accordance with the Code for this ICP.

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 records were examined in detail.

I checked all registry records, including the AC020 and event detail reports for 1 June 2020 to 1 April 2021 to confirm process compliance and that controls are functioning as expected.

This clause links directly to **sections 3.3** and **3.5** below, where findings on the timeliness of updates are recorded.

Audit commentary

All registry fields for all ICPs were confirmed as correct.

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

I checked all registry updates during the audit period for all ICPs. I also checked the new connection details for ICP 1099578842CN302 even though it was outside the audit period.

Audit commentary

All trader events were conducted accurately and within the required timeframes for all ICPs.

Audit outcome

Compliant

3.4. Trader responsibility for an ICP (Clause 11.18)

Code reference

Clause 11.18

Code related audit information

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

A trader ceases to be responsible for an ICP if:

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

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

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

Audit observation

Retailers Responsibility to Nominate and Record MEP in the Registry

I checked the registry to confirm that all active ICPs have an MEP recorded, and MEP nominations were accepted.

ICP decommissioning

One ICP was decommissioned (0071551401CNEF2); I checked that a final interrogation had occurred.

Audit commentary

Retailers Responsibility to Nominate and Record MEP in the Registry

All ICPs have an MEP recorded. MEP nominations were all accurate and on time.

ICP Decommissioning

A final meter reading was obtained for the one decommissioned ICP.

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

I checked all registry updates for all ICPs, including the historic updates for ICP 1099578842CN302 where a new connection occurred during the previous audit period.

Audit commentary

All registry updates were accurate and within the allowable timeframes.

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

I checked the ANZSIC codes for all ICPs.

Audit commentary

ANZSIC codes are correct for all three ICPs.

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

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

Awhitu Windfarms does not have any unmetered load and does not intend to deal with unmetered load.

Audit commentary

Awhitu Windfarms does not have any unmetered load and does not intend to deal with unmetered load.

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

I checked the registry for all ICPs.

Audit commentary

Three ICPs correctly have the “active” status. Each ICP has one customer.

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

I checked the registry status for all ICPs to confirm compliance.

Audit commentary

One ICP was correctly changed to “inactive, ready for decommissioning” and it is now decommissioned.

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,

Audit commentary

There are no ICPs at the “new” or “ready” status and it’s unlikely there will be in future, but it will continue to be checked during future audits.

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

I confirmed ICP level compliance by checking the registry for all three ICPs where switching has occurred.

Audit commentary

Awhitu Windfarms' 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.

Three transfer NT files were sent, and all were sent prior to the switch event date. Compliance is confirmed.

Audit outcome

Compliant

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

Code reference

Clauses 3 and 4 Schedule 11.3

Code related audit information

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

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

When establishing an event date for clause 4, the losing trader may disregard every event date established by the losing trader for an ICP for which when the losing trader received notice from the registry manager under clause 22(a) the losing trader had been responsible for less than two months.

Audit observation

I confirmed ICP level compliance by checking the registry for all three ICPs where switching has occurred.

Audit commentary

No switches out have occurred, therefore there were no AN files to check.

Audit outcome

Compliant

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

Code reference

Clause 5 Schedule 11.3

Code related audit information

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

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

Audit observation

I confirmed ICP level compliance by checking the registry for all three ICPs where switching has occurred.

Audit commentary

No switches out have occurred, therefore there were no CS files to check.

Audit outcome

Compliant

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

Code reference

Clause 6(1) and 6A Schedule 11.3

Code related audit information

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

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

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

If the gaining trader disputes a switch meter reading because the switch event meter reading provided by the losing trader differs by 200 kWh or more, the gaining trader must, within 4 calendar months of the registry manager giving the gaining trader written notice of having received information about the switch completion, provide to the losing trader a changed switch event meter reading supported by 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

I confirmed ICP level compliance by checking the registry for all three ICPs where switching has occurred.

Audit commentary

The RR processes has not been used for any ICPs, therefore there were no files to check.

