

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

For

ECOTRICITY (ECOT)

Prepared by: Ewa Glowacka

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EXECUTIVE SUMMARY

This reconciliation participant audit was performed at the request of Ecotricity (ECOT) to support their application for certification, in accordance with clauses 4 of Schedule 15.1 of The Code 2010. The relevant clauses audited are as required by the Guidelines for Reconciliation Participants Audits V 7.1 issued by the Electricity Authority.

Ecotricity gained 2,426 ICPs. The company mainly trades HHR customers. At the time of the audit, 495 ICPs were reconciled as NHH, which is less than 10%. Ecotricity's business strategy is to replace all newly gained ICPs which have NHH meters installed, with HHR meters.

The audit found 20 non-compliances. The level of compliance has improved in the following area:

- Switching on the same reading
- Information in registry

The main issues identified during this audit are:

- SUML is not reconciled, since the last audit, new ICPs were gained
- Not meeting targets for Historical Estimates
- Meter Frequency Report not being sent to the Authority since July'18, it was rectified before this report was finalised

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. Table 1 of the Guidelines for Reconciliation Participant audit provides some guidance on this matter. The Future Risk Rating score is 38 which results in an indicative audit frequency of 12 months. We agree with the result.

We thank Ecotricity's staff for their full and complete cooperation in this audit.

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	Incorrect profile for ICPs with embedded generation installed, incorrect information for SUML	Moderate	Low	2	Identified
Provision of information	2.2	15.35	Meter Reading Frequency report not sent since July'18	Moderate	Low	2	Identified
Changes to registry information	3.3	10 of Schedule 11.1	Late trader's updates to registry, delayed updates to ICPs "active" status	Moderate	Low	2	Identified
Provision of information the registry manager	3.5	9 of Schedule 11.1	Lack of daily kWh for shared unmetered load. Incorrect profile used for some ICPs	Moderate	Low	2	Identified
Management of "active" status	3.8	17 of Schedule 11.1	A number of ICPs have incorrectly assigned "inactive" status when they should be "active"	Moderate	Low	2	Identified
Management of "inactive" status	0	19 of Schedule 11.1	A number of ICPs had incorrect "inactive" status assigned in the registry	Moderate	Low	2	Identified
Losing trader response to switch request and event dates – standard switch	4.2	3 of Schedule 11.3	One AN file late by one day; incorrect AN response Code in a small number of AN files	Strong	Low	1	Identified
Traders must use the same readings – standard switch	4.4	6(1) & 6A of Schedule 11.3	12 ICPs were not switched on the same read	Moderate	Low	2	Identified
Losing trader response to switch request and event dates – standard switch	4.8	10(1) of Schedule 11.3	Incorrect AN response Code in a small number of AN files	Strong	Low	1	Identified
Gaining trader changes to switch meter reading – switch move	4.11	12 of Schedule 11.3	2 ICPs were not switched on the same read	Strong	Low	1	Identified

Maintaining shared unmetered load	5.1	11.14(6)(7)	Daily Unmetered kWh are not recorded for shared unmetered load for five ICPs	Weak	Low	3	Identified
NHH meters interrogated annually	6.9	8(1) of Schedule 15.2	Ecotricity did not have 100% attainment in the previous 12 months for 14 NSPs.	Moderate	Low	2	Identified
NHH meters 90% read rate	6.10	9(1) of Schedule 15.2	The target of 90% was not achieved for 12 NSPs	Moderate	Low	2	Identified
Electronic meter readings and estimated readings	9.6	17 of Schedule 15.2	HHR data is not checked for unexpected 0 values	Moderate	Low	2	Identified
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHRAGGR files do not contain electricity supplied information	Strong	Low	1	Not required. The Code change required a line up with RN file specification. Breach risk rating excluded from total
Creation of submission information	12.2	15.4	Volumes for ICP 1001292857LC797 were not submitted for months before March'18	Moderate	Low	2	Identified
Accuracy of submission information	12.7	15.12	The most recent seasonal adjustment file (GR-030) was not used for the calculations of historical estimates	Moderate	Low	2	Identified
Permanence of meter readings for reconciliation	12.8	4 of Schedule 15.2	Permanence of meter reading for the period Jan'17 to Aug'1 not achieved	Moderate	Low	2	Identified
Reconciliation participants to prepare information	0	2 of Schedule 15.3	Shared unmetered load ICPs are not reconciled. Incorrect profile used for embedded generation	Moderate	Low	2	Identified

Historical Estimate process	12.11	4 of Schedule 15.3	Incorrect calculation of historical estimates for a small number of scenarios conducted by ORION	Moderate	Low	2	Identified
Historical estimate reporting to RM	13.3	10 of Schedule 15.3	Historical Estimates targets not met for revision 3, 7, and 14.	Moderate	Low	2	Identified
Future Risk Rating						38	

Future risk rating	0-1	1-3	4-15	16-40	41-55	56+
Indicative audit frequency	36 months	24 months	18 months	12months	6 months	3 months

Based on Table 1 of the Guidelines for Reconciliation Participant audit, the next audit should happen within next x months. We agree with the recommendation.

RECOMMENDATIONS

Subject	Section	Description	Recommendation

ISSUES

Subject	Section	Description	Issue

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

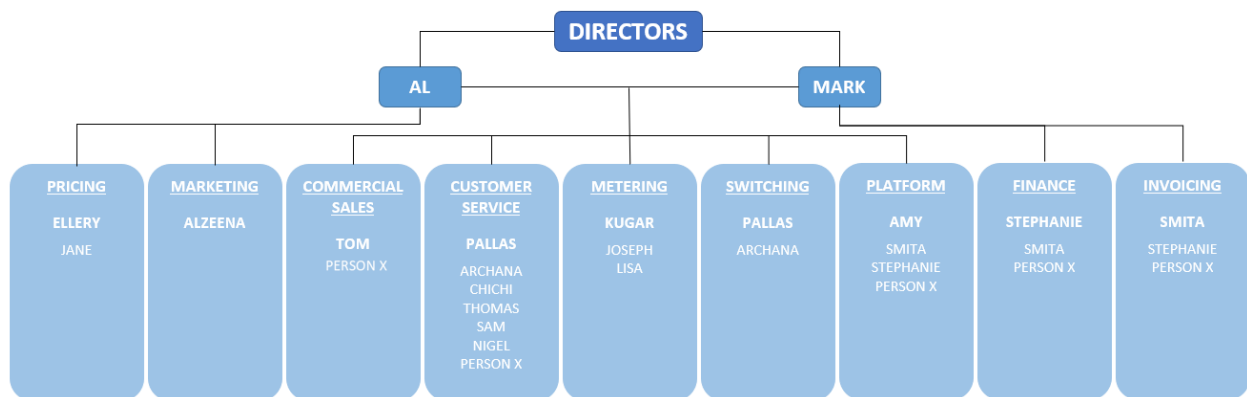
Ecotricity does not have any exemptions granted to exempt them from compliance with all or any of the clauses.

Audit commentary

Ecotricity did not apply for any exemptions. We checked the Electricity Authority website and confirm that there are no exemptions in place.

1.2. Structure of Organisation

The structure of Ecotricity is as follows.



1.3. Persons involved in this audit

Name	Title	Company
Al Yates	Managing Director	Ecotricity
Mark Yates	Director	Ecotricity
Amy Chai	Finance & Billing Analyst	Ecotricity
Kugar Thompson	Metering Installation Coordinator	Ecotricity
Pallas Seow Lyon	Metering Installation Coordinator	Ecotricity
Jamie Aitken	Consultant	Contractor
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates

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

ECOT engages three agents, WELLS for the provision of NHH data and AMCI and EDM I for the provision of HHR data, as described in the scope of the audit.

Audit commentary

As a part of this audit we reviewed the WELLS, EDM I, and AMCI audit reports. The AMS audit report is dated 28/05/2018. The WELLS audit report is dated 28/06/2018. The EDM I audit report is dated 21/06/2018.

1.5. Hardware and Software

Ecotricity uses mainly ORION software provided by Agility and various spreadsheets to manage their day to day operation. ORION is used for reconciliation and billing purposes.

1.6. Breaches or Breach Allegations

There were no breaches or breach allegations lodged against Ecotricity in the period covered by this audit.

1.7. ICP Data

Metering Category	(05/11/18)	(05/03/2018)	(2017)	(06/2016)
1	5,142	2,766	1,907	657
2	139	97	61	37
3	15	8	6	1
4	5	3	1	1
5	0	0	0	0
9	16	2	0	1

Status	Number of ICPs (5/11/2018)	Number of ICPs (5/03/2018)	Number of ICPs (2017)
Active (2,0)	5,238	2,485	1,951
Inactive – new connection in progress (1,12)	31	17	19
Inactive – electrically disconnected vacant property (1,4)	25	13	13
Inactive – electrically disconnected remotely by AMI meter (1,7)	17	7	9
Inactive – electrically disconnected at pole fuse (1,8)	1	1	0
Inactive – electrically disconnected due to meter disconnected (1,9)	3	1	0
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	2	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	6	4	3
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	18	7	0

1.8. Authorisation Received

Ecotricity Energy provided a letter of authorisation to TEG & Associates permitting the collection of data from other parties for matters directly related to the audit.

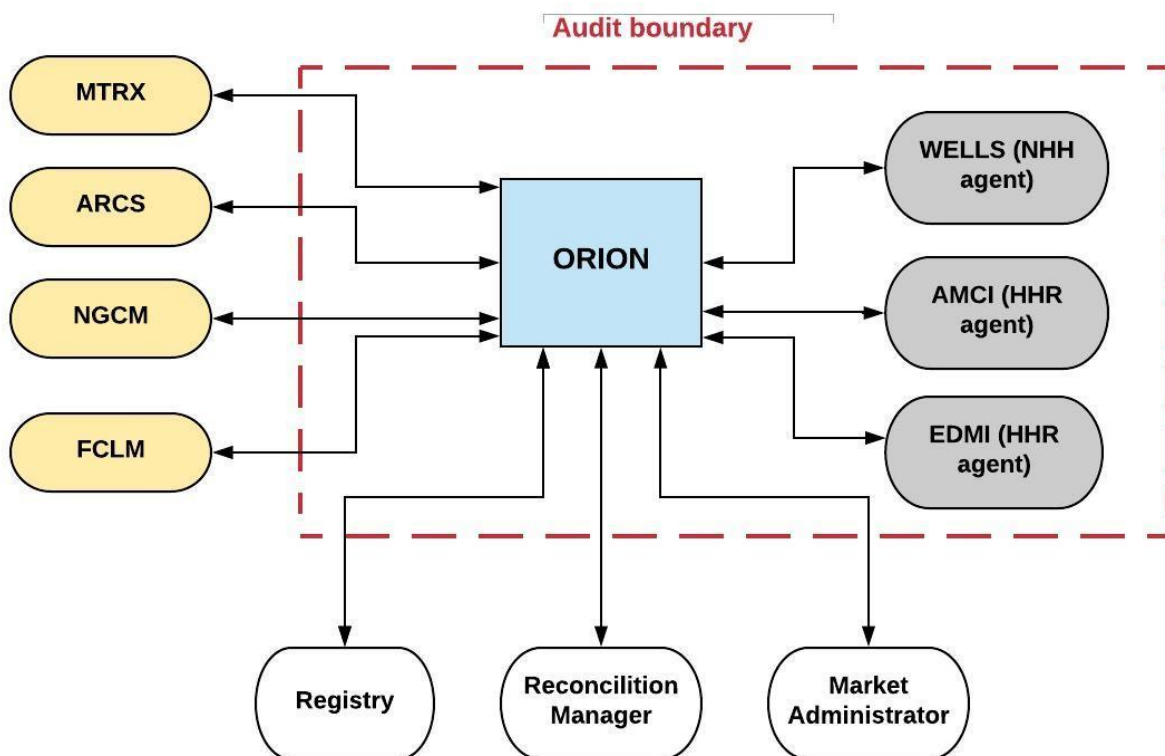
1.9. Scope of Audit

This reconciliation participant audit was performed at the request of Ecotricity to encompass the Authority's request for annual audits as required by clause 2, of Schedule 15.1, of the Code to assure compliance with the Electricity Industry Participation Code 2010.

The audit was carried out on the 7 & 8th November 2018, at Level 6, 26 Swanson Street, Auckland.

