ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT

For

ECOTRICITY (ECOT)

Prepared by: Ewa Glowacka – TEG & Associates

Date audit commenced: 12 March 2020

Date audit report completed: 2 April 2020

Audit report due date: 01-Apr-20

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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 7.2 issued by the Electricity Authority.

At the time of this audit Ecotricity was trading 7,638 ICPs. The company mainly trades HHR customers. At the time of the audit, 449 ICPs were reconciled as NHH, which is 5.8%. 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 and one recommendation. The level of compliance has improved in the following areas:

- ICP days calculation
- Sending CS file for standard switches

The main issues identified during this audit are:

- Not meeting targets for historical estimates due to the management of NHH reads
- Management of NHH reads
- Management of ICPs status and type of reconciliation in the registry, which was identified during analysis of consecutive submissions for Dec'18 and day13 submission for Jan'20. As per the business strategy, Ecotricity replaces legacy meters with smart meters, which creates challenges in maintaining synchronised and up-to-date data between ORION and the registry. For new connections the company is very dependent on FCLM to upload metering data in a timely manner due to the shortcomings of ORION
- Management of the correct allocation of volumes to HHR or NHH type of reconciliation in consecutive revisions

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 41 which results in an indicative audit frequency of 6 months. Our recommendation is 12 months because the company is planning to move part of their operation to another system (Robotron) on 14 March 2020. The new system will be responsible for maintaining registry information and performing customer switching, gathering and storing raw meter data and management of HHR and NHH volume information in relation to information sent in CS files. The next step will be to move reconciliation tasks from ORION to Robotron. For a number of months the two systems will run in parallel. The material change audits will be conducted.

The new system will allow Ecotricity to address a number of non-compliances identified in this report. A 12 month period should allow Ecotricity to "settle" in the new system.

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 information for a small number of ICPs; incorrect volumes submission for Dec'18 (rev3) and Apr'19 (rev7), Jan'20 (day13)	Weak	Medium	6	Identified
Provision of information	2.2	15.35	One HHRVOLS file for Mar'19 was late by 4 minutes	Strong	Low	1	Identified
Changes to registry information	3.3	10 of Schedule 11.1	Late trader's updates to registry, status changes	Moderate	Low	2	Identified
Provision of information to the registry manager	3.5	9 of Schedule 11.1	33 late updates to "active" status, incorrect profile for 25 ICPs (solar), missing information for 4 SUML ICPs	Moderate	Low	2	Identified
ANZSIC codes	3.6	9(1)(k) of Schedule 11.1	Incorrect ANZSIC code assigned to 4 ICPs	Moderate	Low	2	Identified
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	4 SUML ICPs are missing (Daily Unmetered kWh) in the registry	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	3.9	19 of Schedule 11.1	A number of ICPs have incorrectly assigned "inactive" status when they should be "active	Moderate	Low	2	Identified
Losing traders must provide final information - standard switch	4.3	5 of Schedule 11.3	Incorrect information in 3 CS files	Moderate	Low	2	Identified

Non-half hour switch event meter reading - standard switch	4.4	6(1) of Schedule 11.3	One RR file was sent late	Strong	Low	1	Identified
Losing trader response to switch request and event dates – switch move	4.8	10(1) of Schedule 11.3	2 CS files late. Incorrect information in one CS file	Moderate	Low	2	Identified
Gaining trader changes to switch meter reading – switch move	4.11	12 of Schedule 11.3	One RR file was sent late	Strong	Low	1	Identified
Withdrawal of switch requests	4.15	17 of Schedule 11.3	Incorrect withdrawal reason code used for 3 ICPs	Moderate	Low	2	Identified
Electricity conveyed & notification by embedded generators	6.1	15.13	27 ICPs have embedded generation recorded in the registry but ECOT uses RPS profile in the registry, the reconciliation manager was not notified	Weak	Low	3	Identified
NHH meters interrogated annually	6.9	8(1)(a)of Schedule 15.2	100% attainment was not achieved for more than 10 NSPs over 6 months	Moderate	Low	2	Identified
NHH meters 90% read rate	6.10	9(1)(a)of Schedule 15.2	90% attainment was not achieved for on average 12 NSPs per month	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	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.

manager							Breach risk rating excluded from total
Creation of submission information	12.2	15.4	HHRVOLS for March'19 was late by 4 minutes	Strong	Low	1	Identified
Permanence of meter readings for reconciliation	12.8	4 of Schedule 15.2	Permanence of meter reading for the period Mar'18 to Dec'18 not achieved	Moderate	Low	2	Identified
Historical estimates reporting to RM	13.3	10 of Schedule 15.3	Historical Estimate targets not met for revision 3, 7, and 14	Moderate	Low	2	Identified
Future Risk Rating						41	
Next audit date						12 months	

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

RECOMMENDATIONS

Subject	Section	Description	Recommendation
Withdrawals of switch request	4.15	No clear understanding of which withdrawal reason code to use in NW file	Write guidelines of what withdrawal reason code should be used in specific situations

ISSUES

Subject	Section	Description	Issue
			Nil

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

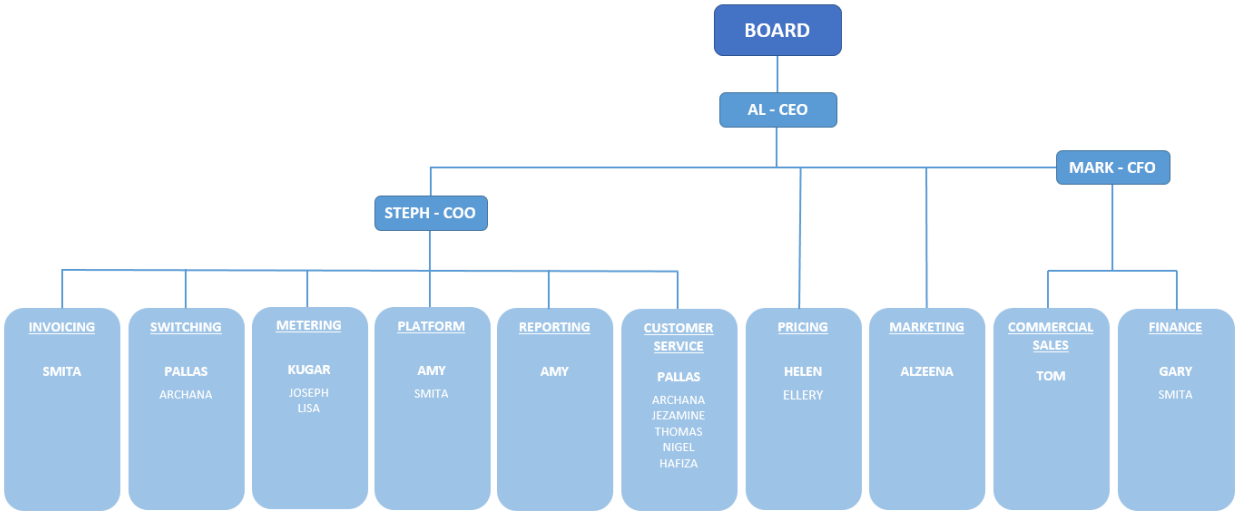
Audit observation

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



1.3. Persons involved in this audit

Name	Title	Company
Al Yates	Chief Executive Officer	Ecotricity
Dennis Mckechnie	Switching Team Leader	Ecotricity
Amy Chai	Finance & Billing Analyst	Ecotricity
Kugar Thompson	Metering Installation Coordinator	Ecotricity
Hafiza Rezaie	Metering Installation Coordinator	Ecotricity
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