Audit outcome

Compliant

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

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

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

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

Audit observation

I confirmed ICP level compliance by checking the registry for all three ICPs where switching has occurred.

Audit commentary

The RR processes has not been used for any ICPs, therefore there were no files to check.

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 ICP level compliance by checking the registry for all three ICPs where switching has occurred.

Audit commentary

The RR processes has not been used for any ICPs, therefore there were no files to check.

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

There have not been any switch moves during the audit period.

Audit commentary

There have not been any switch moves during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 10(1) Schedule 11.3

Code related audit information

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

- *10(1)(a) If the losing trader accepts the event date proposed by the gaining trader, the losing trader must complete the switch by providing to the registry manager:*
 - *confirmation of the switch event date; and*
 - *a valid switch response code; and*
 - *final information as required under clause 11; or*
- *10(1)(b) If the losing trader does not accept the event date proposed by the gaining trader, the losing trader must acknowledge the switch request to the registry manager and determine a different event date that—*
 - *is not earlier than the gaining trader's proposed event date, and*
 - *is no later than 10 business days after the date the losing trader receives notice, or*
- *10(1)(c) request that the switch be withdrawn in accordance with clause 17.*

Audit observation

There have not been any switch moves during the audit period.

Audit commentary

There have not been any switch moves during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 10(2) Schedule 11.3

Code related audit information

If the losing trader determines a different date, then within 10 business days of receiving notice the losing trader must also complete the switch by providing to the registry manager as described in subclause (1)(a):

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

Audit observation

There have not been any switch moves during the audit period.

Audit commentary

There have not been any switch moves during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 11 Schedule 11.3

Code related audit information

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

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

Audit observation

There have not been any switch moves during the audit period.

Audit commentary

There have not been any switch moves during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 12 Schedule 11.3

Code related audit information

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

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

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

- the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 12(2A)(b));
- the gaining trader no later than 5 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

There have not been any switch moves during the audit period.

Audit commentary

There have not been any switch moves during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 14 Schedule 11.3

Code related audit information

The gaining trader switch process applies when a trader has an arrangement with a customer or embedded generator to trade electricity at an ICP at which the losing trader trades electricity with the customer or embedded generator, and one of the following applies at the ICP:

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

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

A gaining trader must advise the registry manager of the switch and expected event date no later than 3 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

There have not been any HH switches during the audit period.

Audit commentary

There have not been any HH switches during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 15 Schedule 11.3

Code related audit information

Within 3 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

There have not been any HH switches during the audit period.

Audit commentary

There have not been any HH switches during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 11.3

Code related audit information

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

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

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

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

Audit observation

There have not been any HH switches during the audit period.

Audit commentary

There have not been any HH switches during the audit period.

Audit outcome

Compliant

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

Code reference

Clauses 17 and 18 Schedule 11.3

Code related audit information

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

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

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

Audit observation

There have not been any withdrawals during the audit period.

Audit commentary

There have not been any withdrawals during the audit period.

Audit outcome

Compliant

4.16. Metering information (Clause 21 Schedule 11.3)

Code reference

Clause 21 Schedule 11.3

Code related audit information

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

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

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

Audit observation

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

Audit commentary

No switches out have occurred within the audit period.

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

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

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

Audit observation

There have not been any switches out during the audit period. Awhitu Windfarms does not have a "saves or win-backs" capability.

Audit commentary

There have not been any switches out during the audit period. Awhitu Windfarms does not have a "saves or win-backs" capability.

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

Awhitu Windfarms does not have any unmetered load at any ICPs. This was confirmed by checking the registry for all ICPs.

Audit commentary

If unmetered load was added or identified, JC Consulting has the ability to submit unmetered load.

Audit outcome

Compliant

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

Code reference

Clause 10.14 (2)(b)

Code related audit information

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

Audit observation

I checked all ICPs for unmetered load records.

Audit commentary

No ICPs have unmetered load.