The audit covers the following processes under clause 15.38 of Part 15, performed by Ecotricity:

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Relevant to audit	Agents Involved in Performance of Tasks
(a) - Maintaining registry information and performing customer and embedded generator switching	✓	
(b) – Gathering and storing raw meter data	✓	WELLS – NHH meter readings AMCI and EDMI– HHR data
(c)(i) - Creation and management of HHR volume information	✗	
(c)(ii) - Creation and management of NHH volume information	✗	
(c)(ii) - Creation and management of HHR and NHH volume information	✓	
(c)(iv) - Creation and management of dispatchable load information	✗	
(d)(i) – Calculation and delivery of ICP days under clause 15.6	✓	
(d)(ii) - delivery of electricity supplied information under clause 15.7	✓	
(d)(iii) - delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8	✓	
(e) – Provision of submission information for reconciliation	✓	
(f) - Provision of metering information to the grid owner in accordance with subpart 4 of part 13	✗	



1.10. Summary of previous audit

The previous audit was conducted on 8 March 2018 by Ewa Glowacka (TEG & Associates Ltd). The findings of this audit were as follows:

Subject	Section	Clause	Non-Compliance	Comment
Relevant information	Error! Reference source not found.	11.2	Incorrect ANZSIC code for some ICPs. Incorrect information in registry for type of profile assigned to some ICPs	Still exists, ANZSIC code is correct for all ICPs
Provision of information	Error! Reference source not found.	15.5	AV-120 file was sent late once. Meter Reading Frequency report not sent regularly	Still exists; Meter Reading Frequency report not sent regularly
Changes to registry information	Error! Reference source not found.	10 of Schedule 11.1	Late trader's updates to registry, 38% of all entries, delayed updates to ICPs "active" status	Cleared
Provision of information the registry manager	Error! Reference source not found.	9 of Schedule 11.1	Some ICPs for new connections were updated to "active" late	Still exists
ANZSIC codes	Error! Reference source not found. Error! Reference source not found.	9(1)(k) of Schedule 11.1	34 ICPs have incorrect ANZSIC codes assigned	Cleared
Management of "active" status	Error! Reference source not found.	17 of Schedule 11.1	A number of ICPs have incorrectly assigned "inactive" status when it should be "active"	Still exists
Management of "inactive" status	Error! Reference source not found.	19 of Schedule 11.1	A number of ICPs had incorrect "inactive" status assigned in the registry	Still exists
Losing trader must provide final information – standard switch	Error! Reference source not found.	5 of Schedule 11.3	One CS file late and, incorrect type of reading flag in one CS file randomly chosen to assess compliance.	Still exists
Traders must use the same readings – standard switch	Error! Reference source not found.	6(1) & 6A of Schedule 11.3	Three RR files were sent later than 4 calendar months. RR file not sent for one ICP	Still exists

Losing trader provides information – switch move	Error! Reference source not found.	11 of Schedule 11.3	CS file for one ICP was sent later than 5BD (4 days)	Cleared
Gaining trader changes to switch meter reading – switch move	Error! Reference source not found.	12 of Schedule 11.3	Ecotricity did not use the same read as the gaining trader for two ICPs	Still exists
Gaining trader to advise the registry manager – gaining trader switch	Error! Reference source not found.	16 of Schedule 11.3	ICP 1001282351LCDF7, switch was completed later than 3 business days	Cleared
Maintaining shared unmetered load	Error! Reference source not found.	11.14(6)(7)	Daily Unmetered kWh are recorded for shared unmetered load for one ICP	System Established
Interrogate meters once	Error! Reference source not found.	7(1)(2) of Schedule 15.2	The requirement to use best endeavours to obtain a read for all ICPs not read during the period of supply was not met	Still exists
NHH meters interrogated annually	Error! Reference source not found.	8(1)(a)(2) of Schedule 15.2	The requirements to use best endeavours to obtain a read for all ICPs annually was not met. The last time a Reading Frequency Report was submitted was Nov'17	Still exists
NHH meters 90% read rate	Error! Reference source not found.	9(1)(3) of Schedule 15.2	The requirements to use best endeavours to obtain a read for all ICPs annually was not met. The last time a Reading Frequency Report was submitted was JulyNov'1718	Still exists
Electricity supplied information provided to the reconciliation manager	Error! Reference source not found.	15.7	AV-120 file for the month of January'18 was not submitted by 1600 hours on day 4.	Cleared
HHR aggregates information provision to the reconciliation manager	Error! Reference source not found.	15.8	HHRAGGR files do not contain electricity supplied information	Still exists

Allocation of submission information	Error! Reference source not found.	15.5	Allocation of volumes information for some ICPs to another NSP than indicated by the data held in the registry for the relevant consumption period	Still exists
Permanence of meter readings for reconciliation	Error! Reference source not found.	4 of Schedule 15.2	Permanence of meter reading for the period May'16 to Dec'16 not achieved.	Still exists
Reconciliation participants to prepare information	Error! Reference source not found.	2(c) of Schedule 15.3	Shared unmetered and unmetered load ICPs not reconciled. Reconciliation volumes for 20 ICPs are submitted as HHR. Volumes are profiled using NHH reads	Still exists
Historical estimates and forward estimates	Error! Reference source not found.	4 of Schedule 15.3	Incorrect calculation of historical estimates conducted by ORION	Cleared
Historical estimate reporting to RM	Error! Reference source not found.	10 of Schedule 15.3	Historically HE targets not met for revision 3, 7, and 14.	Still exists

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 LIS file dated 5/11/2018 was examined to identify any inaccuracies. The Event Detail (EDA) file for the period 01/03/18 to 30/10/18 was examined to determine how quickly Ecotricity provides information to the registry and corrects information which is identified as inaccurate.

Audit commentary

The LIS file and Metering Installation Information (PR-255) were analysed, the results are shown below:

Issue	Quantity	Comments
ICP Status = 002, MEP = blank, UNM Flag = N	0	No evidence of this occurring
ICP Status = 002, Generation Capacity is not blank,	1,583	
Highest Metering Category >2 with residential ANZSIC code assigned (000000)	0	No evidence of this occurring
ANZSIC code = blank or T994, T994000, T99, T999, T999999, T995, T995000, T997, T997000, T998, T998000	0	No evidence of this occurring
ICP with B or G Inst Type, or non-null Fuel or Gen Capacity that do not have a corresponding Injection Register	15	ICPs cat 5
Highest Metering Category greater than 2, Submission Type HHR = No	0	No evidence of this occurring
Highest Metering Category = 9, UNM Flag=N	0	No evidence of this occurring
All active ICPs with Initial Energisation Date populated during a defined period	72	
All Active ICPs (ICP Status = 2) with Shared ICP List not blank	5	0000036648CP82E 0005165571RN9A6

		0006466923RN9DF 0006792073RN776 0006799647RN862
All ICPs at ICP Status 001,12	31	
Submission Type HHR = Y, Profile does not contain HH	2	0007187256RN574 0099553418CNFF5
Submission Type HHR and Submission Type NHH both = Y	1	No evidence of this occurring
All active ICPs where Distributor has indicated UML (UML Load Details not NULL) but Retailer has none (UNM Flag = N)	5	0000036648CP82E 0005165571RN9A6 0006466923RN9DF 0006792073RN776 0006799647RN862
All active ICPs with UNM Flag = Y	6	
All active ICPs with load in excess of 6kWh (Daily Unmetered kWh greater than 16.4 daily)	0	No evidence of this occurring
All active ICPs with load between 3-6k kWh (Daily Unmetered kWh between 8.2-16.4 daily)	0	No evidence of this occurring
All active ICPs with Engineered profile (Daily Unmetered kWh = ENG)	0	No evidence of this occurring

We also observed some irregularities for the type of profile assigned to ICPs.

- 32 ICPs, for which FCLM is the MEP, HHA profile is assigned
- ICP 0000254387UN849MTRX is the MEP, profile HHR was assigned - It was corrected during the audit
- Nine ICPs had the HHR profile assigned but the reconciliation type was NHH - It was corrected during the audit
- Two ICPs (0007187256RN574 and 0099553418CNFF5) had the RPS profile assigned but the reconciliation type was HHR. It was corrected during the audit
- To meet compliance Ecotricity have set up monitoring tasks, which are run daily or weekly or before creating reconciliation files.

We noted in **section 12.9** Ecotricity submits volume to the reconciliation manager using profile RPS and EG1, but the profile recorded in the registry is RPS.

Ecotricity have set up monitoring tasks, which are run daily or weekly or before creating reconciliation files. In addition a new tool was recently developed which compares the registry information and ORION. The comparison is run every three days. The company treats the following checks as a priority.

- To find new ICPs which are NOT in ORION
- To compare HHR HHA RPS
- To compare NHH meter to HHR reconcile profile and vice versa
- To compare loss code
- Check Multipliers

- Check NHH meters being reconciled as HHR
- Check AMI “N” meters being reconciled as HHR
- Meter Certification Expiry Date
- GXP check
- ICPs on Registry but Closed on ORION

Once this validation is run for say two months, Ecotricity should see a much “cleaner” GR-090 and GR-100.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: 11.2 From: 01-Mar-18 To: 30-Oct-18	Incorrect profile for ICPs with embedded generation installed, incorrect information for SUML Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate because there are some improvements that can be made to them. The new process implemented by Ecotricity should successfully address this non-compliance. Audit risk rating is low because the impact on the settlement outcome is minor.		
Actions taken to resolve the issue		Completion date	Remedial action status
Embedded generation profiles have been corrected. SUMLs have been corrected.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Embedded generation profiles have been corrected. SUMLs have been corrected.		12/12/2018	

2.2. Provision of information (Clause 15.35)

Code reference

Clause 15.35

Code related audit information

If an obligation exists to provide information in accordance with Part 15, a participant must deliver that information to the required person within the timeframe specified in the Code, or, in the absence of any

such timeframe, within any timeframe notified by the Authority. Such information must be delivered in the format determined from time to time by the Authority.

Audit observation

The process to provide information in accordance with Part 15 was reviewed throughout the audit.

Audit commentary

It is discussed in part 6, 12, and 13. In **section 6.8 to 6.10** we identified that Meter Readings Frequency Reports have not been provided to the Authority since July'18.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.2 With: 15.35 From: 20-Jul-18 To: 30-Oct-18	Meter Reading Frequency report not sent since July'18 Potential impact: Low Actual impact: None Audit history: Once previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate because there are some improvements that can be made to them particularly in relation to sending regular Meter Readings Frequency Report (MRF). The audit risk rating is low because the impact on the settlement outcome is none (small number of ICPs).		
Actions taken to resolve the issue		Completion date	Remedial action status
The handover of reporting from the previous and since departed reporting manager to the new reporting manager was not complete. The MRF has been provided and will occur monthly.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
The handover of reporting from the previous and since departed reporting manager to the new reporting manager was not complete. The MRF has been provided and will occur monthly.		12/12/2018	

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

Ecotricity receives HHR data from the MEPs (AMS, MTRX) daily. Metering data from AMCI and EDM I is provided monthly. Data is downloaded automatically from MEPs servers and uploaded to the system. There is no manual intervention. Meter reads from WELLS are downloaded using FileZilla.

Audit commentary

The process of data transmission between Ecotricity and MEPs and agents is compliant.

Audit outcome

Compliant

2.4. Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

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

The audit trail must include details of information:

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

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

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

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

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

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

Audit observation

We checked the audit trail for all data gathering, validation, and correction.

Audit commentary

Ecotricity sends and receives data to and from the registry. It is an automated process. Each upload is recorded by ORION. Reconciliation files are uploaded via the RM portal, which records date, time and a participant's login details. Metering data provided by MEPs is automatically uploaded by ORION. ORION has a built-in functionality to record a complete audit trail for all data gathering and communication with the registry. The logs of activities includes the date and time of the activity, the operator identifier, and an activity identifier.

Audit outcome

Compliant

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

Code reference

Clause 10.4

Code related audit information

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

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

Audit observation

Ecotricity publishes "Terms of Use – Residential" and "Terms of Use – Commercial" on their website.

Audit commentary

We reviewed the Terms of Use. They cover contractors or agents, the Line Companies, the meter owner, and meter reader and any of their employees, contractors or agents.

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

We reviewed the Ecotricity Terms of Use.

Audit commentary

Section 8 (Access to Property) of the Terms of Use covers access to a customer's property. Ecotricity will generally exercise this access during Normal Business Hours but a customer will be asked to agree to allow access outside of Normal Business Hours if the matter is urgent.

Audit outcome

Compliant

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

Code reference

Clause 10.35(1) & (2)

Code related audit information

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

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

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

Audit observation

The majority of Ecotricity's installations are category 1 and 2. Ecotricity trades 20 installations of metering category 3 and above.

Audit commentary

Ecotricity confirmed they do not have any installation to which metering data loss compensation has to be applied.

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

We reviewed the Ecotricity Terms of Use.

Audit commentary

In the Terms of Use section 15.3 (Residential/Commercial) is said “if we commit an Event of Default, the Electricity Authority may assign our rights and obligations under this Agreement to another electricity retailer”.

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

The new connection process was examined. It is a robust process up to the point of nomination of an MEP and sending SR asking to install a meter. The “weak” part of the process is a delay in the changing of the ICP status to “active” once an installation is electrically connected. It is identified as non-compliance in the relevant part of this report.

The process for connection and reconnection on exiting ICPs was examined. We reviewed the EDA files to check the correctness of applied status and timeliness. Ecotricity mostly uses MEP’s services to disconnect remotely. In a situation where it is not possible, a request is sent to WELLS.