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

Audit commentary

As a part of this audit we reviewed the WELLS, EDMI, and AMCI audit reports. The audits were older than 7 months, but we talked to their auditors who confirmed that new audits were conducted. Both EDMI and AMCI were found compliant, there were no changes to their processes which would have a negative impact on compliance.

WELLS – in the recent audit in March 2020, it was found that Wells is compliant.

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 was one breach in the period covered by this audit. Ecotricity failed to submit HHRVOLS for March'19 to the reconciliation manager by 16:00 on 17th April 2019. Ecotricity submitted the data at 16:04.

1.7. ICP Data

Metering Category	Number of ICPs (09/03/20)	Number of ICPs (22/5/19)	Number of ICPs (05/11/18)	Number of ICPs (05/03/2018)
1	7,453	5,773	5,142	2,766
2	173	147	139	97
3	20	18	15	8
4	5	5	5	3
5	0	0	0	0
9	15	0	16	2

Status	Number of ICPs (09/03/20)	Number of ICPs (22/05/19)	Number of ICPs (5/11/18)	Number of ICPs (5/03/18)
Active (2,0)	7,555	5,895	5,238	2,485

Inactive – new connection in progress (1,12)	17	19	31	17
Inactive – electrically disconnected vacant property (1,4)	20	31	25	13
Inactive – electrically disconnected remotely by AMI meter (1,7)	38	12	17	7
Inactive – electrically disconnected at pole fuse (1,8)	2	1	1	1
Inactive – electrically disconnected due to meter disconnected (1,9)	5	3	3	1
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	0	1	2	0
Inactive – electrically disconnected ready for decommissioning (1,6)	3	5	6	4
Inactive – reconciled elsewhere (1,5)	0	0	0	0
Decommissioned (3)	43	29	18	7

1.8. Authorisation Received

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

1.9. Scope of Audit

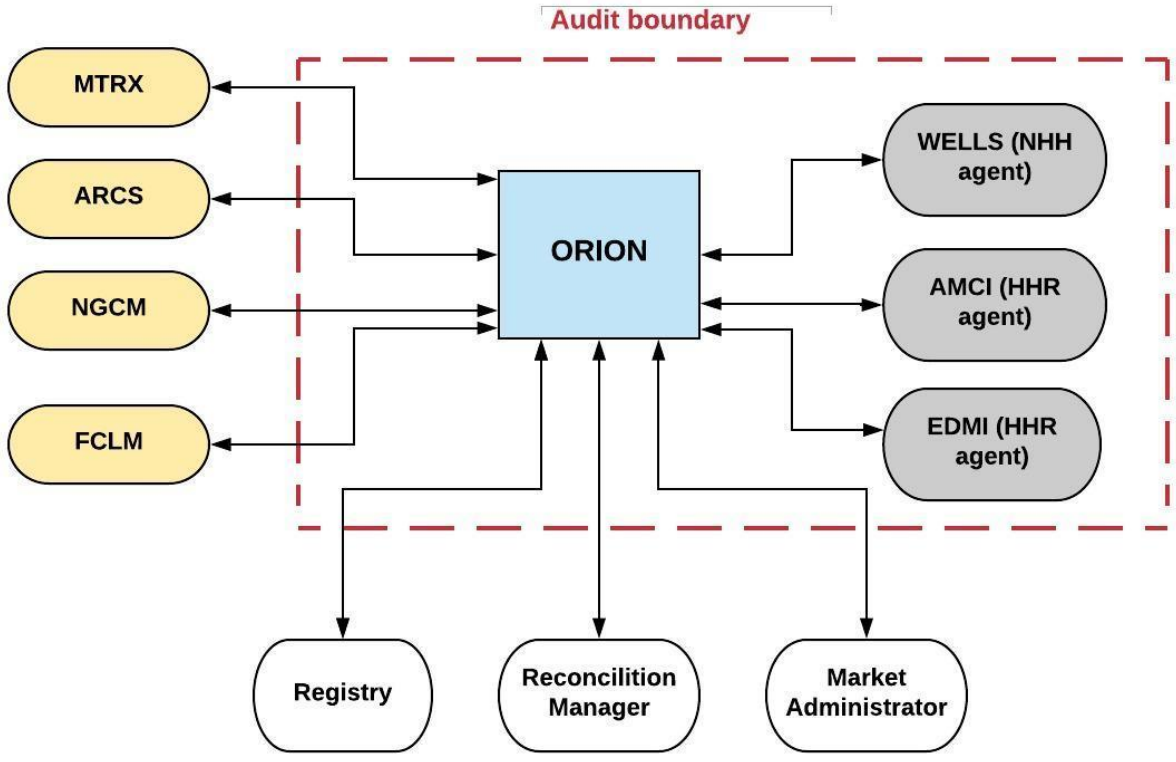
This reconciliation participant audit was performed at the request of Ecotricity to encompass the Authority's request for annual audit as required by clause 4, of Schedule 15.1 to support their application for certification.

The audit was carried out on the 12 and 13 March 2020, 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 in May 2019 by Ewa Glowacka (TEG & Associates Ltd). The findings of this audit were as follows:

Subject	Section	Clause	Non Compliance	Comments
Relevant information	2.1	11.2	Incorrect information for a small number of ICPs	Still exists
Provision of information	2.2	15.35	Meter Reading Frequency report not sent to the Authority; incorrect submissions for SVL0331	Still exists
Changes to registry information	3.3	10 of Schedule 11.1	Late trader's updates to registry, delayed updates to ICPs "active" status	Still exists
ANZSIC codes	3.6	9(1)(k) of Schedule 11.1	Incorrect ANZSIC code assigned to a small number of ICPs	Still exists
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	Information for some UML/SUML not populated or incorrect	Still exists
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"	Still exists
Losing traders must provide final information - standard switch	4.3	5 of Schedule 11.3	CS file sent late by one day for 0000967181TU523	Still exist
Non-half hour switch event meter reading - standard switch	4.4	6(1) of Schedule 11.3	ICP 1099575765CN6B2 did not switch on the same read	Cleared
Losing trader response to switch request and event dates – standard switch	4.8	Losing trader response to switch request and event dates – standard switch	6 switches were finalised late, for 2 switches the event date was not accepted and moved back by one day, 2 incorrect CS files	Still exists