Audit outcome

Compliant

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

Code reference

Clause 10.14 (5)

Code related audit information

If the unmetered load limit is exceeded the retailer must:

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

Audit observation

I checked all ICPs for unmetered load records.

Audit commentary

No ICPs have unmetered load.

Audit outcome

Compliant

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

Code reference

Clause 11 Schedule 15.3, Clause 15.37B

Code related audit information

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

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

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

Audit observation

I checked all ICPs for unmetered load records.

Audit commentary

No ICPs have unmetered load.

Audit outcome

Compliant

6. GATHERING RAW METER DATA

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

Code reference

Clause 10.13, Clause 10.24 and Clause 15.13

Code related audit information

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

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

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

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

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

Audit observation

I checked the registry records and all submission files, including all revisions, to determine compliance.

Audit commentary

Metering installations installed

All active, metered ICPs have an MEP, and at least one meter channel.

No load is submitted by subtraction.

Distributed generation

There is no distributed generation.

Embedded generation

There is one embedded generation station, which has appropriate import/export metering and both channels are submitted by EMS as an agent to Awhitu Windfarms.

Bridged meters

No bridged meters were identified during the audit period.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

The participant responsible for the metering installation must:

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

Audit observation

The NSP table was reviewed.

Audit commentary

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

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

Audit observation

I checked the registry records for all ICPs.

Audit commentary

Awhitu Windfarms has only used the HHR and RPS profiles, and control devices are not used for reconciliation purposes.

Audit outcome

Compliant

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

Code reference

Clause 10.43(2) and (3)

Code related audit information

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

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

Audit observation

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

Audit commentary

Any defective meters would be identified through the data validation process, or from information provided by the metering data provider. EMS and JC Consulting have validations in place to identify potential defective meters.

Upon identifying a possible defective meter, notification will be provided to the MEP. No defective meters were identified during the audit period, so it was not possible to review examples of this process.

Audit outcome

Compliant

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

Code reference

Clause 2 Schedule 15.2

Code related audit information

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

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

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

HHR data is collected by EMS, and data transmission and clock synchronisation processes were reviewed as part of their agent audit. Examples of clock synchronisation events outside acceptable thresholds were requested.

NHH and AMI

JC Consulting receives AMI data from Intellihub for the Counties Power meter.

ICP 1099566453CN9C7 has a legacy meter. Data collection is conducted by Awhitu Windfarms and a photo is taken of the meter register and the entire metering installation and is emailed to JC Consulting.

Audit commentary

HHR

HHR data transmission and clock synchronisation was reviewed as part of EMS's agent audit, and compliance is recorded. No defective HHR meters or clock synchronisation events outside the permissible thresholds have been identified during the audit period.

NHH and AMI

All information used to determine volume information is collected from the services interface or the metering installation by Awhitu Windfarms, their agents, or the MEP. Fulfilment of the interrogation systems requirements, and clock synchronisation was examined as part of the MEP audit.

Intellihub has appropriate event management processes and will advise JC Consulting if any events or clock errors are present. No events requiring action have been identified during the audit period.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

All validated meter readings must be derived from meter readings.

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

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

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

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

Audit observation

The data collection process was examined.

Audit commentary

One NHH ICP is read by Awhitu Windfarms. ICP 1099566453CN9C7 has a legacy meter. Data collection is conducted by Awhitu Windfarms and a photo is taken of the meter register and the entire metering installation and is emailed to JC Consulting. The email includes the results of the checks into seals, tampering and safety issues. JC Consulting checks the photo to ensure compliance with point c, which is phase failure. The photos below clearly show that no issues are present, all three phases are intact, and all seals are present.





Audit outcome

Compliant

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

Code reference

Clause 6 Schedule 15.2

Code related audit information

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

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

Audit observation

The process of the application of meter readings was examined.

Audit commentary

JC Consulting provided submission summary information and the most recent meter reading photo confirming that readings were correctly date and time stamped.

Switch event meter readings were correctly identified.

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

I checked whether any ICPs had switched out and whether meter readings were obtained.