Audit commentary

Ecotricity uses “inactive- new connection in progress (1,12)” to take responsibility for the ICPs. As soon as the status is assigned, an MEP is nominated, and SR is sent requesting the installation of a meter. We

examined ten new connections and confirm that the process was followed. The analysis of the EDA file for the period covered by this audit did not show any new connections with backdated creation dates.

During the audit, we randomly chose ten ICPs and followed them through the communication between Ecotricity, AMS and WELLS. We found the process compliant.

ICPs status changes to “1,12” are done manually using the registry web interface because ORION does not allow the setting up of a new ICP in the system unless a meter is installed. Such a configuration in ORION requires extra careful “handling” of new connections from Ecotricity’s staff.

Audit outcome

Compliant

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

Code reference

Clause 10.33(1)

Code related audit information

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

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

Audit observation

The new connection process was examined.

Audit commentary

Ecotricity used the “inactive-new connection in progress” status in the registry to take responsibility for a new ICP. There were no situations where Ecotricity asked an MEP to temporary electrically connect a point of connection, which previously has not been electrically connected.

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

- (i) a metering installation is in place at the ICP; and*
 - (ii) the metering installation is operational but not certified; and*
 - (iii) the reconciliation participant arranges for the certification of the metering installation to be completed within 5 business days of the ICP being electrically connected:*
- (b) may electrically connect an ICP if the point of connection is solely for unmetered load.*

(3) A reconciliation participant must not authorise the electrical connection of a point of connection in either of the following circumstances:

(a) a distributor has electrically disconnected the point of connection for safety reasons, and has not subsequently approved the electrical connection of the point of connection:

(b) electrically connecting the point of connection would breach the Electricity (Safety) Regulations 2010.

Audit observation

The new connection process was examined. Since the last audit, Ecotricity gained 72 new connections. As part of the new connection process, an installation is electrically connected as a certified meter is installed, not before. In **section 2.10** we examined ten new connections, all of them met compliance with this clause.

Audit commentary

At the time of the audit, Ecotricity did not have a process in place to check if a re-connected installation had a certified meter in place. The re-connection process was amended during this audit.

Audit outcome

Compliant

2.12. Arrangements for line function services (Clause 11.16)

Code reference

Clause 11.16

Code related audit information

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

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

Audit observation

Ecotricity has an arrangement with all relevant networks. Agreements are always in place before any ICP is switched in.

Audit commentary

Ecotricity demonstrated the existence of either a UoSA or other trading arrangement for all networks to which their ICPs are connected.

Audit outcome

Compliant

2.13. Arrangements for metering equipment provision (Clause 10.36)

Code reference

Clause 10.36

Code related audit information

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

Audit observation

The process has not changed since the last audit. For new connections Ecotricity always uses FCLM as the MEP. For any new switches, Ecotricity accepts an existing MEP. If a NHH installation is changed to HHR, FCLM is always nominated as the MEP.

Audit commentary

It was discussed during the audit. Ecotricity has an arrangement with all MEPs which provide metering services to them.

Audit outcome

Compliant

3. MAINTAINING REGISTRY INFORMATION

3.1. Obtaining ICP identifiers (Clause 11.3)

Code reference

Clause 11.3

Code related audit information

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

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

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

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

Audit observation

The new connection process was examined in detail.

Audit commentary

In **section 2.9** the process is described. The process is managed by a dedicated team as Ecotricity actively pursue new connections.

Audit outcome

Compliant

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

Code reference

Clause 11.7(2)

Code related audit information

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

Audit observation

The new connection process was examined in detail. The LIS and EDA files were examined to check the correctness of information and if the registry was notified in the timeframe specified by a relevant clause.

Audit commentary

The process was described in **section 2.9**. The process is well understood and followed by the team. The most challenging area is to obtain metering information from MEPs as an installation is electrically connected.

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 5 business days after the change.

Audit observation

We analysed the EDA file for the period 01/03/2018 to 30/10/218. We reviewed the timeliness of updates. We used the extreme case methodology examining the most backdated entries to the registry.

Audit commentary

Activity	Status code	No of updates	No of updates later than 5BD	Date range of updates [BD]	Comment
Status (2,0)	active	118	64 (54.2%)	7 to 407	Increase from 48.7% as per the last audit 1001292857LC797 was backdated by 407 BD
Status (1,12)	new connection in progress	67	9 (10.5%)	7 to 115	Increase from 6.6% as per the last audit
Status (1,4)	De-energised - vacant	27	0		
Status (1,7)	De-energised remotely	23	2	7 to 27	
Status (1,8)	De-energised at pole fuse	1	0		
Status (1,9)	De-energised due to a meter disconnected	1	0	0	
Status (1,10)		1	0		
Status (1,11)		2	1	10	
Status (1,6)	De-energised – ready for decommissioning	4	4 (100%)	13 to 59	
Trader		2,792	582 (20.8%)	6 to 192	Decrease from 38.8% as per the last audit

Trader field updates

About 10 late updates of trader information were corrections after the last audit.

In the table below we show the most backdated trader updates (corrections after the last audit are not included)

ICP	Effective Date	Input Date	BD	Comment
1001132351LCF4A	1/11/17	11/08/18	192	update ANZSIC code
0000017711WE7CC	16/01/18	13/06/18	101	change of profile and type of reconciliation
0000232532MP680	7/06/18	5/10/18	87	change of profile and type of reconciliation
0000505591CEEA6	23/02/18	31/07/18	109	change of profile and type of reconciliation
0007133224RN825	14/03/18	15/08/18	107	change of profile and type of reconciliation
0000506836CEC9B	23/02/18	31/07/18	109	change of profile and type of reconciliation
0007157257RN560	8/03/18	19/07/18	92	change of profile and type of reconciliation
0000042950WEB73	23/03/18	23/08/18	106	update ANZSIC code
0000010074TC822	2/04/18	3/10/18	130	change of profile and type of reconciliation
0000128643TRCFC	23/02/18	12/07/18	96	change of profile and type of reconciliation

The most common reason for late updates is a mismatch between information held in the registry and ORION. Once a mismatch is identified, the registry is corrected. We believe that the new tool developed by Ecotricity will result in a decrease of late updates.

Status field update

The status of 2 ICPs was changed to “inactive-remotely disconnected” later than 5 BD, and 9 ICPs changed to “new connection in progress (1,12)”. All of the updates to “1,12” were entered prior to installations being electrically connected.

- During the audit we identified one ICP, 1001292857LC797, which was “forgotten”. The ICP was created on 22/06/16, its status was not changed to “active” until 16/3/18, meter was installed on 22/11/16. Due to late the registry update of ICP 1001292857LC797 resulted in many non-compliances

The high percentage of backdated updates to “active” status from “new connection in progress” is caused by a policy adopted by Ecotricity. The company waits for an MEP to upload metering information to the registry before it changes the ICP status, which results in backdated update. It must be noted that MEPs have 15BD to update the registry, traders only 5BD.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.3</p> <p>With: 10 of Schedule 11.1</p> <p>From: 01-Mar-18</p> <p>To: 30-Oct-18</p>	<p>Late trader's updates to registry, delayed updates to ICPs "active" status</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: twice previously</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls are recorded as moderate. The new process of synchronising the registry information and ORION should decrease number of late updates. Incorrect information of the ICPs status can affect switching and customer invoicing. Impact on settlement outcome is minor due to number of ICPs. Audit risk rating is recorded as low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Previously used Agility ICP registry syncing functionality has proven to be sporadic.</p> <p>Ecotricity now runs its own ICP registry synchronisation reports weekly and compares this with the ICP Registry LIS file.</p> <p>More specifically for Active customer not on Agility, Ecotricity has made a process decision to only update new ICPs once the MEP data has been uploaded as Agility does not cope with new ICPs being added without meter information.</p>		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Previously used Agility ICP registry syncing functionality has proven to be sporadic.</p> <p>Ecotricity now runs its own ICP registry synchronisation reports weekly and compares this with the ICP Registry LIS file.</p> <p>More specifically for Active customer not on Agility, Ecotricity has made a process decision to only update new ICPs once the MEP data has been uploaded as Agility does not cope with new ICPs being added without meter information.</p>		12/12/2018	

3.4. Trader responsibility for an ICP (Clause 11.18)

Code reference

Clause 11.18

Code related audit information

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

A trader ceases to be responsible for an ICP if:

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

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

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

Audit observation

The LIS file dated 5/11/ 2018 was analysed and we confirm that all ICPs have a MEP recorded in the registry. The new connection process was examined, and a MEP is nominated at the same time as the ICP status is changed to “new connection in progress”.

The ICP decommissioning process was examined.

Audit commentary

Ecotricity understands that as soon as they are recorded in the registry as accepting responsibility, that responsibility will only cease when an ICP switches out to another trader.

The review of the LIS file showed that Ecotricity has six ICPs marked as “ready for decommissioning”, for four of them Ecotricity asked in the period covered by this audit. Every time a meter was removed the final read was taken by an MEP.

Audit outcome

Compliant

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

Code reference

Clause 9 Schedule 11.1

Code related audit information

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

- a) *the participant identifier of the trader, as approved by the Authority (clause 9(1)(a))*
- b) *the profile code for each profile at that ICP, as approved by the Authority (clause 9(1)(b))*
- c) *the metering equipment provider for each category 1 metering or higher (clause 9(1)(c))*
- d) *the type of submission information the trader will provide to the RM for the ICP (clause 9(1)(ea))*

- e) *if a settlement type of UNM is assigned to that ICP, either:*
- *the code ENG if the load is profiled through an engineering profile in accordance with profile class 2.1 (clause 9(1)(f)(i)); or*
 - *in all other cases, the daily average kWh of unmetered load at the ICP (clause 9(1)(f)(ii)).*
 - *the type and capacity of any unmetered load at each ICP (clause 9(1)(g))*
 - *the status of the ICP, as defined in clauses 12 to 20 (clause 9(1)(j))*
 - *except if the ICP exists for the purposes of reconciling an embedded network or the ICP has distributor status, the trader must provide the relevant business classification code applicable to the customer (clause 9(1)(k)).*

The trader must provide information specified in (a) to (j) above within 5 business days of trading (clause 9(2)).

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

Audit observation

The new connection process was analysed in detail. We also analysed the LIS and EDA files.

Audit commentary

The process of MEP nomination is sound. As soon as a customer asks for a connection, the registry status is changed to “new connection in progress” and a MEP is nominated. It is done using the registry web interface.

Information in registry are correct except lack of daily kWh recorded in the registry for shared unmetered load. In **section 2.1** we identified some irregularities for the type of profile assigned to ICPs.

We reviewed five new connections and checked installation certifications provided by MEPs. For all of them the active date, installation certification, and electrical connection date matched.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: 9 of Schedule 11.1 From: 01-Jul-17 To: 28-Feb-18	Lack of daily kWh for shared unmetered load. Incorrect profile used for some ICPs Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate. The information for new connections is correct but updates to the “active” status is often late. Audit risk rating is recorded as low because minor impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
Previously used Agility ICP registry syncing functionality has proven to be sporadic. Ecotricity now runs its own ICP registry synchronisation reports weekly and compares this with the ICP Registry LIS file.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Previously used Agility ICP registry syncing functionality has proven to be sporadic. Ecotricity now runs its own ICP registry synchronisation reports weekly and compares this with the ICP Registry LIS file.		12/12/2018	

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

Code reference

Clause 9 (1(k) of Schedule 11.1

Code related audit information

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

Audit observation

The LIS file was reviewed.

Audit commentary

ANZSIC codes are validated when the customer signs up and are checked as part of the registry validation process. The analyses showed that the active ICPs were populated with an ANZSIC code which correctly

describe the type of a customer. We randomly checked 20 residential and 20 commercial ICPs and found them to be correct.

Audit outcome

Compliant

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

Code reference

Clause 9(1)(f) of Schedule 11.1

Code related audit information

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

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

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

Audit observation

The LIS file dated 5/11/18 was reviewed.

Audit commentary

Ecotricity trades one UML ICP 0000181384HB943. The registry is correctly populated.

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 11.1

Code related audit information

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

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

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

- *the ICP has only 1 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

The analysis of the EDA file showed that for some ICPs the status in the registry is incorrect or updates are backdated by many days.