Withdrawal of switch requests	4.15	17 of Schedule 11.3	For ICP 0000011210WEB4CNW was sent later than 2 calendar months after the event date of the switch	Still exists
NHH meters interrogated annually	6.9	8(1)(a)of Schedule 15.2	100% attainment was not achieved for more than 10 NSPs over 6 months	Still exists
NHH meters 90% read rate	6.10	9(1)of Schedule 15.2	90% attainment was not achieved for more than 10 NSPs over 6 months	Still exists
Electronic meter readings and estimated readings	9.6	17 of Schedule 15.2	HHR data is not checked for unexpected 0 values	Still exists
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHRAGGR files do not contain electricity supplied information	Still exists
Creation of submission information	12.3	15.5	Volumes for ICPs were submitted against different NSPs than that which was recorded in the registry	Cleared
Accuracy of submissions	12.7	15.12	Incorrect submissions for SVL0331 for two months	Cleared
Permanence of meter readings for reconciliation	12.8	4 of Schedule 15.2	Permanence of meter reading for the period Jan'18 to Feb'18 not achieved	Still exits
Historical Estimate process	12.11	4 of Schedule 15.3	Incorrect calculation of historical estimates for two scenarios conducted by ORION	Cleared
Historical estimate	13.3	10 of Schedule	Historical Estimates targets not met for	Still exits

reporting to RM		15.3	revision 3, 7, and 14.	

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 09/03/20 was examined to identify any inaccuracies. The Event Detail (EDA) file for the period 01/03/19 to 29/02/20 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,	3,575	
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	1	1002071443LCCB2
ICP with B or G Inst Type, or non-null Fuel or Gen Capacity that do not have a corresponding Injection Register	5	0000006713TR891 0000057749TR0DC 0000063224TR2DE 0000070334TRB76 1001149088CK46A
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	120	
All Active ICPs (ICP Status = 2) with Shared ICP List not blank	8	0006026192RN50F 0005165571RN9A6 0006466923RN9DF 0006792073RN776 0006799647RN862 0006795722RN859 0007175794RN1C7 0000030354CP158
All ICPs at ICP Status 001,12	19	
Submission Type HHR = Y, Profile does not contain HH	0	No evidence of this occurring
Submission Type HHR and Submission Type NHH both = Y	0	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	0000030354CP158 0000185048HB831 0006026192RN50F 0006795722RN859 0007175794RN1C7
All active ICPs with UNM Flag = Y	5	0000181384HB943 0005165571RN9A6 0006466923RN9DF 0006792073RN776 0006799647RN862
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

Section 3.5 - 27 ICPs recorded by distributors as having embedded generation have the profile in the registry RPS, PV1 or EG1.

Section 5.1 - 4 ICPs (0000030354CP158, 0006026192RN50F, 0006795722RN859, and 0007175794RN1C7) have incorrect information in the registry such as "UML flag" field and "Daily Unmetered kWh" field, which is not populated.

Section 12.7 – volumes for 3 ICPs in rev14 were not submitted; possibly some volumes not submitted for April'19 (rev7)

Section 13.1 - We reviewed NHH submissions for April'19 to compare NHHVOLS with ICP detail report for the same month. We identified a difference of 2048.17 kWh between the two files. The volumes submitted were lower than the volumes calculated in the ICP detail file. It was a single NSP, BPE0331, for which volumes were different.

Section 12.7 – Jan'20 analysis showed unsubmitted HHR volumes caused by an incorrect ICP status in the registry

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: 11.2, 15.2 From: 01-Mar-19 To: 29-Feb-20	Incorrect information for a small number of ICPs; incorrect volumes submission for Dec'18 (rev3) and Apr'19 (rev7), Jan'20 (day13) Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Weak Breach risk rating: 6
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as weak because processes for managing ICP status in the registry are not robust and result in under submitting volumes. The audit risk rating as medium because it requires more analysis of the volumes effected.

Actions taken to resolve the issue	Completion date	Remedial action status
We are migrating to a new platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

2.2. Provision of information (Clause 15.35)

Code reference

Clause 15.35

Code related audit information

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

Audit observation

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

Audit commentary

As noted in section 1.6 HHRVOLS file was late for Mar'19 by 4 minutes.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.2 With: 15.35 From: 17-Apr-19 To: 17-Apr-19	One HHRVOLS file for Mar'19 was late by 4 minutes Potential impact: None Actual impact: None Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are recorded as strong, it was one-off incident., Audit risk rating is recorded as low because there was no impact on settlement outcomes.

Actions taken to resolve the issue	Completion date	Remedial action status
This was an abnormal off slip up and the file was provided as soon as the issue was identified.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
This was an abnormal off slip up and the file was provided as soon as the issue was identified. Further, we are migrating to a new and more automated platform which we expect will resolve the root cause (time) but also be able to report better.	Complete	

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

We reviewed the process for data transmission between Ecotricity and agents.

Audit commentary

Ecotricity receives HHR data from the MEPs daily. Metering data from AMCI and EDMI 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 outcome

Compliant

2.4. Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

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

The audit trail must include details of information:

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

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

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

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

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

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

Audit observation

We reviewed the process for data transmission between Ecotricity, MEPs and agents.

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 records a complete audit trail for all data gathering and communication with the registry.

In the last audit we made a recommendation to reference all WELLS readings by a file name, our recommendation was implemented. All metering data received from Wells is referenced by a file name.

The logs of activities include 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

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

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 25 installations of metering category 3 and above. (20 category 3 metering installations, and 5 category 4 metering installations).

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

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

Audit commentary

In the Terms of Use section 15.3 (Residential/Commercial) said it states "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 and connection/reconnection process was examined and it has not changed since the last audit.

Audit commentary

It is a robust and compliant process. Ecotricity uses "inactive- new connection in progress (1,12)" status to take responsibility for the ICPs in the registry. As soon as the status is assigned, a MEP is nominated, and a SR is sent requesting the installation of a meter. Ecotricity gained 95 new connections in the period covered by this audit. We examined five new connections and confirm that the process was followed. An arrangement with FCLM is in place. FCLM is the preferred MEP.

We reviewed the EDA files to check the correctness of data. Ecotricity uses MEP's services to disconnect remotely (80% of disconnections). In a situation where it is not possible, a request is sent to WELLS and it is disconnected manually.

Audit outcome

Compliant

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

Code reference

Clause 10.33(1)

Code related audit information

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

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

Audit observation

It was covered during the audit.

Audit commentary

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:

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

Audit observation

The new connection process was examined. The Audit Compliance report was examined.