Audit commentary

No ICPs have switched out. NHH ICPs are read each month, which was confirmed during the audit.

Audit outcome

Compliant

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

Code reference

Clause 8(1) and (2) Schedule 15.2

Code related audit information

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

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

Audit observation

The meter reading process was examined. Monthly reports for the audit period were provided and reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2.

Audit commentary

No ICPs have been with MYST for 12 months. Monthly reading is conducted ,and compliance is likely to be met.

Audit outcome

Compliant

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

Code reference

Clause 9(1) and (2) Schedule 15.2

Code related audit information

In relation to each NSP, each reconciliation participant must ensure that for each NHH ICP at which the reconciliation participant trades continuously for each 4 months, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every four months for 90% of the non-half hour 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 meter reading process was examined. Monthly reports for the audit period were reviewed.

Audit commentary

There is only one relevant ICP in the 4-month report and it has been read each month.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

One ICP is AMI, and one is NHH manually read. I checked processes and records to confirm compliance.

Audit commentary

Intellihub has an interrogation log that was checked during their MEP audit.

ICP 1099566453CN9C7 has a legacy meter. Data collection is conducted by Awhitu Windfarms and a photo is taken of the meter register and the entire metering installation and is emailed to JC Consulting.

The email states the date the meter was read, who read the meter, the photo contains the meter and register identification. The title of the email identifies the customer, and it's obvious what the ICP is, but I recommend the ICP identifier is included in the title of the email.

Recommendation	Description	Audited party comment	Remedial action
Regarding clause 10 Schedule 15.2.	Ensure the ICP identifier is included in the title of the email for the manually read ICP.	<p>[Participant comment]</p> <p>The ICP identifier will be included in the title of the email</p>	<p>[auditor comment]</p>

Audit outcome

Compliant

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

Code reference

Clause 11(1) Schedule 15.2

Code related audit information

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

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

Audit observation

HHR data is collected by EMS. The data collection requirements were reviewed as part of their agent audit.

Audit commentary

Compliance with this clause has been demonstrated by the agents as part of their own audits.

Audit outcome

Compliant

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

Code reference

Clause 11(2) Schedule 15.2

Code related audit information

The following information is collected during each interrogation:

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

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

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

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

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

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

Audit observation

HHR data is collected by EMS. The interrogation data requirements were reviewed as part of their agent audit.

Audit commentary

Compliance with this clause has been demonstrated by EMS as part of their own audit.

Audit outcome

Compliant

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

Code reference

Clause 11(3) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

HHR data is collected by EMS. The data interrogation log requirements were reviewed as part of their agent audit.

Audit commentary

Compliance with this clause has been demonstrated by EMS as part of their own audit.

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 collected by EMS. Trading period duration was reviewed as part of their agent audit.

Audit commentary

Compliance with this clause has been demonstrated by EMS.

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

Processes to archive and store raw meter data were reviewed. The oldest raw meter data available was viewed, to confirm it is retained. Audit trails were reviewed in **section 2.4**.

Audit commentary

HHR

Compliance with this clause has been demonstrated by EMS as part of their audit.

NHH

JC Consulting provide historical data showing that all readings were available since the start of trading.

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

Awhitu Windfarms does not deal with any non-metering information.

Audit commentary

Awhitu Windfarms does not deal with any non-metering information.

Audit outcome

Compliant

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

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

Code reference

Clause 19(1) Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

Processes for the correction of NHH meter readings were reviewed.

Audit commentary

NHH corrections are processed by JC Consulting as MYST's agent. The process documentation contains appropriate processes which achieve compliance. One NHH correction was conducted during the audit period. ICP 0071551401CNEF2 switched in on 10 June 2020 with estimated reads of 9406 and 41218. The next readings were taken on 30 June 2020 and were 9406 and 39193, confirming the losing trader's estimate was too high by at least 2025 kWh. The ICP was decommissioned on 19 February 2021 and by that time the consumption had not reached a reading exceeding 41218 on the only consuming register. A submission of minus 264 kWh was conducted to adjust the reading to match the decommissioning reading. Compliance is confirmed in this section, because the meter reading used was accurate. Non-compliance is recorded in **section 2.1** because the submission and billing information was not "complete and accurate".