Audit commentary

In **section 3.3** it was noted that 54.2% of updates of the “active” status were later than 5BD. The review of the LIS file showed that 21 ICPs still had the status “new connection in progress” when the electrical connection date was recorded by a distributor. The dates (EV charger, no MEP data uploaded) were

between 10/07/18 and 31/10/18. The Ecotricity policy is to wait for MEPs to upload metering information to the registry before the ICP status is changed to “active”. Problem with such policy is that MEPs have more time to upload information to the registry than traders to update the status information.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.8</p> <p>With: 17 of Schedule 11.1</p> <p>From: 01-Mar-18</p> <p>To: 30-Oct-18</p>	<p>A number of ICPs have incorrectly assigned “inactive” status when they should be “active”</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Twice previously</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls are recorded as moderate because they require some adjustment. Minor impact on settlement outcomes. Audit risk rating is low because a small number of ICPs are affected.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Previously used Agility ICP registry syncing functionality has proven to be sporadic.</p> <p>Ecotricity now runs its own ICP registry synchronisation reports weekly and compares this with the ICP Registry LIS file.</p> <p>More specifically for Active customer not on Agility, Ecotricity has made a process decision to only update new ICPs once the MEP data has been uploaded as Agility does not cope with new ICPs being added without meter information.</p>		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Previously used Agility ICP registry syncing functionality has proven to be sporadic.</p> <p>Ecotricity now runs its own ICP registry synchronisation reports weekly and compares this with the ICP Registry LIS file.</p> <p>More specifically for Active customer not on Agility, Ecotricity has made a process decision to only update new ICPs once the MEP data has been uploaded as Agility does not cope with new ICPs being added without meter information.</p>		12/12/2018	

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

Code reference

Clause 19 Schedule 11.1

Code related audit information

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

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

Audit observation

The LIS and EDA files were analysed to assess compliance. The process of connections and disconnection was reviewed. The management of “inactive” status has improved since the last audit.

Audit commentary

As described in **section 3.8**, 21 ICPs had the status “inactive-new connection in progress” assigned when the electrical connection date was recorded by a distributor.

We chose eight ICPs for which the registry status was “inactive”. Ecotricity provided correspondence with WELLS and MEPs for the review of the process. We found that for all ICPs the process was followed however for three ICPs an incorrect Status Reason was assigned in the registry. The status of “Electrically disconnected at meter box switch” instead “Electrically disconnected remotely by AMI meter”. The additional training was provided to member of the staff to avoid such mistakes in the future.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.9 With: 19 of Schedule 11.1 From: 01-Apr-18 To: 30-Oct-18	A number of ICPs had incorrect "inactive" status assigned in the registry Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate as they require additional improvement. Additional training was provided to switching team. Minor impact on settlement outcomes. Audit risk rating is low because of a small number of ICPs		
Actions taken to resolve the issue		Completion date	Remedial action status
Previously used Agility ICP registry syncing functionality has proven to be sporadic. Ecotricity now runs its own ICP registry synchronisation reports weekly and compares this with the ICP Registry LIS file.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Previously used Agility ICP registry syncing functionality has proven to be sporadic. Ecotricity now runs its own ICP registry synchronisation reports weekly and compares this with the ICP Registry LIS file.		12/12/2018	

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

It is a distributor's code obligation to monitor an ICP which has had the status of "New" or "Ready" for 24 calendar months or more. It is expected that a trader be able to respond to such queries from distributors.

Audit commentary

Ecotricity has not been approached by any distributor asking for updates.

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 2 business days after the arrangement comes into effect and include in its advice to the registry manager that the switch type is TR and 1 or more profile codes associated with that ICP.

Audit observation

Ecotricity provided the Event Listing file (EDA) and Switch Breach History details report for the time period of 1/03/201 to 30/10/2018.

Audit commentary

Customers can contact Ecotricity via their website or call the office and request a switch. The customer information form on the website requests from a customer their details, type of switch, transfer or move in.

The Switch Breach report did not have any backdated transfer switches. We also checked the EDA file and confirm that no switches were backdated. Ecotricity sent 2,255 notifications (NTTR) to the registry.

Audit outcome

Compliant

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

Code reference

Clauses 3 and 4 Schedule 11.3

Code related audit information

Within 3 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 5 business days after the date of notification. The losing trader must then:

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

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

Audit observation

To assess compliance we analysed the EDA file for the period covered by this audit and Switch Breach Report for the same period.

Audit commentary

Ecotricity sent 9 AN files in response to the registry notification. All of them, except one (0005654181RN037), were sent within 3 business days. The event date in the AN files was the same as requested by gaining trader or 3 days later.

We identified eight AN files, in which an incorrect AN Response Code was used. For ICPs metered by smart meters the response should be AD not AA.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: 3 of Schedule 11.3 From: 07-Sep-18 To: 13-Sep-18	One AN file late by one day; incorrect AN response Code in a small number of AN files Potential impact: None Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong. Only one AN file was late in the period covered by this audit and small number of incorrect of Response Code in AN files, which does not have any impact on settlement outcomes is none. Audit risk rating is recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Switching processes are a strong part of the Ecotricity operation. We will continue to monitor any issues as they become apparent.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
No further action required as existing checks and processes are thorough.		12/12/2018	

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

Code reference

Clause 5 Schedule 11.3

Code related audit information

If the losing trader provides information to the registry manager in accordance with clause 3(a) of Schedule 11.3 with the required information, no later than 5 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

To assess compliance we analysed the EDA file for the period covered by this audit and Switch Breach Report for the same period.

Audit commentary

We reviewed all CS files. All of them were sent within 5 BD. The information in the files was correct.

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 actual event date, provide to the losing trader a changed switch event meter reading supported by 2 validated meter readings.

- *the losing trader can choose not to accept the reading, however, must advise the gaining trader no later than 5 business days after receiving the switch event meter reading from the gaining trader (clause 6A(a)); or*
- *if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader. (clause 6A(b)).*

Audit observation

The last audit found Ecotricity non-compliant with this clause. The management of read requests was examined. The EDA file and the Switch Breach Reports were analysed to assess compliance with clause 6A of Schedule 11.3. The EDA file for the period 01/03/18 to 30/10/18 was examined to assess compliance.

Audit commentary

Ecotricity sent 577 RR files. All files were sent within less than 4 months.

ORION imports a switch event read from CS files for all switches. The CS read is only used for NHH reconciled ICPs. HHR ICP volumes are based on absolute volumes contained in meter readings provided by MEPS. Ecotricity manually checks each switch event read. The assumption is made that if a losing trader provides a read with the flag "A" it is true. It is a good robust process. It is time-consuming process because it is done manually. ORION does not have built-in functionality.

18 RR files for standard switch were rejected by a losing trader, which is a small number. Rejected RR covered both NHH to NHH switch and NHH to HHR switch. Each type of switch is handled differently by ORION.

- 5 RR files were related to NHH to NHH switch. Ecotricity provided evidence that all 5 ICPs Ecotricity used switch event meter readings for reconciliation purposes after RR files were rejected
- 12 RR files were related to NHH to HHR switch. ORION does not have the functionality which allows the redistribution of volumes, if an agreement between traders is not reached. We compared switch event reads provided by losing traders with not excepted RR files sent by Ecotricity. Total difference of volume was 815 kWh (switch event reads were under-estimated)
- 1 RR file was related to HHR to HHR switch. Ecotricity provided the same a switch event read as a losing trader. The file was sent by mistake

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: 6(1) of Schedule 11.3 From: 01-Mar-18 To: 30-Oct-18	12 ICPs were not switched on the same reading Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate. It is a manual well managed process. Only 12 ICPs did not switch on the same reading (NHH to HHR). Minor impact on settlement outcomes because of the small number of ICPs.		
Actions taken to resolve the issue		Completion date	Remedial action status
Switching processes are a strong part of the Ecotricity operation. We will continue to monitor any issues as they become apparent.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ecotricity however uses smart meter reads for opening reads and requests, via RR's for losing retailers to use the same reads. We welcome the move for all retailers to use closing HHR reads.		12/12/2018	

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 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.*

Audit observation

The process has not changed since the last audit. As described in the previous **section 4.4**, Ecotricity uses AMI reads received from MEPs to compare a switch event read with the flag "E" received from a losing trader.

Audit commentary

Ecotricity demonstrated the process using examples of five ICPs. We found the process compliant.

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

There were no disputes with a losing trader. If such a situation were to occur in the future it would be resolved in accordance with this clause.

Audit commentary

Ecotricity stated that they will not decline to accept another traders' validated meter reading or permanent estimate if they are reasonable and appropriate in the applicable circumstances. The company will also provide a reasonable explanation to the other participant where it does decline to accept their validated meter reading or permanent estimate.

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 2 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

Ecotricity provided the Event Listing file (EDA) and Switch Breach History details report for the period of 1/03/201 to 30/10/2018.

Audit commentary

The Switch Breach report did not report any backdated transfer switches. We also checked the EDA file and confirm that no switches were backdated. Ecotricity sent 32 notifications (NTMI) to the registry. We discussed eight ICPs with Ecotricity for which the switch date was in the past and in all situations, it was due to the late notifications from customers or an incorrect ICP provided by a customer.

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 5 business days after receiving notice of a switch move request from the registry manager—

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

Audit observation

Ecotricity provided the Event Listing file (EDA) and Switch Breach History details report for the period 1/03/201 to 30/10/2018.

Audit commentary

Ecotricity sent four AN files for switch move switches. All of them were provided within the timeframe described by this clause. We reviewed all files and identified that, for three of them, an incorrect AN Response Code was used. For ICPs metered by smart meters the response should be AD not AA. The same problem was identified in **section 4.2**.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.8 With: 10(1) of Schedule 11.3 From: 22-Mar-18 To: 31-Aug-18	Incorrect AN response Code in a small number of AN files Potential impact: None Actual impact: None Audit history: Once previously Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong. Only one AN file was late in the period covered by this audit. The impact on settlement outcomes is none. Audit risk rating is recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Switching processes are a strong part of the Ecotricity operation. We will continue to monitor any issues as they become apparent.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
No further action required as existing checks and processes are thorough.		12/12/2018	

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

Code reference

Clause 10(2) Schedule 11.3

Code related audit information

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

Ecotricity provided the Event Listing file (EDA) for the period 1/03/201 to 30/10/2018.

Audit commentary

Four switches used the move in process. For all of them Ecotricity accepted the event date specified by the gaining trader.

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

Ecotricity provided the Event Listing file (EDA) for the period 1/03/201 to 30/10/2018.

Audit commentary

We reviewed four CS files sent to the gaining trader and found them compliant.

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 actual event date, must provide to the losing trader a changed validated meter reading or a permanent estimate supported by 2 validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):*
- *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

The process for the management of read requests was examined. The EDA file and the Switch Breach Report were analysed to assess compliance.

Audit commentary

The process of creation of RR files was described in section 4.4.

5 RR files for move in switch were rejected by a losing trader. Rejected RR covered both NHH to NHH switch and NHH to HHR switch. Each type of switch is handled differently by ORION.

- 3 RR files were related to NHH to NHH switch. Ecotricity provided evidence that all 3 ICPs Ecotricity used switch event meter readings for reconciliation purposes after RR files were rejected
- 2 RR files were related to NHH to HHR switch. ORION does not have the functionality which allows the redistribution of volumes, if an agreement between traders is not reached. We compared switch event reads provided by losing traders with not excepted RR files sent by Ecotricity. Total difference of volume was 1,230 kWh (switch event reads were over-estimated)

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.11 With: 12 of Schedule 11.3 From: 01-Mar-18 To: 30-Oct-18	2 ICPs were not switched on the same read Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate. It is a manual well managed process. Only 3.1% of ICPs did not switch on the same read. Minor impact on settlement outcomes because of the small number of ICPs.		
Actions taken to resolve the issue		Completion date	Remedial action status
Switching processes are a strong part of the Ecotricity operation. We will continue to monitor any issues as they become apparent.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ecotricity however uses smart meter reads for opening reads and requests, via RR's for losing retailers to use the same reads. We welcome the move for all retailers to use closing HHR reads.		12/12/2018	

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

Code reference

Clause 13 Schedule 11.3

Code related audit information

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

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

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

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

The EDA file for the period covered by this audit was analysed to assess compliance.

Audit commentary

Ecotricity gained nine ICPs using a gaining trader switch process. For seven switches the proposed event date was in the same month as the date on which the gaining trader advised the registry manager. For one ICP (1002050348LC509) the proposed event date was 60 days before the date on which Ecotricity advised the registry manager and this date was agreed with the losing trader.

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

The EDA file and Switch Breach Report for the period covered by this audit was analysed to assess compliance.

Audit commentary

Ecotricity has not lost any ICP to another trader which has used this type of switch.

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 3 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 5 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

The EDA file and Switch Breach Report for the period covered by this audit was analysed to assess compliance.

Audit commentary

We walked through all nine HH switches. All of them were completed within the time frame specified by this clause.

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 2 calendar months after the event date of the switch.

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

- *for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*
 - *the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and*
 - *the withdrawal advisory code published by the Authority. (clause 18(c)(ii))*
- *within 5 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 2 business days after receiving notice from the registry manager in accordance with clause 22(b), the losing trader must comply with clauses 3,5,10 and 11 (whichever is appropriate) and the gaining trader must comply with clause 16. (clause 18(f))*

Audit observation

The EDA file and Switch Breach Report for the period covered by this audit was analysed to assess compliance.

Audit commentary

Ecotricity sent 322 NW files. The files were sent no later than 2 calendar months after the event date of the switch.