Audit commentary

Since the last audit, Ecotricity gained 95 new connections. As part of the new connection process, an installation is electrically connected as a certified meter is installed.

We identified one new installation (1000588645PC6D5), which is "active", the metering installation was certified by FCLM but still has not uploaded metering information to the registry.

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.

Audit commentary

Ecotricity demonstrated the existence of either a UoSA or other trading arrangement for all networks to which their ICPs are connected. Agreements are always in place before any ICP is switched in.

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

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

Audit commentary

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 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.

Audit commentary

Ecotricity gained 95 new connections in the audit period. The process is described in **section 2.9**. The process is managed by a dedicated team at Ecotricity which specialises in new connections and metering.

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 LIS file dated 09/03/20 and the EDA file and the Audit Compliance report for the period 01/03/19 to 29/2/20 were examined to check the correctness of information and if the registry was notified in the timeframe specified by the relevant clause.

Audit commentary

This section is linked to **section 3.5**. The new connection process is detailed in **sections 2.9**. The process in place ensures that the trader required information is populated as required by this clause.

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 examined the LIS and EDA files and the Audit Compliance report for the period covered by this audit.

Audit commentary

The table below shows the summary of updates in the registry.

Status update	Year	Total number of updates	No of updates within 5BD	No of updates later than 5BD	Average notification days [BD]	Percentage compliant
Change to active (2,0)	2018	118	54	64		54.2%
	2019	138	68	70		50.7%
	2020	175	102	73	15	**58.3%**
Change to electrically disconnected vacant property - (1,4)	2018	27		0		100%
	2019	52		0		100%
	2020	5	5	0	1	**100%**
Change to electrically disconnected ready for decommissioning (1,6)	2018	4	0	0		0%
	2019	5	1	4		80%
	2020	4	3	1	2.5	**75%**
Change to	2018	23	21	2		91.3%

electrically disconnected by AMI meter (1,7)	2019	34	34	0	1	100%
	2020	123	115	8	4.2	**93.5%**
Change to electrically disconnected at pole fuse (1,8)	2018	1	1	0		100%
	2019	1	0	1		0%
	2020	4	3	1	3.5	**75%**
Change to electrically disconnected due to meter disconnected (1,9)	2018	0				
	2019	0				
	2020	15	14	1	3.3	**93.3%**
Change to electrically disconnected at meter box switch (1,11)	2018	2	1	1		50%
	2019	2	2	0		100%
	2020	0				
Change to new connection in progress (1,12)	2018	67	56	9		83.5%
	2019	66	64	2		97%
	2020	95	95	0	1	**100%**
Trader (NT updates and MEP nominations are excluded)	2018	No data recorded				
	2019	No data recorded				
	2020	1,711	1,031	690	20	**60%**
MEP nomination	2018	No data recorded				
	2019	No data recorded				
	2020	993	967	26	1.03	**97.4%**

Status

There are still delays in assigning active status to new connections caused 41.7% of updates are later than 5 business days.

The Audit Compliance report recorded 33 new connections for which updated to “active“ status was delayed. The average delay is 7.65 business days, compliance 68%. It is caused by delays of updates from FCLM. Overall 41.7% of updated to “active” status is late. Updates of disconnections is well managed.

Trader

The number of backdated entries is higher than identified in the last audit. It is caused by correcting profiles assigned to ICPs, type of reconciliation.

The Audit Compliance report recorded 325 late trader updates of existing connections. The average delay is 12.12 business days.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.3 With: 10 of Schedule 11.1 From: 01-Mar-19 To: 29-Feb-20	Late trader updates to registry, status changes. 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. The new process of synchronising the registry information and ORION has decreased the number of late updates. Impact on settlement outcome is minor due to the low number of ICPs. Audit risk rating is recorded as low.

Actions taken to resolve the issue	Completion date	Remedial action status
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better. May / June 2020	May / June 2020	

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)):*
    - *arrange for a final interrogation to take place prior to or upon meter removal (clause 11.18(3)(a)); and*
    - *advise the MEP responsible for the metering installation of the decommissioning (clause 11.18(3)(b)).*

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

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

Audit observation

The new connection and ICPs decommissioning processes were examined. The registry files were reviewed.

Audit commentary

All ICPs have a MEP assigned in the registry. As soon as a meter is installed and the installation electrically connected, an MEP is nominated.

When an ICP needs to be decommissioned, Ecotricity requests from a MEP, the removal of a meter and a final read. 4 installations were decommissioned in the audit period. We checked decommissioned ICPs and confirm final reads were used for reconciliation.

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

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 EDA, LIS files and Audit Compliance report were reviewed for the audit period. The new connection process was described in **section 2.9**.

Audit commentary

The Audit Compliance report identified 33 new connections for which the update to "active" status was done later than 5 business days.

We confirm that the information provided to the registry for ICPs traded by Ecotricity is correct with the exception of the profile recorded for 25 ICPs having installed solar panels. The registry record says RPS. It was discussed with Ecotricity in details. The company explained some of them don't have solar panels installed (incorrect distributor entry)or the change to correct profile was delayed.

27 ICPs recorded by distributors as having embedded generation have the profile in the registry RPS, PV1 or EG1.

We identified 1 ICP (0000063224TR2DE) for which Import/Export meter is not installed but RPS PV1 profile is used.

4 ICPs (0000030354CP158, 0006026192RN50F, 0006795722RN859, and 0007175794RN1C7) have incorrect information in the registry such as "UML flag" field and "Daily Unmetered kWh" field, which is not populated. Ecotricity does a calculation in a separate spreadsheet. Every time Ecotricity populates these fields, Orion overrides them.

Population of the ANZIC code for 9 ICPs was later than 5 business days.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.5 With: 9 of Schedule 11.1 From: 01-Mar-19 To: 29-Feb-20	33 late updates to "active" status, incorrect profile for 25 ICPs (solar), missing information for 4 SUML ICPs Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate because there are some improvements that can be made but ORIONs functionality precludes it. The audit risk rating

	is low because the impact on the settlement outcome is negligible (small number of ICPs with very low usage).

Actions taken to resolve the issue	Completion date	Remedial action status
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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

We reviewed the Audit Compliance report and the LIS file for the period covered by this audit.

Audit commentary

We identified 3 ICPs (0000501876CEA5E, 0007167412RNDA0 and 0110010953EL30D). ICP 1002071443LCCB2 had status T99.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.6 With: 9(1)(k) of Schedule 11.1 From: 01-Mar-19 To: 29-Feb-20	Incorrect ANZSIC code assigned to 4 ICPs Potential impact: Low Actual impact: None Audit history: None 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. More monitoring of the status of new connections is required. The audit risk rating is low because the impact on the settlement

	outcome is minor (small number of ICPs).