Defective meters

Defective meters are typically identified through the meter reading validation process, or from information provided by the meter read provider. No defective meters were identified during the audit period.

Multiplier corrections

No incorrect multipliers were identified during the audit period, and there have been no multiplier corrections.

Bridged meter corrections

No bridged meters were identified during the audit period.

Inactive ICPs with consumption

The validation process identifies any ICPs with consumption during an inactive period. The registry status records are corrected to active for the affected period, and all consumption is submitted.

One ICP had been in an inactive status during the audit period prior to decommissioning and there was no consumption while it was in the inactive status.

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

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

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

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

Audit observation

Processes for the correction of HHR meter readings were reviewed. Information on HHR corrections was requested from EMS.

Audit commentary

HHR corrections are processed by EMS, and compliance was recorded in their agent audit. No HHR corrections were required during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 19(3) Schedule 15.2

Code related audit information

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

Audit observation

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

Audit commentary

Awhitu Windfarms supplies one ICP with metering category 5, and EMS confirmed that error or loss compensation was not applied.

Audit outcome

Compliant

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

Code reference

Clause 19(4) and (5) Schedule 15.2

Code related audit information

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

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

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

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

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

19(5)(d)- the half-hour metering data or the non-half hour metering data corrected or altered, and the total difference in volume of such corrected or altered data,

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

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

Audit observation

Corrections are conducted by EMS, their audit report 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 retention for MEPs and agents was reviewed as part of their own audits.

Audit commentary

HHR corrections are processed by EMS, and compliance was recorded in their agent audit.

Raw NHH meter data is held by the MEPs and JC Consulting. Compliance was confirmed as part of the Intellihub audit. JC Consulting does not overwrite raw meter data.

Audit outcome

Compliant

9. ESTIMATING AND VALIDATING VOLUME INFORMATION

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

Code reference

Clause 3(3) Schedule 15.2

Code related audit information

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

Audit observation

I checked examples of permanent estimates and their treatment in the RM Tool to confirm compliance.

Audit commentary

Estimates and permanent estimates are clearly identified.

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

I checked the “submission summary” sheet for all months, provided by JC Consulting for MYST. I reviewed the EMS audit report for AWFL.

Audit commentary

Review of submission summary sheets for MYST and submission data for AWFL confirmed that it is based on readings as required by this clause.

Audit outcome

Compliant

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

Code reference

Clause 3(5) Schedule 15.2

Code related audit information

All meter data that is used 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 **section 12**, to confirm that volume was based on readings as required.

HHR data is collected by EMS and compliance was assessed as part of their agent audit.

NHH data provided by Intellihub and by Awhitu Windfarms for the manually read ICP is not rounded or truncated.

Audit commentary

HHR

EMS' processes were reviewed as part of their agent audit and found to be compliant.

NHH

NHH data provided by Intellihub and by Awhitu Windfarms for the manually read ICP is not rounded or truncated.

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

Processes for the estimation of HHR meter readings were reviewed. Information on HHR estimates was requested from EMS.

Audit commentary

HHR estimates are conducted by EMS, and compliance was recorded in their agent audit.

HHR estimates are regularly created by EMS where data is missing but no examples were identified for AWFL.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

I conducted a walkthrough of the validation processes. The JC Consulting RM Submission Process documentation and Submission Checklist were reviewed during an audit conducted in December 2020.

Audit commentary

All NHH reads are captured by Intellihub for AMI and by Awhitu Windfarms one manually read ICP, and they are then sent to JC Consulting.

Points “a” and “b” above are conducted by JC Consulting when data is loaded into the RM tool. Loading cannot occur unless there is an ICP, meter, register and date match. The RM tool also identifies missing start and end reads.

Points “c” and “d” are conducted in the RM Tool where excessive, negative, and zero consumption examples are identified and reported.