We discussed with Ecotricity the use of the CE code for 207 NW files. The CE code was used correctly as it was used for customers who had a contract with the previous trader and were not aware of it. Once their contract expired, they contacted Ecotricity again.

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

Meter readings are received from MEPs or WELLS. As a part of the validation of CS files and RR files, we examined the ORION functionality in relation to creating switch event reads when actual reads are not available.

Audit commentary

All meter readings provided as a switch event read are validated meter readings or permanent estimates.

Audit outcome

Compliant

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

Code reference

Clause 11.15AA to 11.15AB

Code related audit information

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

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

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

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

Audit observation

This was discussed during the audit. The registry was examined to confirm that Ecotricity is a save protected trader.

Audit commentary

The process used by Ecotricity is as follows, NT is received, an email is sent to a customer asking for confirmation that it is a valid request. According to the Terms of Use a customer is required to give 30 days' notice before switching to another trader.

Audit outcome

Compliant

5. MAINTENANCE OF UNMETERED LOAD

5.1. Maintaining shared unmetered load (Clause 11.14)

Code reference

Clause 11.14

Code related audit information

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

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

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

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

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

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

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

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

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

Audit observation

The analysis of the LIS file dated 5/11/ 2018, showed that Ecotricity trades five ICPs.

Audit commentary

Since the last audit, Ecotricity gained an additional four shared unmetered load ICPs. Non-compliance was identified in the last audit report that volumes for ICP 0000036648CP82E were not submitted to the reconciliation manager. Since the last audit, Ecotricity gained an additional four shared unmetered load ICPs (0005165571RN9A6, 0006466923RN9DF, 0006792073RN776, and 0006799647RN862). Total kWh per day is 0.772 kW. Daily kWh are not recorded in the registry. It used to be recorded by previous traders, but it was deleted by ORION as Ecotricity change the reconciliation status to HHR.

ORION does not have a functionality to calculate unmetered volumes for ICPs reconciled as HHR. The company has not developed any process to address the shortcomings of the software. The volumes are not submitted to the reconciliation manager.

There is also still no process in place to identify shared unmetered load as a part of a newly gained ICP.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 5.1 With: 11.14(6)(7) From: 01-Mar-17 To: 30-Oct-18	Daily Unmetered kWh are not recorded for shared unmetered load for five ICPs Potential impact: Low Actual impact: Low Audit history: Once previously Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	There were no controls to identify shared unmetered load as a part of a newly gained ICP. Orion does not have the functionality to calculate UML volumes for HHR reconciled ICPs. Minor impact on settlement outcomes. Audit risk rating recorded as low because of low daily kWh and a small number of ICPs. However, systems have now been set up to record these volumes. First file will be submitted in Dec'18 (day13)		
Actions taken to resolve the issue		Completion date	Remedial action status
Ecotricity now have a fully functional UML and SUML system to reconcile unmetered loads. This affects 104 kWh per month so has a minor impact. Agility is only able to automatically reconcile NHH UML (1 ICP = 71 kWh per month) which was occurring correctly. However UML on HHR sites (6 sites, 35 kWh total) is now being processed each month and being added to the relevant GXP,NSP,DLFs NHH AV-080 volumes per month.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Systems are now set up to record and report UMLs on HHR sites. Future AV-080 volumes and revisions will include HHR UML volumes.		12/12/2018	

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

Code reference

Clause 10.14 (2)(b)

Code related audit information

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

Audit observation

The analysis of the LIS file dated 5/11/ 2018, showed that Ecotricity trades one UML ICP (0000181384HB943). Its daily usage is 3 kWh.

Audit commentary

Ecotricity does not trade any UML which load exceeds 3,000 kWh per annum.

Audit outcome

Compliant

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

Code reference

Clause 10.14 (5)

Code related audit information

If the unmetered load limit is exceeded the retailer must:

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

Audit observation

The analysis of the LIS file dated 5/11/ 2018, showed that Ecotricity trades one UML.

Audit commentary

Unmetered load for 0000181384HB943 has not exceeded the threshold. It uses only 1,086 kWh per annum.

Audit outcome

Compliant

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

Code reference

Clause 11 Schedule 15.3, Clause 15.37B

Code related audit information

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

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

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

Audit observation

Ecotricity does not trade distributed unmetered load.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

6. GATHERING RAW METER DATA

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

Code reference

Clause 10.13, Clause 10.24 and 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 are 1 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

The LIS file dated 5/11/18 was reviewed.

Audit commentary

We noted that Ecotricity trades NHH and HHR ICPs. There are six ICPs to which standard or shared unmetered load is attached. No subtraction is used to determine submission information.

Ecotricity trades 1,586 ICPs for which embedded generation is recorded. 1,513 ICPs are solar panels and 73 ICPs are a combination of solar panels and batteries. We cross checked submission files against registry files and confirm that import (I) volumes for all ICPs are submitted.

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 3 months for the grid owner to review and comment on the design*
- *respond within 3 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 LIS file was reviewed to confirm that Ecotricity is not responsible for any GIPs.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

Audit observation

The LIS file was reviewed to identify which profiles are used for reconciliation purposes.

Audit commentary

Ecotricity uses HHR, RPS and EG1 for reconciliation purposes. 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

The process of identifying defective metering was examined. HHR data is provided by MEPs and two agents. WELLS and occasionally customers provide readings for NHH ICPs.

Audit commentary

HHR reads are uploaded automatically. During the upload meter reads are validated. WELLS reads are uploaded Monday, Wednesday, and Friday. A report provided by ORION is not reliable therefore each read is checked individually. If, during any of the processes, Ecotricity becomes aware that a meter is defective, the responsible MEP is notified and asked to investigate.

We asked Ecotricity to provide examples of defective meters. The company stated that they did not have had any meters like this thus far. They do have a few jobs where customers have requested their meters to be sent to a test house, but these jobs were only recently sent, and they do not have any results back yet.

Audit outcome

Compliant

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

Code reference

Clause 2 Schedule 15.2

Code related audit information

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

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

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

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

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

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

2(6) – The interrogation systems must record:

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

Audit observation

HHR data is collected by MEPs and two agents on behalf of Ecotricity.

Audit commentary

Compliance with this clause is assessed as a part of the MEPs audit. AMCI and EDM I was reviewed and compliance with this clause is confirmed.

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. We sampled five meter reads from WELLS to compare with entries in ORION. We “shadowed” import/validation of ten WELLS reads to ORION. Ecotricity does not accept customer reads as a part of BAU (Business as Usual).

Audit commentary

All readings in ORION are labelled and the name of the reference file is visible on the screen. As a part of this audit we reviewed the WELLS audit report dated 28/06/2018. WELLS has processes in place to identify and report on tampering, damage, broken and missing seals, phase failure, and unsafe situations.

Ecotricity has an automated email that asks customers to send photos of the meter and reads if they have a legacy meter. Upon switch in the system picks up that the customer does not have a smart meter and will send the email out. ECOT also have provided meter reader cards to WELLS for ECOT customers that they will leave at the property when the meter reader does not have access to the meter that asks our customers to send a photo to assist with billing.

ORION does not validate customer reads against customer reads, validation is only done using actual reads.

Audit outcome

Compliant

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

Code reference

Clause 6 Schedule 15.2

Code related audit information

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

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

Audit observation

The switch read from the CS file is used as a start read for NHH ICPs. Consecutive readings from WELLS or a customer apply from 0000hrs on the day after the last meter interrogation up to and including 2400hrs on the day of the meter interrogation.

Audit commentary

Compliance was confirmed by analyses of scenarios described in **section 12.11**.

Audit outcome

Compliant

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

Code reference

Clause 7(1) and (2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

There is process for checking if an ICP was interrogated by Ecotricity at least once during the period of supply. It is called "Missing WELLS reads" spreadsheet.

Audit commentary

Ecotricity closely monitors NHH ICPs, which has not been read. There is a shared Google sheet regarding hard to read ICPs, the process to identify new problem ICPs needed to be used more often. Once such ICPs are identified, Ecotricity works closely with WELLS and customers to gain a meter read. There are additional pre-billing checks, which identified which meters were not read for more than 3 months.

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

ORION has a functionality to create a Meter Reading Frequency Report which has to be submitted to the Authority every month.

Audit commentary

The last time such a report was sent by Ecotricity was for Jan'18, May'18, and July'18. In July'18 the person who was responsible for this area left Ecotricity. This responsibility has not been transferred to a new person. Since July'18 Ecotricity has not provided this report regularly to the Authority. This non-compliance was addressed before this audit report was finalised .

Ecotricity submitted to the Authority Meter Frequency Reports for months July'18 to Nov'18. According to the report for Nov'18, Ecotricity did not have 100% attainment in the previous 12 months for 14 NSPs. Ecotricity does not exclude from the report ICPs, which are exceptionally difficult to read.

The task of sending this report monthly has been added to the Reconciliation Tasks.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.9 With: 8(1)(a) of Schedule 15.2 From: 01-Jul-18 To: 30-Nov-18	Ecotricity did not have 100% attainment in the previous 12 months for 14 NSPs. Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because there was not well-structured process in place to assure compliance is met. Now the process has been modified but the resolution has not been in place for appropriate time to record controls as strong Impact on settlement outcomes is minor because ORION estimates data at the end of each month and not many ICPs are traded as NHH for 12 months. Further, Ecotricity's business strategy is to replace legacy meters with a smart meters.		
Actions taken to resolve the issue		Completion date	Remedial action status
Ecotricity confirms the handover of this report from one reporting manager to the next has been lacking. The Meter Read Frequency report will now be issued to the EA.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
The Reading Frequency report will be submitted as required regularly. A How to Document has been updated to ensure there are many people that operate this task.		12/12/2018	

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 month, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every 4 months for 90% of the non-half hour metered ICPs.

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

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

Audit observation

ORION has a functionality to create a Meter Reading Frequency Report which has to be submitted to the Authority every month.

Audit commentary

The last time such a report was sent by Ecotricity was for Jan'18, May'18, and July'18. Since July'18 Ecotricity has not provided this report regularly to the Authority and does not monitor to check that 90% of NHH ICPs are read at least once every 4 months but Ecotricity monitors ICPs, which were not read for 3 months and more.

This non-compliance was addressed before this audit report was finalised as described in **section 6.8**.

The task of sending this report monthly has been added to the Reconciliation Tasks.

Before this audit report was finalised, Ecotricity submitted to the Authority Meter Frequency Reports for months July'18 to Nov'18.

Monthly Meter Frequency Reports provided were reviewed

Month	Total NSPs where ICPs were supplied for 4 months	NSPs<90% read	Total number of ICPs not read for 4 months	Overall % read
201807	73	8	17	95.38%
201808	73	7	17	95.89%
201809	83	12	22	91.02%
201810	89	8	16	97.89%
201811	97	12	43	95.91%

The report provided for Nov'18 showed that for 11 NSPs the target of 90% was not met.

Month	NSP	Count_of_4_month_active_ICPs_read
201811	BLN0331	87.5%
201811	BRK0331	66.67%
201811	CML0331	85.71%
201811	CPK0111	33.33%
201811	GYM0661	80%
201811	HKK0661	75%
201811	INV0331	50%
201811	MTO0331	80%
201811	NMA0331	50%
201811	TIM0111	50%
201811	TMK0331	80%

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 6.10</p> <p>With: 9(1) of Schedule 15.2</p> <p>From: 01-Jul-18</p> <p>To: 30-Nov-18</p>	<p>The target of 90% was not achieved for 12 NSPs</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Twice previously</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate because there was not well-structured process in place to assure compliance is met. Now the process has been modified but the resolution has not been in place for appropriate time to record controls as strong Impact on settlement outcomes is minor because ORION estimates data at the end of each month. Further, Ecotricity's business strategy is to replace legacy meters with a smart meters.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Over 93% of Ecotricity ICPs are HHR / HHA certified meters. All NHH legacy meters are upgraded to HHR where possible when customers join Ecotricity.</p> <p>Of the remaining NHH meters, Ecotricity is continually revisiting the ability to upgrade these meters to HHR communicating meters.</p>		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Meter Frequency reports have been provided and show in fact that Ecotricity does have higher than required meter reading statistics.</p> <p>However, because Ecotricity is a new retailer, and in particular in new and smaller networks to Ecotricity, there will always be the statistical chance of less than 90% reads each 4 months occurring per GXP.</p> <p>Overall however, we have 590 NHH 4 month ICPs, of which 568 have been read in the last 4 months which represents 96%.</p>		12/12/2018	

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

Code reference

Clause 10 Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

NHH data is collected by WELLS as an agent. The data interrogation log requirements were reviewed as part of their agent audit.

Audit commentary

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

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 ARCS, AMS, MTRX, and EDM I. HHR interrogation data requirements were reviewed as part of their audits.

Audit commentary

Compliance with this clause has been demonstrated by ARCS, AMS, MTRX, and EDM I as part of their audits. We reviewed the EDM I and AMCI audits and confirm compliance.