Actions taken to resolve the issue	Completion date	Remedial action status
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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 was examined.

Audit commentary

Ecotricity trades 10 SUML ICPs and 2 UML ICPs. 4 ICPs (0000030354CP158, 0006026192RN50F, 0006795722RN859, and 0007175794RN1C7) have no "Daily Unmetered kWh" field populated.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.7 With: 9(1)(f) of Schedule 11.1 From: 01-Mar-19 To: 29-Feb-20	4 SUML ICPs are missing (Daily Unmetered kWh) in the registry Potential impact: Low Actual impact: None Audit history: None 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 but ORIONs functionality precludes it. The audit risk rating is low because the impact on the settlement outcome is negligible (small number of ICPs with very low usage).

Actions taken to resolve the issue	**Completion date**	**Remedial action status**
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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 Ecotricity registry list and the Audit Compliance Report for the audit period were checked for any variances between the initial electrical connection date, meter certification date, and the active date. We found two instances where the distributors entry of electrical connection date was incorrect was incorrect.

The process for the management of ICP reconnection and the timeliness of registry updates is discussed in **section 2.11**.

Audit commentary

In **section 3.3** it was noted that 58.3% of updates of the "active" status were later than 5BD. The Audit Compliance report recorded 33 new connections for which updated to "active" status was delayed. The average delay is 7.65 business days, compliance 68%.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.8 With: 17 of Schedule 11.1 From: 01-Mar-19 To: 29-Feb-20	A number of ICPs have incorrectly assigned "inactive" status when they should be "active" 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 they require some adjustment to the process. Minor impact on settlement outcomes. Audit risk rating is low because a small number of ICPs are effected

Actions taken to resolve the issue	Completion date	Remedial action status
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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 for connections and disconnections was reviewed.

Audit commentary

In **section 11.4** we described that 27 ICPs have the incorrect status "inactive" in the registry. ORION status was "active" therefore volumes were submitted to the reconciliation manager. There is on-going problem to match ICP status in ORION and the registry. We trust a new system shortly implemented by Ecotricity will successfully address this issue.

Currently the status reason is used as a comparison parameter not the status, which could be confusing. Additionally a check of statuses is done only from ORION's point of view not the registry. During the audit changes were made to fix it.

Westpower queried Ecotricity of the status of two ICPs 000724360WPC95 and 0000816070WP92D. Both of them had "inactive" status in the registry since 21/12/18 but volumes were provided in EIEP1 to the network. Ecotricity corrected the registry on 11/3/20. Volumes will be washed up.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.9 With: 19 of Schedule 11.1 From: 01-Mar-19 To: 29-Feb-20	A number of ICPs have incorrectly assigned "inactive" status when they should be "active" 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 because they require some adjustment to the process. Minor impact on settlement outcomes. Audit risk rating is low because a small number of ICPs are affected

Actions taken to resolve the issue	Completion date	Remedial action status
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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. As soon as an ICP identifier is created for a new connection, Ecotricity updates the status.

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

The standard switch process was examined to assess compliance. We reviewed the EDA files and the Switch Breach Report for the audit period.

Audit commentary

During the audit period 1,785 were sent. Once all pre-conditions are met the Sales Team "triggers" the sending of NT files to the registry. All switches were sent within 2 business days after the agreement came into effect.

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 may disregard every event date established by the losing trader for an ICP for which when the losing trader received notice from the registry manager under clause 22(a) the losing trader had been responsible for less than 2 months.

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 7 AN files as a response to notifications from the registry for switches which were complete. AN files are always sent manually using the registry web interface the same or following day. The Switch Breach Report did not report any breaches. The company policy is always to accept the switch date which is specified in the NT file sent by a gaining trader.

Compliance with clause 4(1)(b) of Schedule 11.3 was met.

Audit outcome

Compliant

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

Code reference

Clause 5 Schedule 11.3

Code related audit information

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

The standard switch process was examined to assess compliance. We reviewed the EDA file for the period of this audit and the Switch Breach Report.

Audit commentary

Ecotricity sent 3 CS files as a response to a gaining trader. The Switch Breach Report did not report any breaches.

We checked all the information in all CS files. In one file the Last Read Date was not correct, in another file an incorrect Read Type flag was used (It should be “A”, not “E”).

Average daily consumption for NHH reads provided by Wells is calculated correctly but we are not sure about ICPs for which daily reads are provided by MEPs.

Audit outcome

Non-compliant

Non-compliance	Description

Audit Ref: 4.3 With: 5 of Schedule 11.3 From: 01-Mar-19 To: 29-Feb-20	Incorrect information in 3 CS files 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, the process in place is not satisfactory, it needs to be re-engineered. Ecotricity sent 3 CS files and 2 of them had incorrect information. Audit risk rating is low.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.		May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur		**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.		May / June 2020	

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

Code reference

Clause 6(1) and 6A Schedule 11.3

Code related audit information

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

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

If the gaining trader disputes a switch meter reading because the switch event meter reading provided by the losing trader differs by 200 kWh or more, the gaining trader must, within 4 calendar months of the registry manager giving the gaining trader written notice of having received information about the switch completion, provide to the losing trader a changed switch event meter reading supported by 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 EDA file and the Switch Breach Reports for the audit period were analysed to assess compliance with clause 6A of Schedule 11.3. We reviewed the process.

Audit commentary

According to the Switch Breach report one RR file was sent late (0001413605AL8EC). It was sent after 5 months, it was overlooked by Ecotricity's staff.

Ecotricity sent 143 RR files for a standard switch. Ecotricity did not receive any RR file for a standard switch. ORION imports a switch event read from CS files for all switches. 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 time-consuming process because it is done manually and open to human error. The process is not well documented.

We reviewed 10 RR files, Ecotricity provided supporting calculations, which we found correct.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.4 With: 6(1) of Schedule 11.3 From: 01-Mar-19 To: 29-Feb-20	One RR file was sent late Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are recorded as strong even though it is a manual process. Impact on settlement outcome is minor. Audit risk rating is recorded as low.

Actions taken to resolve the issue	Completion date	Remedial action status
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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 EDA file and the Switch Breach Reports for the audit period were analysed

Audit commentary

Ecotricity did not receive any RR file for a standard switch.

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 again 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 EDA file and Switch Breach History details report for the audit period.

Audit commentary

Ecotricity sent 614 NTMI files to the registry. All switches were sent within 2 business days after the agreement came into effect.

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

Audit observation

The EDA file and Switch Breach History details report for the audit period were analysed.

Audit commentary

Ecotricity sent 4 CS files as a response to a gaining trader. The Switch Breach Report reported 2 breaches. It appears that Ecotricity is not clear that the Switch Move must be finalised quicker than a Standard Switch.

We checked all the information in all CS files. In one file the Last Read Date was not correct.