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

17(4)(f) - a review of the meter and data storage device event log for any event that could have affected the integrity of metering data,

17(4)(g) – a review of the relevant metering data where there is an event that could have affected the integrity of the metering data.

If there is an event that could affect the integrity of the metering data (including events reported by MEPs but excluding where the MEP is responsible for investigating and remediating the event) the reconciliation must investigate and remediate any events.

If the event may affect the integrity or operation of the metering installation the reconciliation participant must notify the metering equipment provider.

Audit observation

I reviewed the HHR and AMI data validation processes, including meter event logs and validation checks.

Audit commentary

HHR

This function was examined as part of the EMS audit and found to be compliant. No meter events which could affect meter accuracy have occurred during the audit period.

NHH

JC Consulting check for missing data, invalid dates and times; and unexpected zeros and register readings are compared to the sum of intervals.

Intellihub reviews events and any relevant ones are sent to traders or their agents.

Compliance is recorded because no events requiring further action were identified during the audit period.

Audit outcome

Compliant

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

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

Code reference

Clause 13.136

Code related audit information

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

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

Audit observation

I confirmed with the Grid Owner that Awhitu Windfarms is not responsible for compliance with this clause.

Audit commentary

I confirmed with the Grid Owner that Awhitu Windfarms is not responsible for compliance with this clause.

Audit outcome

Not applicable

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

Code reference

Clause 13.137

Code related audit information

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

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

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

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

Audit observation

I confirmed with the Grid Owner that Awhitu Windfarms is not responsible for compliance with this clause.

Audit commentary

I confirmed with the Grid Owner that Awhitu Windfarms is not responsible for compliance 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

I confirmed with the Grid Owner that Awhitu Windfarms is not responsible for compliance with this clause.

Audit commentary

I confirmed with the Grid Owner that Awhitu Windfarms is not responsible for compliance with this clause.

Audit outcome

Not applicable

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

Code reference

Clause 13.140

Code related audit information

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

Audit observation

I confirmed with the Grid Owner that Awhitu Windfarms is not responsible for compliance with this clause.

Audit commentary

I confirmed with the Grid Owner that Awhitu Windfarms is not responsible for compliance 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

I checked whether any breach allegations had been made in relation to buying and selling notifications.

Audit commentary

No trading notifications were required during the audit period, and no alleged breaches were recorded for late trading notifications.

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

I checked ICPCOMP, ICPMISS, ICPDAYS and submission summary reports for the audit period to confirm compliance.

Audit commentary

EMS calculates and submits ICP days for AWFL. JC Consulting calculates and submits ICP days for MYST.

There were no discrepancies identified for any month during the audit period. ICP days calculations are correct.

Audit outcome

Compliant

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

Code reference

Clause 15.7

Code related audit information

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

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

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

Audit observation

I checked the MYST electricity supplied report against the data from invoices for one ICP and against submission data for the other two ICPs. MYST has one ICP where an actual invoice is sent, the other active ICP has Awhitu Windfarms as the customer and the reconciliation participant so electricity is “supplied” but not invoiced.

AWFL does not submit an electricity supplied report for their ICP, but the ICP has load as well as generation it should be submitted.

Audit commentary

The MYST electricity supplied total matched the aggregation of the invoiced and “supplied” quantities, which in total matched the total of the submission data.

As mentioned above, AWFL does not submit an electricity supplied file for the load kWh at the generation station.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.3 With: Clause 15.7 From: 23-Jan-20 To: 27-Apr-21	An AV120 file is not provided for AWFL. 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 overall because they are strong for MYST but there are no controls in place for AWFL.		
	The impact is assessed to be low because there is no impact on settlement.		
Actions taken to resolve the issue		Completion date	Remedial action status
The AV120 file to be provided for AWFL		01 June 21	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Instructions manual update		01 June 21	

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

EMS creates HHR aggregates and volumes information, and compliance was assessed as part of their audit.

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 eight submissions.