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 ARCS, AMS, MTRX, and EDM I. HHR interrogation data requirements were reviewed as part of their audits.

Audit commentary

We reviewed the EDM I and AMCI audits and confirm compliance.

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 ARCS, AMS, MTRX, and EDM I.

Audit commentary

Data interrogation requirements are covered in the MEPs audit. As a part of this audit we reviewed the HHR collection audit for AMCI and EDM I.

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

Ecotricity receives HHR data from MTRX, AMS, ARCS, and EDM I.

Audit commentary

Compliance with this clause has been demonstrated by MEPs and is discussed in their audit. We reviewed EDM I and AMCI (AMS) audits and confirm compliance reports.

Audit outcome

Compliant

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

Code reference

Clause 18 Schedule 15.2

Code related audit information

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

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

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

Audit observation

HHR data is received from the MEPs and two agents, who archive raw meter data. Ecotricity keeps a copy of all HHR raw data.

NHH data is received from WELLS and archived.

Audit commentary

MEPs are responsible for meeting compliance with this clause. It is reviewed during their audits. As a part of this audit we reviewed the HHR collection audit for AMCI and EDM I. Compliance is confirmed.

Readings cannot be modified without an audit trail being created. Audit trails were reviewed.

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

Ecotricity only uses the HHR, EG1 and RPS profiles for reconciliation submissions. No external control equipment is used.

Audit commentary

It was discussed during the audit; the company 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

(1) If a reconciliation participant detects errors while validating non-half hour meter readings, the reconciliation participant must—

- (a) confirm the original meter reading by carrying out another meter reading; and*
- (b) if the second meter reading confirms that the original meter reading is erroneous, replace the original meter reading with the second meter reading (even if the second meter reading is at a different date).*

(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—

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

Audit observation

WELLS reads NHH meters on behalf of Ecotricity.

Audit commentary

At the time of uploading data to ORION data is validated. Once it is done Ecotricity manually checks each read. If a meter reading is considered inaccurate during validation, WELLS is advised and asked to read it again. Overall, at the time of audit Ecotricity was trading 495 NHH ICPs, the company strategy is to replace them with smart meters. If any errors are detected during validation, WELLS is contacted and asked for a confirmation.

Audit outcome

Compliant

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

Code reference

Clause 19(2) Schedule 15.2

Code related audit information

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

- (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*
- (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

All MEPs and agents providing HHR reads validate them in their system and it is also validated by ORION.

Audit commentary

It was discussed with Ecotricity and their comment was that they have not received any incorrect HHR data from MEPs or their agents since the last audit. According to the process adopted by the company if such a situation occurs, MEPs will be asked for an explanation and asked to read a meter again. The issue is not that data received from MEPs is incorrect, a more common problem is a lack of data, which will be discussed later on.

Audit outcome

Compliant

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

Code reference

Clause 19(3) Schedule 15.2

Code related audit information

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

Audit observation

Ecotricity does not have any installations where error or loss compensation occurs.

Audit commentary

Any multipliers recorded in the registry are uploaded to ORION through CS.eda file and applied to data. This was validated in **section 12.11**.

Audit outcome

Compliant

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

Code reference

Clause 22(1) and (2) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

Ecotricity trades both NHH and HHR ICPs. The company receives a copy of raw data only, which is never overwritten. Raw data is archived by MEPs, EDMI, and WELLS.

Audit commentary

As a part of this audit, we examined the audit trail for NHH metering read corrections.

The company stated that, since the last audit, there were no instances of HHR data which required correction/alteration.

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

ORION has a built-in function which allows the identification of actual and estimated readings.

Audit commentary

We reviewed the allocation of the readings flag as a part of sampling CS and RR files. We also reviewed flags during the review of the process for NHH and HHR estimation.

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

ORION uses both validated and estimated readings to create submission files.

Audit commentary

If actual data is not available, Orion estimates data for NHH ICPs using estimated daily consumption (EDC), which is updated after each read. For HHR ICPs ORION profiles data using the daily shape of the same time last week or the default daily profile using register reads. It was reviewed as a part of the sampling of HHR estimation. In **section 12** we reviewed submission data for 3 NSPs.

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

Ecotricity provided five raw meter (copy) data examples from FCLM and AMS.

Audit commentary

We confirm that data is imported to ORION as it is delivered from the MEPs of the agents. No rounding or truncation occurs.

Audit outcome

Compliant

9.4. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

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

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

Audit observation

The process has not changed since the last audit. ORION has built-in HHR data estimation module. Three scenarios were sampled. One scenario was for a situation where data for a few intervals was missing within a day, the second scenario was for a situation where an entire day was missing, and the third, manual insertion of HHR reads for non-communicating meters.

Audit commentary

Ecotricity provided three examples of ICPs (0000019414CP992, 0000046002NTEBE, and 0000553030NRBED) for which meters stopped communicating for two or three days and data was not provided by the MEP. ORION estimated data (daily profile) using the register reads.

Three examples were provided for ICPs (0000102059UNF93, 0000600802TUDE2, and 0007185668RNE56) for which data was missing for a few hours.

The company provided calculations for all examples including ORION screenshots as supporting evidence.

There are 9 ICPs which stopped communicating. As was described in the previous audit, Ecotricity still treat their customers as a HHR profile but have them on a manual WELLS cycle. ORION does not “allow” the changing of a type of customer from NHH to HHR and back. As a work around, ORION would take the given volume based on the actual reads from WELLS and distribute that across the number of periods between the two actual reads. This type of estimation is not automatic. Actual reads are provided to Agility, which applies the HHR profile and uploads data to ORION. It is not an ideal way of estimating intervals based on manually read registers received from WELLS every two months, but it is the best solution that Agility can offer at the present time.

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

NHH readings from WELLS are uploaded to ORION manually. The files are uploaded to the system, which creates a report, which is analysed by an operator.

Audit commentary

ORION performs a preliminary validation by checking for invalid dates and times, confirming that the meter reading relates to the correct ICP, meter, and register.

Once it is done a report is displayed on the screen. The report does not provide reliable information in relation to if a meter reading lies within an acceptable range compared with the expected pattern, previous pattern, or trend. This part of validation is done manually by the Ecotricity metering group. Each read is validated individually; it is a laborious and time-consuming process.

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

Meters are electronically interrogated by AMS, FCLM, ARCS, and Metrix. Data is uploaded automatically on a daily basis to ORION.

Audit commentary

Upon data upload, ORION conducts certain validation. If data does not pass validation, it is “shifted” to an “error directory” which is checked every day. If any issues were identified during upload, ORION marks it with an error flag and the file is not uploaded.

Ecotricity received log files from FCLM, MTRX and ARCS. ARCS log files provides limited information because of the nature of their installations. The provided log files are reviewed, and the company commented that, since the last audit, none of them provided any information which indicated that the integrity of data was affected.

Validation of HHR data does not include checks for unexpected 0 values. During a billing run, volumes are validated against the previous months, but this validation won’t identify any unexpected small number of 0 values.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 9.6 With: 17 of Schedule 15.2 From: 01-Mar-18 To: 30-Oct-18	HHR data is not checked for unexpected 0 values 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 recorded as moderate, they do not cover all requirements of this clause e.g. "unexpected 0 values". Low risk rating is assigned due to impact on settlement outcomes is minor		
Actions taken to resolve the issue		Completion date	Remedial action status
Ecotricity runs exception reports every month on all ICPs which includes; <ul style="list-style-type: none"> - Exceptional changes of volumes - Exceptional changes of dollar amounts invoiced - Exceptions changes in days bills 		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ecotricity has developed a zero reads process which looks for zero reads under certain circumstances, but excludes other circumstances, for instance solar generation at night.		12/12/2018	

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

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

Code reference

Clause 13.136

Code related audit information

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

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

Audit observation

Ecotricity is not required to provide information to the pricing manager.

Audit commentary

This clause is not applicable to Ecotricity. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 13.137

Code related audit information

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

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

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

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

Audit observation

Ecotricity is not required to provide information to the pricing manager.

Audit commentary

This clause is not applicable to Ecotricity. Compliance was not assessed.

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

Ecotricity is not required to provide information to the pricing manager.

Audit commentary

This clause is not applicable to Ecotricity. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 13.140

Code related audit information

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

Audit observation

Ecotricity is not required to provide information to the pricing manager.

Audit commentary

This clause is not applicable to Ecotricity. Compliance was not assessed.

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

The LIS file dated 5/11/18 was reviewed. Ecotricity has trading notifications for all profiles.

Audit commentary

Ecotricity only uses HHR, EG1 and RPS profiles for reconciliation submissions. Two were confirmed by checking the LIS file and submission files for Aug'18 and Sept'18.

Audit outcome

Compliant

11.2. Calculation of ICP days (Clause 15.6)

Code reference

Clause 15.6

Code related audit information

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

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

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

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

Audit observation

The process for the calculation of ICP days was examined as a part of Historical Estimate scenarios. We also examined three NSPs with a small number of ICPs to confirm if ICP days calculation was correct.

We reviewed the ICP days file (AV-110) submitted to the reconciliation manager and GR-100 provided by the reconciliation manager.

Audit commentary

There were no late submissions of ICP days file (AV-110) to the reconciliation manager.

The table shows the ICP days (NHH and HHR combined) difference between GR-100 (it was downloaded from the RM portal) and Ecotricity files.

Month	R0	R1	R3	R7	R14
Dec-16	0.52%	-0.15%	0.22%	-0.02%	0.77%
Jan-17	-0.19%	-0.26%	-0.13%	0.03%	0.71%
Feb-17	-0.66%	-0.77%	-0.74%	-0.71%	-0.10%
Mar-17	-1.19%	-1.43%	-1.55%	-1.40%	-0.87%
Apr-17	-1.67%	-1.54%	-2.14%	-1.69%	-1.21%
May-17	-1.82%	-2.01%	-2.01%	-1.58%	-1.24%
Jun-17	-2.40%	-2.48%	-2.07%	-1.58%	-1.61%
Jul-17	-2.97%	-2.77%	-2.66%	-2.28%	-2.35%
Aug-17	-3.06%	-2.95%	-2.97%	-3.18%	-2.70%
Sep-17	-2.99%	-3.06%	-2.92%	-3.35%	
Oct-17	-2.95%	-2.95%	-2.71%	-3.14%	
Nov-17	-3.26%	-3.27%	-2.99%	-3.34%	
Dec-17	-3.30%	-3.24%	-3.59%	-3.34%	
Jan-18	-3.14%	-3.08%	-3.44%	-3.32%	
Feb-18	-3.15%	-3.46%	-3.41%		
Mar-18	-3.12%	-3.38%	-3.36%		
Apr-18	-3.47%	-3.65%	-3.60%		
May-18	-3.37%	-3.42%	-3.67%		
Jun-18	-3.28%	-3.37%	-3.32%		
Jul-18	-3.21%	-3.17%	-3.15%		
Aug-18	-2.94%	-2.97%			
Sep-18	-2.95%	-2.92%			

Note – areas highlighted in yellow indicates submissions in the period covered by this audit

The discrepancies between ICP days calculated by the registry and ORION are mainly caused by a mismatch of information between the two data sets. It is described in more detail in **section 11.4**. The section relates to HHR ICPs, but the same problem applies to NHH ICPs.

It is visible that, since Ecotricity has grown this year by 100%, the percentage has also increased. It appears that Ecotricity claims more ICP days as their responsibility than recorded in the registry. It is mainly caused by a mismatch of the type of reconciliation.

The table below shows an ICP days split between HHR and NHH. It shows that Ecotricity submit volumes for more HHR ICPs than expected by the registry. We trust that new reporting developed by Ecotricity will address this issue.

Month/day14	NHH		HHR	
	Sum of Difference registry-trader (days)	%	Sum of Difference registry-trader (days)	%
01/2018	-203	-2.81%	-2391	-3.11%
02/2018	-174	-2.60%	-2544	-3.54%
03/2018	103	1.31%	-3161	-3.83%
04/2018	304	3.68%	-3631	-4.38%
05/2018	867	8.49%	-4353	-4.74%
06/2018	-92	-0.93%	-3591	-3.61%
07/2018	-20	-0.17%	-4016	-3.47%
08/2018	254	1.95%	-4411	-3.47%
09/2018	422	3.34%	-4656	-3.52%

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

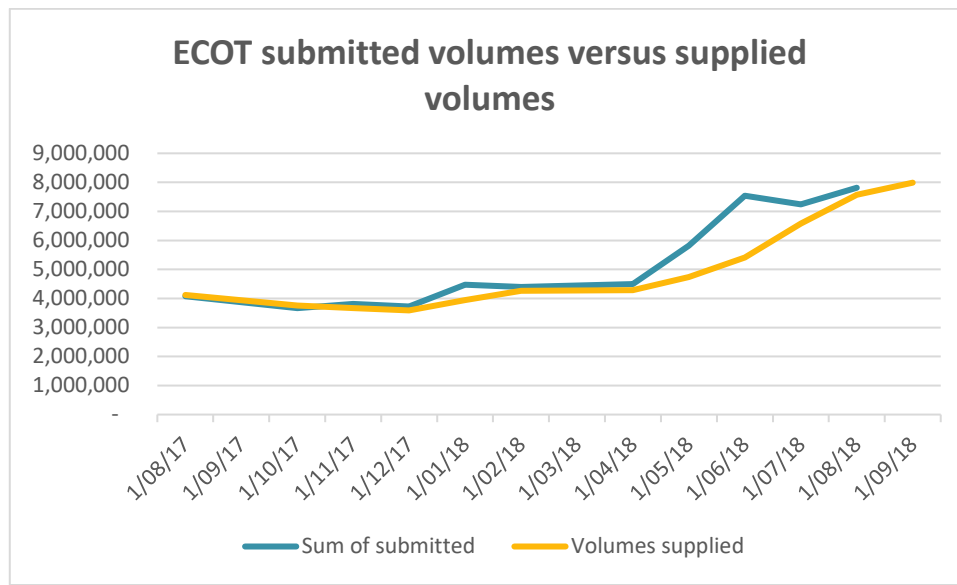
As a part of the file submission process to the reconciliation manager Ecotricity submits AV-120 every month for the current month and scheduled revisions. We checked the RM portal to confirm it.