Average daily consumption for NHH reads provided by WELLS is calculated correctly but we are not sure about ICPs for which daily reads are provided by MEPs.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.8 With: 10(1) of Schedule 11.3 From: 01-Mar-19 To: 29-Feb-20	2 CS files late. Incorrect information in one CS file 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, the process in place is not satisfactory, it needs to be re-engineered. Ecotricity sent 4 CS files and one of them had incorrect information. Audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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

Code reference

Clause 10(2) Schedule 11.3

Code related audit information

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

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

Audit observation

The EDA file and Switch Breach History details report for the audit period were analysed.

Audit commentary

For all ICPs (4) Ecotricity accepted the event date requested by the gaining traders.

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

The EDA file and Switch Breach History details report for the audit period were analysed.

Audit commentary

As per **section 4.9,** Ecotricity accepted the event date requested by the gaining traders and provided a switch event meter reading accordingly.

Audit outcome

Compliant

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

Code reference

Clause 12 Schedule 11.3

Code related audit information

The gaining trader may use the switch event meter reading supplied by the losing trader or may, at its own cost, obtain its own switch event meter reading. If the gaining trader elects to use this new switch

event meter reading, the gaining trader must advise the losing trader of the switch event meter reading and the actual event date to which it refers as follows:

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

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

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

Audit observation

The EDA file and the Switch Breach Reports for the audit period were analysed to assess compliance. We reviewed the process.

Audit commentary

Ecotricity sent 32 RR files for switch move. ORION imports a switch event read from CS files for all switches. 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 time-consuming process because it is done manually and open to human error. The process is not well documented.

We sampled 10 RR files for standard switch. The same process is used for the standard switch and the Switch Move. Ecotricity provided supporting calculations, which we found correct.

One RR file (0000041307HB015) was late due to difficulties in obtaining a WELLS read.

Audit outcome

Non-compliant

Non-compliance	Description

Audit Ref: 4.11 With: 12 of Schedule 11.3 From: 01-Mar-19 To: 29-Feb-20	One RR file was sent late Potential impact: None Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are recorded as strong. The process is managed well. There was no impact on settlement outcome.. Audit risk rating is recorded as low.

Actions taken to resolve the issue	**Completion date**	**Remedial action status**
This was an irregular error from the team.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
This was an irregular error from the team.	Complete	

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

Code reference

Clause 14 Schedule 11.3

Code related audit information

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

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

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

A gaining trader must advise the registry manager of the switch and expected event date no later than 3 business days after the arrangement comes into effect.

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

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

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

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

> *14(4)(a) – the proposed event date is in the same month as the date on which the gaining trader advised the registry manager; or*
>
> *14(4)(b) – the proposed event date is no more than 90 days before the date on which the gaining trader advises the registry manager and this date is agreed between the losing and gaining traders.*

Audit observation

The gaining switch process was examined. The EDA file was examined to determine if any gaining switches occurred.

Audit commentary

According to the EDA file one NTHH was sent (1001108200UN77B). It was a by delays of updates from MEPs, category 3 metering installation.

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 gaining switch process was examined. The EDA file was examined to determine if any gaining switches occurred.

Audit commentary

Ecotricity received one notification from the registry for ICP 0000191602TR0B5. The switch was withdrawn.

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 gaining switch process was examined. The EDA file and the Switch Breach Report for the audit period was examined

Audit commentary

There were no breaches recorded by the Switch Breach Report. As per **section 4.12**, Ecotricity sent only one NTHH. The switch was finalised within 3 business days.

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 files and the Switch Breach Report for the audit period were reviewed.

Audit commentary

The Switch Breach Report has not recorded any breaches. Ecotricity sent 366 NW files and received 95 files. The most common withdrawal reason code was "CE". According to the Terms and Conditions, a customer needs to give 30 days' notice before switching to another trader. If a customer decides to wait for 30 days, Ecotricity uses the "CE" reason code.

We sampled 11 NW files to assess if the correct withdrawal reason code was used. We identified 3 ICPs for which an incorrect withdrawal reason code was used.

Overall our comment is that clear guidelines need to be written to explain what withdrawal reason code should be used in which situation. A few people left the switching team and clear guidelines would appease some confusion as to which code is most appropriate to use.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.15 With: 6(1) of Schedule 11.3 From: 01-Mar-19 To: 29-Feb-20	Incorrect withdrawal reason code used for 3 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	Controls are recorded as moderate because they require some adjustment to the process. Minor impact on settlement outcomes. Audit risk rating is low because of the small number of ICPs affected

Actions taken to resolve the issue	Completion date	Remedial action status
This was an irregular error from the team.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
This was an irregular error from the team.	Complete	

Description	Recommendation	Audited party comment	Remedial action

Not clear understanding which a withdrawal reason code use I NW file	No clear understanding of which withdrawal reason code to use in NW file		

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 used in the switching process are validated meter readings or permanent estimates. The cost of additional interrogation is covered in a commercial agreement between Ecotricity and companies providing meter readings.

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

Ecotricity is a switch saving protected trader as per the registry entry.

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.

Ecotricity sent 20 NWCX files. We checked 11 files, a reason code CX was correctly used.

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 LIS file was examined.

Audit commentary

Ecotricity traded 8 SUML ICPs. As ORION does not have the functionality to calculate unmetered volumes for UML ICPs, the company has developed a process to address the shortcomings of the software. The volumes are submitted to the reconciliation manager by manually creating a file.

4 ICPs (0000030354CP158, 0006026192RN50F, 0006795722RN859, and 0007175794RN1C7) have incorrect information in the registry such as “UML flag” field and “Daily Unmetered kWh” field, which is not populated. Ecotricity does a volume calculation in a separate spreadsheet., which was reviewed during the audit. One error was identified which is described in **section 13.3**.

Audit outcome

Compliant

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

Code reference

Clause 10.14 (2)(b)

Code related audit information

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

Audit observation

The LIS file was examined.

Audit commentary

The analysis of the LIS file showed that Ecotricity does not have any UML ICP which has volumes that exceed 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:*
    - *the date the limit was calculated or estimated to have been exceeded*
    - *the details of the corrective measures that the retailer proposes to take or is taking to reduce the unmetered load.*

Audit observation

The LIS file was examined.

Audit commentary

The analysis of the LIS file showed that Ecotricity does not have any UML ICP which has volumes exceeding 3,000 kWh per annum.

Audit outcome

Compliant

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

Code reference

Clause 11 Schedule 15.3, Clause 15.37B

Code related audit information

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

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

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

Audit observation

The LIS file was examined.

Audit commentary

Ecotricity does not trade DUML and does not have such plans. 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 is 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 09/03/20 was reviewed.

Audit commentary

Ecotricity trades NHH and HHR ICPs. There are 10 ICPs to which standard or shared unmetered load is attached. No subtraction is used to determine submission information.