The GR090 ICP Missing files were examined for the audit period.

Audit commentary

EMS' processes for provision of HHR aggregates information were assessed during their agent audit. Non-compliance was found because the HHR aggregates report contains submission information, not electricity supplied information as specified under clause 15.8. Although the reports EMS' produces are consistent with the Reconciliation Manager Functional Specification, this is recorded as technical non-compliance below.

I checked the process for aggregation of HHR data is correct, by matching HHR aggregates information to the volumes for eight submissions. All the submissions matched.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.4 With: Clause 15.8 From: 01-Feb-20 To: 27-Apr-21	HHR aggregates file does not contain electricity supplied information. Potential impact: None Actual impact: None Audit history: Once Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The issue relating to content of the aggregates file is an error in the code, Awhitu Windfarms is providing submission information as expected.		
Actions taken to resolve the issue		Completion date	Remedial action status
AWFL HHR aggregates file to contain electricity supplied information		01 June 21	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Update procedures Manual		01 June 21	

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

All HHR data is collected by EMS, and daylight savings adjustments were reviewed as part of their agent audit.

Audit commentary

Daylight savings adjustments were reviewed as part of EMS's agent audit and found to be compliant. EMS uses the trading period run on technique.

Review of submission information for the change to and from daylight savings time confirmed that the correct number of trading periods was recorded.

Audit outcome

Compliant

12.2. Creation of submission information (Clause 15.4)

Code reference

Clause 15.4

Code related audit information

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

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

Audit observation

HHR submissions are created by EMS, and their processes were reviewed as part of their agent audit. Submissions were checked in **section 11.4**.

JC Consulting prepares NHH submission information using the RM Tool.

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

Audit commentary

HHR

Submission of HHR information was reviewed as part of EMS' agent audit and found to be compliant.

NHH

No alleged breaches for late provision of submission information occurred during the audit period.

Submissions are reviewed prior to submission, and these checks are discussed in **section 9.6**.

HHR submission was reviewed in **section 11.4**.

Audit outcome

Compliant

12.3. Allocation of submission information (Clause 15.5)

Code reference

Clause 15.5

Code related audit information

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

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

Audit observation

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

The process to ensure that AV080 submissions are accurate was confirmed by checking all files submitted to the RM during the audit period.

All HHR submission files were checked.

Audit commentary

The process for aggregating the AV080 was examined by checking the total submitted against detailed ICP level information. The NHH volume calculation was confirmed to be correct.

Other consumption validation checks are discussed in **section 9.5**.

HHR

HHR aggregation was reviewed in **section 11.4** and found to be compliant.

Audit outcome

Compliant

12.4. Grid owner volumes information (Clause 15.9)

Code reference

Clause 15.9

Code related audit information

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

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

Audit observation

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

Audit commentary

Awhitu Windfarms is not a grid owner.

Audit outcome

Not applicable

12.5. Provision of NSP submission information (Clause 15.10)

Code reference

Clause 15.10

Code related audit information

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

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

Audit observation

The registry list and NSP table were reviewed.

Audit commentary

Awhitu Windfarms does not own any local or embedded networks and 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

Awhitu Windfarms is not a grid connected generator.

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

Late provision of submission information

No alleged breaches were recorded for late submission data during the audit period.

Accuracy of submission data

Review of submissions confirmed revisions were submitted as expected. Evidence was observed of revised consumption information where submissions were different.

Audit outcome

Compliant

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

Code reference

Clause 4 Schedule 15.2

Code related audit information

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

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

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

Audit observation

There have not been any 14-month revisions, however each ICP is read every month so the proportion of HE is likely to be 100%.

Audit commentary

There have not been any 14-month revisions, however each ICP is read every month so the proportion of HE is likely to be 100%.