Audit commentary

The table below shows a comparison between volumes submitted and supplied (billed) for the period Aug'17 – September'18

Month	Sum of submitted	Sum of supplied
1/08/17	4,073,907	4,114,973
1/10/17	3,666,412	3,759,327
1/11/17	3,810,763	3,663,397
1/12/17	3,722,689	3,588,018
1/01/18	4,468,536	3,946,332
1/02/18	4,392,374	4,268,795
1/04/18	4,498,194	4,283,720
1/05/18	5,817,287	4,743,310

1/06/18	7,538,442	5,409,260
1/07/18	7,240,693	6,580,405
1/08/18	7,814,093	7,574,993
1/09/18	7,415,652	7,988,811



We confirm, the submission process of AV-120 is compliant.

Audit outcome

Compliant

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

Code reference

Clause 15.8

Code related audit information

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

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

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

Audit observation

Ecotricity provided a set of submission files (AV140) for the month Aug'17, Aug'18 and Sept'18.

We compared the volumes in HHRVOLS and HHRAGGR for a selected month.

We also checked GR-090 (ICP missing) file for Mar'18 and Sep'18 (day4 submissions). We randomly chose 10 ICPs and confirm that volumes provided by MEPS are the same which were sent to RM.

Alleged breaches during the period covered by this audit were reviewed.

Audit commentary

No breaches were recorded for late provision of HHRAGGR files.

We checked volumes in HHRAGGR and HHRVOLS submitted for the same month and confirm volumes in both files were within a few kWh. For two ICPs we checked volumes against the source data, it was correct.

GR-090 files were reviewed for day4 submissions only because these files are not updated as reconciliation participants resolve discrepancies. The table below shows the results of the analysis.

Month	Number of ICPs
03/2018	94
A	56
R	38
04/2018	126
A	72
R	54
05/2018	240
A	89
R	151
06/2018	182
A	95
R	87
07/2018	200
A	134
R	66
08/2018	192
A	107
R	85
09/2018	189
A	92
R	97

Legend

A – ICP volumes not included in HHRAGGR

R – Volume submitted for ICPs not listed in the registry list

For ICPs for which volumes were not included in HHRAGGR, there were valid reasons for them not being included e.g. late switch notification, late registry updates by MEP when NHH meter was replaced by HHR etc. We randomly chose ten ICPs and identified that the main reason for discrepancies is the result of the mismatch of information recorded in ORION and the registry.

Another reason for the high number of ICPs in GR-090 is a discrepancy in the mismatch of the type of reconciliation, profile types between the registry and ORION. It also impacts ICP days calculation which was discussed in **section 11.2**. It has been an on-going problem for Ecotricity. Agility has been asked many times to provide a report to identify discrepancies between the two data sets. The report has never worked correctly. During the audit Ecotricity developed a new tool to compare the registry information and ORION, which uses output from ORION and the registry and identifies mismatches. Once the clean-

up process is complete, our expectation is that GR-090 would list only a few entries (legitimate discrepancies).

The HHRAGGR files are prepared at ICP level based on submission information. Clause 15.8 states that the HHRAGGR should contain electricity supplied information rather than submission information. The Reconciliation Manager Functional Specification in section 3, described HHRAGGR as HHR submission information that is aggregated per ICP for the whole month.

There is a misalignment between the Code requirements and RM file specification. It is a problem well known to the Authority and is awaiting a resolution.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.4 With: 15.8 From: 01-Mar-18 To: 30-Oct-18	HHRAGGR files do not contain electricity supplied information Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Ecotricity submits submissions volumes as per the reconciliation manager specification.		
Actions taken to resolve the issue		Completion date	Remedial action status
			Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	

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 1 of the techniques set out in clause 15.36(3) specified by the Authority.

Audit observation

HHR data is collected by ARCS, AMS, , EDM I and AMCI agent.

All data provided is daylight saving adjusted except data provided by Metrix. The company gave evidence to demonstrate how data was adjusted for NZDT.

Audit commentary

Compliance with this clause has been demonstrated by ARCS and AMS as part of their MEP audit. As a part of this audit we reviewed agents audit reports provided by AMCI (AMS) and EDM I.

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

In the period covered by this audit, no breaches have been recorded for the late provision of submission files to the reconciliation manager.

We reviewed the process for the submission of files for NHH and HHR ICPs. We sampled three NSPs to validate if NHH volumes were submitted

Audit commentary

The process for the creation of submission files has not changed since the last audit. Ecotricity submits volumes for both NHH and HHR ICPs. Ecotricity prepares HHR and NHH submissions using ORION.

Submissions are based on readings provided by MEPs and agents. If embedded generation is installed at an ICP, export volumes are submitted.

During the review of the EDA file for the period 01/03/18 to 30/10/18, we identified ICP 1001292857LC797, for which the update to the status “active” was delayed for 407 BD. It was one of the situations where because ORION does not allow the setting up of an ICP in the system it caused this ICP to be “lost”. To make the situation even worse the MEP had not provided data for 5 months. It was identified in March’18, the status was changed to “active” and volumes submitted. We checked and volumes for July’16 up to Feb’18 have not been submitted yet. Total volume missing is 9,574 kWh.

In **section 12.7** we noted that Ecotricity that since June’18 the seasonal adjustment file (GR-030) was not uploaded to ORION before day 14 to allow accurate calculations of historical estimates.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.2 With: 15.4 From: 01-Mar-18 To: 30-Oct-18	Volumes for ICP 1001292857LC797 were not submitted for months before March’18 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 recorded as monitoring process needs improvement. Audit risk rating is recorded as low as impact on settlement outcomes is minor		
Actions taken to resolve the issue		Completion date	Remedial action status
As noted the standard Agility ICP Registry syncing tools have been spasmodic. Ecotricity now has ICP registry tools which sync outside of the Agility platform and has far more functionality and flexibility to ensure all situations / ramifications are covered including ICPs on the registry but not on Agility.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ecotricity now has ICP registry tools which sync outside of the Agility platform and has far more functionality and flexibility to ensure all situations / ramifications are covered including ICPs on the registry but not on Agility.		12/12/2018	

12.3. Allocation of submission information (Clause 15.5)

Code reference

Clause 15.5

Code related audit information

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

Ecotricity has a process in place to submit data for all revisions every month, as per the schedule..

Audit commentary

Every time data is estimated, or missing data provided by MEPs, ORION recalculates submission volumes. We reviewed GR-170NHH and GR-100 to observe that both volumes and ICP days are recalculated to take into account backdated switches, withdrawn switches etc. We compared rev3 and 7 for April'17 and observed that in rev 7 volumes for 0001451403UN3F5 and 0129784281LC73D were not included. Error was identified and in was corrected in rev14.

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

The LIS file was reviewed.

Audit commentary

Ecotricity is not responsible for any GIP. Compliance was not assessed.

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 LIS file was reviewed.

Audit commentary

Ecotricity is not an embedded network owner. Compliance was not assessed.

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 LIS file was reviewed.

Audit commentary

Ecotricity is not a grid connected generator. Compliance was not assessed.

Audit outcome

Not applicable

12.7. Accuracy of submission information (Clause 15.12)

Code reference

Clause 15.12

Code related audit information

If the reconciliation participant has submitted information and then subsequently obtained more accurate information, the participant must provide the most accurate information available to the

reconciliation manager or participant, as the case may be, at the next available opportunity for submission (in accordance with clauses 15.20A, 15.27, and 15.28).

Audit observation

The process for the calculation of initial and subsequent submission volumes was examined. Ecotricity demonstrated that if they subsequently obtain more accurate information, they provide it to the reconciliation manager as part of the normal schedule of revision submissions. Every month, before day 13, revision files are submitted for month 3, 7, and 14.

Audit commentary

The revisions files are submitted to the RM as per the revision schedule which is listed in the “Daily check list”. Ecotricity provided a set of submission files for Aug’17 including revisions. ORION has a built-in functionality that as soon as meter readings are corrected, for example RR files, it flows through to submission volumes.

In June this year, the person who was responsible for submissions to the reconciliation manager left the company. The transfer of responsibility to the new person did not cover all areas. As a result the new person was not aware that the seasonal adjustment file (GR-030) needed to be uploaded to ORION before day 14 to allow accurate calculations of historical estimates.

As was described in **section 12.2**, volumes for ICP 1001292857LC797 were not submitted for the period June’16 to March’18.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.7 With: 15.1 From: 01-Jun-18 To: 30-Oct-18	<p>The most recent seasonal adjustment file (GR-030) was not used for the calculations of historical estimates</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because the situation has been rectified and the period of incorrect GR-030 used for submissions was short. Minor impact on settlement outcomes is noted. Audit risk rating recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The reporting function has been transferred between staff effectively.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
The GR-030 files will be updated monthly and for all revision cycles.		12/12/2018	

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

Code reference

Clause 4 Schedule 15.2

Code related audit information

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

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

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

Audit observation

We reviewed submission volumes for Feb'17 to Dec'16. Files were submitted during the period covered by this audit. Rev14 shown below:

Audit commentary

The analysis of rev14 for the above month is shown below. The table shows the number of NSPs for which Ecotricity submitted volumes for NHH ICPs.

Month	Number of NSP for which compliance was not met	Total number of NSPs
Jan'17	7	57
Feb'17	8	60
Mar'17	16	65
Apr'17	9	66
May'17	12	70
June'17	15	76
July'17	16	79
Aug'17	16	71

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.8 With: 4 of Schedule 15.2 From: 01-Apr-18 To: 30-Oct-18	Permanence of meter reading for the period Feb'17 to Aug'17 not achieved Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because there are some improvements that can be made to them. Ecotricity trades a small number of NHH ICPs for which metering is changed to HHR as soon as possible. The management of NHH reads improved since the last audit but it is still not as good as it should be. The audit risk rating is low because the impact on the settlement outcome is minor.		
Actions taken to resolve the issue		Completion date	Remedial action status
Noted and we will be improving this process.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Noted and we will be improving this process.		Early 2019	

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

Code reference

Clause 2 Schedule 15.3

Code related audit information

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

(aa) must comprise all volume information for the ICP:

(a) must comprise half hour volume information for the total metered quantity of electricity for each category 3 or higher metering installation:

(ab) must not comprise half hour volume information for a non-half-hour metering installation:

(ac) must comprise either half hour volume information or non-half hour volume information for the total metered quantity of electricity for each metering installation that—

(i) is a category 1 metering installation or category 2 metering installation; and

(ii) is a half-hour metering installation:

(ad) must comprise non-half hour volume information calculated under clauses 4 to 6 (as applicable) for the total metered quantity of electricity for each metering installation that—

(i) is a category 1 metering installation or category 2 metering installation; and

(ii) contains only non-half-hour metering:

(ae) if a metering installation is a category 1 metering installation or category 2 metering installation, and the metering installation contains half-hour metering and non-half-hour metering, may comprise—

(i) a combination of—

(A) half hour volume information for the half-hour metering; and

(B) non-half hour volume information calculated under clauses 4 to 6 (as applicable) for the non-half-hour metering; or

(ii) non-half hour volume information for the total metered quantity of electricity for the metering installation:

(b) [Revoked]

(c) must include unmetered load quantities for each ICP that has unmetered load associated with it, which must be 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.

(2) To create non-half hour submission information, a reconciliation participant must only use information that is dependent on a control device if—

(a) the certification of the control device is recorded in the registry; or

(b) the metering installation in which the control device is located is an interim certified metering installation.

(3) To create submission information for a point of connection for which it is responsible, a reconciliation participant must use volume information from each metering installation for the point of connection.

(4) For the purposes of subclause (3), the reconciliation participant must calculate the volume information by applying to the raw meter data obtained from each metering installation—

(a) for each ICP, the compensation factor recorded in the registry for the metering installation; or
(b) for each NSP, the compensation factor recorded in the metering installation's most recent certification report.