According to the registry 3,578 ICPs have embedded generation and is recorded by distributors in the registry. We identified 27 ICPs for which distributors recorded an embedded generation (solar) in the registry but Ecotricity recorded the profile RPS.

We identified 1 ICP (0000063224TR2DE) for which an Import/Export meter is not installed but the RPS PV1 profile is used.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.1 With: 15.13 From: 01-Mar-19 To: 29-Feb-20	27 ICPs have embedded generation recorded in the registry but ECOT uses RPS profile in the registry, the reconciliation manager was not notified Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3
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 of the small number of ICPs

Actions taken to resolve the issue	**Completion date**	**Remedial action status**
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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 and 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 and the Audit Compliance Report was reviewed to identify which profiles Ecotricity uses for reconciliation purposes.

Audit commentary

Ecotricity uses HHR, RPS, PV1, and EG1. 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

Metering data is provided by MEPs and three agents.

Audit commentary

NHH meter data is validated by Ecotricity's staff manually. HHR data is validated by ORION. Before volumes are submitted to the reconciliation manager they are validated again to check for any anomalies.

During the audit Ecotricity stated no defective installations were identified since the last audit.

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 is 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

Data collection for HHR ICPs is conducted by MEPs themselves or it is provided by AMCI and EDMI. The obligation of compliance lies with the agent, but it is still the responsibility of Ecotricity. The company does not collect metering data themselves.

Audit commentary

Compliance with this clause is assessed as a part of the MEPs audit. AMS (HHR agent) and EDMI were 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. NHH readings are received from WELLS. Ecotricity does not accept customer reads as a part of BAU. It is treated as the exception as a last resort to request a customer to provide their own read.

Audit commentary

As a part of this audit we reviewed the WELLS audit. WELLS has processes in place to identify and report on tampering, damage, broken and missing seals, phase failure, and unsafe situations. They also read 12 smart non-AMI meters, which are reconciled as HHR.

We sampled 10 meter reads from WELLS to compare with entries in ORION.

As described in the previous audits, Ecotricity has a process in place to send an email that asks customers to send photos of their meter, if they have a legacy meter and WELLS has difficulties gaining access.

Upon switch in, the system picks up that the customer does not have a smart meter and will send the email out to WELLS requesting regular reads. Ecotricity has additionally provided meter reader cards to customers to be left at the property, when the meter reader does not have access to the meter. On the card a customer is asked to send a photo of their meter to assist with billing.

In the last audit we identified one flaw in the process, which precluded sending a request to WELLS for customers for whom an incorrect flag is recorded in ORION. Before the audit was finalised Ecotricity created a new report to address the issue.

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

The process has not changed since the last audit.

Audit commentary

Ecotricity closely monitors NHH ICPs, which have not been read. There is a shared Google sheet regarding hard to read ICPs, the process is to identify new problem ICPs. 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

We reviewed the Meter Reading Frequency Report from Apr'19 to Jan'20. According to the reports Ecotricity did not have 100% attainment every month for a number of NSPs. Details are shown below.

Month	Total NSPs where ICPs were supplied for 12 months	NSPs<100% read	Total number of ICPs not read for 12 months
201904	74	16	25
201905	78	13	25
201506	81	13	23
201907	82	13	24
201908	84	13	24
201909	91	15	29
201910	90	17	32
201912	96	16	27
202001	95	20	31

Ecotricity closely monitors NHH reads, if there are no reads for six months, a customer is asked to send a photo.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.9 With: 8(1(a)of Schedule 15.2 From: 01-Mar-19 To: 29-Feb-20	100% attainment was not achieved for, on average, 13 NSPs per month 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	The controls are recorded as moderate because the process needs to be refined. Further, Ecotricity's business strategy is to replace legacy meters with smart meters after a switch is complete. Audit risk rating is low because of the small number of ICPs effected. ORION estimates data at the end of each month.

Actions taken to resolve the issue	Completion date	Remedial action status
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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

Code reference

Clause 9(1) and (2) Schedule 15.2

Code related audit information

In relation to each NSP, each reconciliation participant must ensure that for each NHH ICP at which the reconciliation participant trades continuously for each 4 months, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every 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

We reviewed the Meter Reading Frequency Report from Apr'19 to Jan'20. According to the reports Ecotricity did not have 90% attainment every month for a number of NSPs. Details are shown below.

Month	Total NSPs where ICPs were supplied for 4 months	NSPs<90% read	Total number of ICPs not read for 4 months
201904	105	15	18
201905	103	15	17
201506	106	14	16
201907	106	12	14
201908	102	11	14
201909	104	13	17
201910	104	14	19
201912	104	10	11
202001	105	12	12

Ecotricity closely monitors NHH reads, if there are no reads for six months, a customer is asked to send a photo.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.10 With: 9(1)of Schedule 15.2 From: 01-Mar-19 To: 29-Feb-20	90% attainment was not achieved for, on average, 12 NSPs per month 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	The controls are recorded as moderate because the process needs to be refined. Further, Ecotricity's business strategy is to replace legacy meters with smart meters after a switch is complete. Audit risk rating is low because of the small number of ICPs effected. ORION estimates data at the end of each month.

Actions taken to resolve the issue	Completion date	Remedial action status
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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 MEPs and agents.

Audit commentary

HHR interrogation data requirements were reviewed as part of the MEPs audits. We reviewed the EDMI 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 MEPs and agents.

Audit commentary

HHR interrogation data requirements were reviewed as part of the MEPs audits. We reviewed the EDMI 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 MEPs and agents.

Audit commentary

HHR interrogation data requirements were reviewed as part of the MEPs audits. We reviewed the EDMI and AMCI audits and confirm compliance.

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 ±0.1% (±2 seconds).

Audit observation

Ecotricity receives HHR data from MEPs and EDMI.

Audit commentary

Compliance is confirmed based on Ecotricity agents audit reports. We reviewed data provided by ARC and FCLM and confirm that the trading period duration is 30 minutes.

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

All meter readings are conducted by MEPs or agents upon Ecotricity's request.

Audit commentary

Ecotricity keeps a copy of raw data for traded ICPs, which are read by WELLS and MEPs. The only time that Ecotricity have raw meter data is when a customer provides their own read on very rare occasions.

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 report for AMCI and EDMI. 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

Registry files were reviewed to check what profiles were used by Ecotricity.

Audit commentary

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

Audit outcome

Compliant

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

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

Code reference

Clause 19(1) Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

WELLS reads NHH meters on behalf of Ecotricity.

Audit commentary

At the time of uploading data to ORION data goes through basic validation. Once it is done Ecotricity's staff manually check each read. If a meter reading is considered inaccurate during validation, WELLS is advised and asked to read it again. The previously provided read is flagged as "misread" and not used for reconciliation. Ecotricity showed us a number of examples.