Audit outcome

Compliant

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

Code reference

Clause 2 Schedule 15.3

Code related audit information

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

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

- b) *the metering installation in which the control device is location has interim certification.*
- *to create submission information for a point of connection the reconciliation participant must apply to the raw meter data (clause 2(3):*
 - a) *for each ICP, the compensation factor that is recorded in the registry (clause 2(3)(a))*
 - b) *for each NSP the compensation factor that is recorded in the metering installations most recent certification report. (clause 2(3)(b))*

Audit observation

Aggregation and content of reconciliation submissions was reviewed.

Audit commentary

Compliance with this clause was assessed:

- all ICPs with metering category 3 or above are submitted as HHR,
- there is no unmetered load to submit,
- no profiles requiring a certified control device are used,
- no loss or compensation arrangements are required, and
- aggregation of the AV080, 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

I reviewed all AV080 submissions for the audit period, to confirm that historic estimates are included and identified.

Permanence of meter readings is reviewed in **section 12.8**. The methodology to create forward estimates is reviewed in **section 12.12**.

Audit commentary

I reviewed all AV080 submissions for all months and confirm that forward and historic estimates are included and identified as such.

The quantity of forward estimates was very small.

Audit outcome

Compliant

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

Code reference

Clause 4 and 5 Schedule 15.3

Code related audit information

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

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

Audit observation

I checked the submission details for all submissions for all months to confirm compliance.

Audit commentary

All HE calculations were confirmed as correct.

Audit outcome

Compliant

12.12. Forward estimate process (Clause 6 Schedule 15.3)

Code reference

Clause 6 Schedule 15.3

Code related audit information

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

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

Audit observation

The process to create forward estimates was reviewed.

Forward estimates were checked for accuracy by analysing the GR170 file for variances between revisions for all relevant months.

Audit commentary

The forward estimate process is based on historic consumption or the average daily consumption from the losing trader's CS file is used. As a last resort a forward default estimate can be used. There were examples of forward estimates based on historic consumption. I checked these and confirmed the calculation was accurate.

No revisions were different to the initial submission by more than a very small margin.

Audit outcome

Compliant

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

Code reference

Clause 7 Schedule 15.3

Code related audit information

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

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

Audit observation

I checked whether any profile changes had occurred.

Audit commentary

There were no profile changes, and none are expected. JC Consulting has processes in place to manage meter changes and most profile changes would also have a meter change.

Audit outcome

Compliant

13. SUBMISSION FORMAT AND TIMING

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

Code reference

Clause 8 Schedule 15.3

Code related audit information

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

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

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

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

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

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

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

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

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

Audit observation

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

Aggregation of NHH volumes is discussed in **section 12.3**, and 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
- trading period for half hour metered ICPs and consumption period or day for all other ICPs.

NHH volumes and HHR volumes aggregation was confirmed to be compliant.

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 AV080, AV090 and AV140 reports as part of the aggregation checks.

Audit commentary

Submissions are correctly rounded to two decimal places.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.3

Code related audit information

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

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

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

Audit observation

The timeliness of submissions of historic estimate was reviewed in **section 12.2**.

I reviewed all AV080 reports to determine whether historic estimate requirements were met.

Audit commentary

The quantity of historical estimates is contained in the submission file and is not a separate report. The proportion of HE in the revision files was checked for all months. All files contained 100% HE by the 3-month revision and most were 100% HE for all revisions.

Audit outcome

Compliant

CONCLUSION

Awhitu Windfarms has two participant codes; AWFL for the HHR generation at ICP 1099578842CN302 and MYST for two NHH load only ICPs.

HHR submission and registry management is completed by EMS for AWFL, and compliance is recorded in their audit report, apart from a technical non-compliance relating to the HHR aggregates submission.

AWFL has one further non-compliance; an electricity supplied file is not provided to the Reconciliation Manager for the load kWh at the generation ICP.

NHH submission, registry information management and switching are completed by JC Consulting for MYST. One issue was found for MYST, information provided for ICP 0071551401CNEF2 was not complete and accurate because the read dispute process was not used to replace an incorrect estimate from the losing trader, meaning volume was allocated to incorrect time periods. One recommendation is made regarding the NHH interrogation log.

PARTICIPANT RESPONSE