Audit observation

Ecotricity provided submission files for the month of Aug'18 and Sept'18 which were reviewed, and compliance assessed.

Audit commentary

All metering installations category 3, and higher, ICPs are reconciled as HHR.

Volumes for SUML were not submitted. It was identified as a non-compliance in the last audit. There is still no functionality in ORION to deal with UML volumes when a HHR ICP is reconciled.

Incorrect profile of EG1 is used for embedded generation (solar). It should be PV1.

In the registry embedded generation ICPs only RPS profile assigned which does not line up with type of profile used in submission files.

We crossed checked NHHVOLS (Sept'18) against the detailed report for the same month. We confirm that volumes matched.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.9 With: 2(c) of Schedule 15.3 From: 01-Apr-18 To: 30-Oct-18	Shared unmetered load ICPs are not reconciled. Incorrect profile used for embedded generation Potential impact: Low Actual impact: Low Audit history: Twice before Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because there are some improvements that can be made to them. Audit risk rating is recorded as low because volume of shared unmetered load is low. Incorrect profile for embedded generation is bigger issue but impact on settlement outcome is minor.		
Actions taken to resolve the issue		Completion date	Remedial action status
We now have a fully functional SUML process for capturing all SUML sites. Further, and as noted above, we have a comprehensive system for reconciling the ICP registry and the Agility database.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
ICP registry and the Agility database will be synchronised weekly using a new system that will capture Profiles and other changes on the registry. NHH sites that were previously EG1 now are now PV1 unless we are aware a battery has been installed.		12/12/2018	

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

We examined AV-080 for Aug'17 (including revisions), Aug'18 and Sept'18.

Audit commentary

We confirm that historical and forward estimates are clearly identified in ORION. Historical estimates are correctly allocated in AV-080.

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

If the seasonal adjustment file (GR-30) is not available, which is a case for day4 submissions, ORION does not create their own shape file. It will calculate a forward estimate, which will be replaced by historical estimates once a shape file provided by the reconciliation manager is available.

Audit commentary

For the assessment of compliance with this clause we provided Ecotricity with a set of scenarios to validate the accuracy of the calculation of historical and forward estimation for NHH ICPs. Only six scenarios were tested and for all of the calculations were incorrect. The results of testing are shown below:

Ref	Test	Comments	Result of Audit
1	Switch in during the month with estimated switch read, actual read gained in the next month, full profile data available.	Confirm that HE is calculated for the relevant part of the month, even though the switch in read is an estimate, and calculation begins on correct day	Compliant
2	Switch in during the month with actual switch read, actual read gained in the next month, full profile data available.	Confirm that HE is calculated for the relevant part of the month, and calculation begins on correct day	Compliant
3	Status change to active during the month, read gained in	Confirm that HE is calculated for the relevant part of the month	Scenario not found

	the next month, full profile data available		
4	Switch out on estimate during the month	Confirm that HE is calculated even though the reading is an estimate Confirm that HE calculation ends on the correct day.	Number of days is calculated correctly but it appears that ORION adds additional volumes for one day. HE is lower than total volume, it should be the same
5	Switch out on actual during the month	Confirm that HE is calculated for the relevant part of the month, and calculation ends on correct day	Number of days is calculated correctly, volume is slightly higher than calculated manually, could be because a different version of GR-030 is used. Total volumes = HE.
6	Complete month without a read in the month	Read in the previous month and the month after, confirm correct HE for the month	Compliant
7	Complete month with a read during the month	Confirm the two calculations for the month are correct	Compliant
8	GXP change during the month	Confirm submission against one GXP for part month then the other GXP for part month, with correct HE/FE balance on each	Compliant
9	Switch in 2 months ago, first actual read gained in current month, profile data not available for current month	Confirm estimation is shown as forward, not historical	Scenario not found
10	Meter change during month	Confirm estimation is calculated for both meters, and summed correctly	Scenario not found, ECOT does not change legacy meters
11	Half-hour meter installed during month	If NHH read is added to meter, and site class is 'DEEMED', then estimation should be calculated for HH meter according to the same rules as NHH meter	Number of days is calculated correctly. Change of reconciliation is delayed by one day to account for all volume recorded on the day of meter change. Volume is slightly lower than calculated manually, could be because a different version of GR-030 is used. Total volumes = HE. Correct methodology used
12	Two reads in the same month	Confirm usage between two reads is 'Historic' even if no profile data is available	Compliant

13	ICP days for all HE scenarios above	Confirm ICP days calculations are correct	Compliant
14	GXP change backdated	Confirm usage is shown against correct GXP for the time of usage	Compliant
15	Unmetered load submission	Check that this works the same as a normal meter and is considered HE	Calculation is correct, but it is recorded as FE
16	No longer any ICPs with a particular combination of GXP, loss cat code etc.	Confirm that this row is “zeroed” in subsequent submissions	No row for zero value
17	CS read modified by RR	Confirm that consumption is updated to match RR read replacing CS	Compliant
18	ICP has a meter with multiplier greater than 1	Multiplier is applied correctly	We identified 2 ICPs 0002221630TG080, 0000006328DE56B, for which multipliers need to be checked with MEPs. It is likely that information in the registry is incorrect.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.11 With: 4 of Schedule 15.3 From: 01-Mar-18 To: 30-Oct-18	Incorrect calculation of historical estimates for a small number of scenarios conducted by ORION Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because there are some improvements that can be made to them. It is on-going problem of ORION. It has improved since the last audit. Audit risk is recorded as low as impact on settlement outcomes is minor		
Actions taken to resolve the issue		Completion date	Remedial action status
We note there were a number of HE issues with Agility in the previous audit. These have by and large been resolved by Agility updating the code to calculation HE's. There are however some unique situations where HE's are slightly mis-calculated, but which have minimal impact on volumes reported.		12/12/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ecotricity will continue to put pressure on Agility to fix the slight HE calculations in the unique circumstances which are still not performing 100%.		12/12/2018	

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

NHH ICPs are a small part of the Ecotricity business because their business strategy is to trade only HHR ICPs. As soon as a NHH ICP switches in, the company requests an MEP to upgrade to HHR. NHH ICPs are

read by WELLS, which sometimes have difficulties in providing a read for reasons outside of their control. For such situations ORION estimates data.

Audit commentary

ORION has a built-in functionality to calculate forward estimates using daily kWh or values from the CS files if it is a new ICP. For already traded ICPs, Orion uses Estimated Daily Usage, which is updated as soon as a new read is recorded. Forward Estimate.

We checked to see if there are any balancing areas for which Ecotricity does not meet the requirement of having subsequent revision within 15% and within 100,000 kWh. Ecotricity does not have such balancing areas.

The volumes traded as NHH for any balancing area were below 100,000 kWh in July'18. BALANC1TASMG was the biggest balancing area. In July'18 volumes submitted were 34,747 kWh, therefore we did not test the percentage of error in relation to forward estimates.

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

At the time of this audit HHR, RPS, and EG1 profiles were used for submissions.

Audit commentary

The only time a profile change occurs is when there is a replacement of a legacy meter by a smart meter. At the time of meter replacement, a final read is taken by an MEP and passed to Ecotricity. We checked four randomly chosen examples of meter replacements and found documentation showing a final read and the corresponding read in ORION.

Audit outcome

Compliant

13. SUBMISSION FORMAT AND TIMING

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

Code reference

Clause 8 Schedule 15.3

Code related audit information

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

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

Audit observation

Ecotricity provided submission files for Aug'18 and Sept'18.

Audit commentary

We reviewed files and confirm that the format of submission files is compliant. We reviewed HHRVOLS and HHRAGGR in **section 11.4**. NHHVOLS were discussed in **section 12.9**.

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 2 decimal places.

If the unrounded digit to the right of the second decimal place is greater than or equal to 5, the second digit is rounded up, and

If the digit to the right of the second decimal place is less than 5, the second digit is unchanged.

Audit observation

We reviewed submission files for Aug'18 to Sept'18.

Audit commentary

Submission information for NHH and HHR is rounded to two decimal places. It was discussed with the company as to how submission information was calculated, and Ecotricity confirm that submission volumes are rounded using a method prescribed by this clause at the end of calculations.

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

We reviewed GR-170NHH for the period Dec'16 to Jul'18, which covers reconciliation files submitted in the period covered by this audit.

Audit commentary

The results of analysis are shown below:

Month	R3	R7	R14
Dec'16	6/54	2/54	7/54
Jan'17	5/57	2/57	7/57
Feb'17	7/60	2/60	8/60
Mar'17	19/65	21/65	16/65
Apr'17	8/66	5/66	9/66
May'17	10/70	4/70	12/70
June'17	58/76	14/76	15/76
July'17	21/79	22/79	16/79
Aug'17	22/71	12/71	16/71
Sept'17	28/70	16/70	
Oct'17	12/75	2/75	
Nov'17	14/81	3/81	
Dec'17	9/81	4/81	
Jan'18	10/79	10/79	
Feb'18	6/79	5/79	
Mar'18	5/77	5/77	
Apr'18	6/84		
May'18	5/93		
Jun'18	7/95		
Jul'18	7/99		

Note – areas highlighted in yellow indicates submissions in the period covered by this audit

We identified non-compliance because the targets specified by this clause are not met. It is important to note that the number of NSPs, from which ICPs traded by Ecotricity are supplied, increased significantly.

During a review of GR-170NHH we came across some anomalies, which we analysed fully during this audit. It was discussed with the company, but it was not clear if it is a problem with how ORION closes

switches (interpretation of reading flag when calculation of HE is conducted) or if it is a not well managed transfer of reconciliation information from NHH to HHR when a legacy meter is replaced by a smart meter.

Below, there are four examples of anomalies:

- TWZ0331 – HE changes from 100% to 6.3% between revision 3 and 7 for Feb'18
- ROT0111 – HE changes from 100% to 74.27% between revision 3 and 7 for Feb'18
- GFD0331 – HE changes from 100% to 26.25% between revision 3 and 7 for Mar'18
- TWZ0331 – HE changes from 100% to 5.44% between revision 3 and 7 for Mar'18

In our opinion, there are a few reasons why the targets are not met.

1. NHH ICPs readings are not well managed (it was highlighted in the last audit). It has improved in the last few months; more people work in this area but at the same time the number of NHH ICPs has increased.
2. A change in personnel and who is responsible for submissions files to the Reconciliation Manager ?. The RM files are not "screened" before submissions, GR-170NHH is not analysed.
3. Meter Reading Frequency report is not sent to the Authority, tracking of missing reads is done manually, and there is a lack of proper reporting in ORION.

Overall the number of NSPs for which the target is not met is low e.g. 7% NSPs do not reach the target of 80% for July'18. It is not a bad result when put in the context that Ecotricity trades all over NZ.

It comes as a surprise that, for revision 14 months, the target of 100% HE is not met for 22% of NSPs. Some readings are still treated as Forward Estimates.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 13.3</p> <p>With: 10 of Schedule 15.3</p> <p>From: 01-Mar-18</p> <p>To: 30-Oct-18</p>	<p>Historical Estimates targets not met for revision 3, 7, and 14.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Twice previously</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate, the process in place is not satisfactory, it needs to be re-engineered. Audit risk rating is recorded as low because impact on settlement outcomes is minor		
Actions taken to resolve the issue		Completion date	Remedial action status
It is noted with a change of market reporting personnel that the training for this process of checking was not passed on.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We are in the process of training our new market reporting staff on this.		Early 2019	

CONCLUSION

PARTICIPANT RESPONSE

The structure of Ecotricity has grown substantially over the last 12 months and specialist areas of competence have been expanded among the staff. Further, Ecotricity has been working on ensuring a number of people within the business can perform all tasks.

The manager of reporting departed in August and while the handover to the new staff member could have been smoother and better documented the new manager has the competence to perform all the reports. Further access to outside reporting specialists has been provided for training for the new manager in the meantime.

Major strides have been made with ICP Registry synchronisation across the board and Ecotricity has developed a syncing tool that sits outside, but synchronises with Agility and the registry.

It should be noted that a major event occurred in the Agility billing platform, and outside of Ecotricity's control in February. Ecotricity has recovered from this even but it took a large amount of resource to rectify the issues from February 2018 onwards which took some focus away from our March 2018 audit. Ecotricity is re-assessing the performance of the Agility platform until and whether it is suitable for the expected continued growth.

Results from this audit have been assigned to individuals and teams to ensure our rating in each area is improved substantially for the next audit.

It is in Ecotricity's financial interests to ensure 100% reporting accuracy, where possible, is achieved to ensure minimisation of default volumes.

Finally, and to support this, the Ecotricity board have also given approval to management to hire a dedicated, and industry experienced Chief Operating Officer (COO). This will add a further, and third, layer of competence across a number of areas of the business. Benefits of the new COO will further cement Ecotricity's accuracy and consistency of reporting.