Audit outcome

Compliant

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

Code reference

Clause 19(2) Schedule 15.2

Code related audit information

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

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

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

(i) The total of all substituted intervals matches the total consumption recorded on a meter, if available; and

(ii) The reconciliation participant considers the pattern of consumption to be materially similar to the period in error

Audit observation

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, the process has not changed since the last audit. If incorrect HHR data is identified, MEPs are notified and asked to read again. If it is not successful, it is considered to be a faulty meter and Ecotricity requests a replacement. There were no such cases since the last audit.

Audit outcome

Compliant

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

Code reference

Clause 19(3) Schedule 15.2

Code related audit information

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

Audit observation

It was discussed during the audit.

Audit commentary

Ecotricity does not have any installations where error or loss compensation occurs. Any multipliers recorded in the registry are uploaded to ORION through the 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 19(4) and (5) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

The company receives a copy of raw data only, which is never overwritten. Raw data is archived by MEPs, EDMI, and WELLS.

Audit commentary

During the audit we viewed 4 readings from WELLS which Ecotricity considered inaccurate. WELLS provided new readings and the previous readings were flagged as "misread".

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 the ability to record a flag to identify actual and estimated readings.

Audit commentary

We reviewed readings in ORION as a part of the review of CS files (switching section) and comparing metering data provided by MEPs and data recorded in ORION. All readings are correctly labelled. 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 validated, estimated and permanent estimated readings to create NHH and HHR submission files.

Audit commentary

In a situation where an actual data is not available, ORION estimates data for NHH ICPs using estimated daily consumption (EDC). EDC is updated after each actual read.

When actual data is not available 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.

As recorded in the last audit, Ecotricity trades 12 ICPs for which energy is recorded by smart meters which have stopped communicating and the MEPs are not able to read them remotely. These meters are read by WELLS then the register reads are profiled. More details are in **section 9.4**.

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

During the audit, we viewed data provided by MEPs and compared with data stored in ORION.

Audit commentary

We confirm that data is imported to ORION as it is delivered from the MEPs or 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 ORION module identifies missing intervals and estimates using register reads.

Audit commentary

During the audit, Ecotricity described estimation methods for HHR estimates. All estimated intervals are correctly labelled.

We went through 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.

There are 12 ICPs which stopped communicating. As was described in the previous audits, Ecotricity still treat their customers as a HHR profile but have them read by WELLS. The reason for it is that ORION does not “allow” the changing of a type of customer from NHH to HHR and back.

To address the issue, Ecotricity arranged WELLS to read these meters manually. Readings are provided to Agility, which distribute volumes using the HHR profile across the number of periods between the two actual reads. Once it is done it is uploaded to ORION. It is not an ideal way of estimating intervals based on manual reads. It is the best solution that Agility can offer, there are no plans to change it.

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.

Audit commentary

The process has not changed since the last audit. The validation report provided by ORION is not reliable therefore reading 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 MEPs. Data is uploaded automatically on a daily basis to ORION.

Audit commentary

As a daily task, Ecotricity's staff checks an errors directory to see if all metering data was uploaded successfully. If any issues were identified during upload, ORION marks it with an error flag and the file is not uploaded. If MEPs identify known issues with data Ecotricity is notified.

Events logs are provided by MEPs, which are reviewed. Since the last audit, none of them provided any information which indicated that the integrity of data was affected.

ARCS log files provides limited information because of the nature of their installations.

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-19 To: 29-Feb-20	HHR data is not checked for unexpected 0 values 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; they do not cover all requirements of this clause e.g. "unexpected 0 values". Low risk rating is assigned due to a minor impact on settlement outcomes because data is highly scrutinized during billing run

Actions taken to resolve the issue	Completion date	Remedial action status
This will be difficult to check for the period of lockdown however we recognise once lockdown ends we will be able to improve this process. Further, we are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	To be confirmed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

This will be difficult to check for the period of lockdown however we recognise once lockdown ends we will be able to improve this process. Further, we are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	To be confirmed	

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

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

Code reference

Clause 13.136

Code related audit information

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

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

Audit observation

Ecotricity is not a generator.

Audit commentary

This clause is not applicable. 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 relevant grid owner half-hour metering information for:

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

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

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

Audit observation

Ecotricity is not a generator.

Audit commentary

This clause is not applicable. 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 a generator.

Audit commentary

This clause is not applicable. 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 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 a generator.

Audit commentary

This clause is not applicable. 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 09/03/20 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 Apr'19 and Jan'20.

ORION still does not support the PV1 profile.

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

We examined two NSPs to confirm if ICP days calculation was correct. The process for the calculation of ICP days was examined as a part of historical estimate scenarios.

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

Audit commentary

The table shows the ICP days difference between GR-100 and ICPDAYS files.

Month	R0	R1	R3	R7	R14
Feb-18	-3.15%	-3.46%	-3.41%	-3.32%	-0.21%
Mar-18	-3.12%	-3.38%	-3.36%	-3.36%	-0.15%
Apr-18	-3.47%	-3.65%	-3.60%	-3.37%	-0.16%
May-18	-3.37%	-3.42%	-3.67%	-3.36%	0.00%
Jun-18	-3.28%	-3.37%	-3.32%	-3.11%	-0.07%
Jul-18	-3.21%	-3.17%	-3.15%	-0.07%	-0.07%
Aug-18	-2.94%	-2.97%	-2.86%	-0.18%	-0.07%
Sep-18	-2.95%	-2.92%	-2.70%	-0.19%	-0.06%
Oct-18	-2.80%	-2.57%	-2.65%	-0.12%	0.00%
Nov-18	-2.70%	-2.66%	-0.09%	-0.10%	-0.02%
Dec-18	-2.74%	-2.68%	-0.07%	-0.12%	-0.12%
Jan-19	-2.82%	-0.16%	-0.15%	-0.17%	
Feb-19	-1.72%	-0.08%	-0.12%	-0.14%	
Mar-19	-0.04%	-1.60%	-0.12%	-0.03%	
Apr-19	0.00%	-0.02%	-0.02%	0.00%	
May'19	0.00%	0.00%	0.02%	-0.02%	
June'19	0.00%	-0.06%	-0.09%	-0.02%	
July'19	0.00%	0.00%	0.00%	0.00%	
Aug'19	0.00%	-0.03%	-0.05%		
Sept'19	0.00%	0.00%	-0.01%		
Oct'19	0.00%	0.00%	-0.03%		
Nov'19	0.00%	-0.03%	-0.01%		
Dec'19	0.00%	-0.01%			
Jan'20	-0.02%	-0.02%			
Feb'20	-0.01%				

There is a significant improvement in the accuracy of the calculation of ICPDAYS in comparison with the last audit. Before reconciliation files are submitted, Ecotricity compares ICPDAYS calculated by the registry with ORION.

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

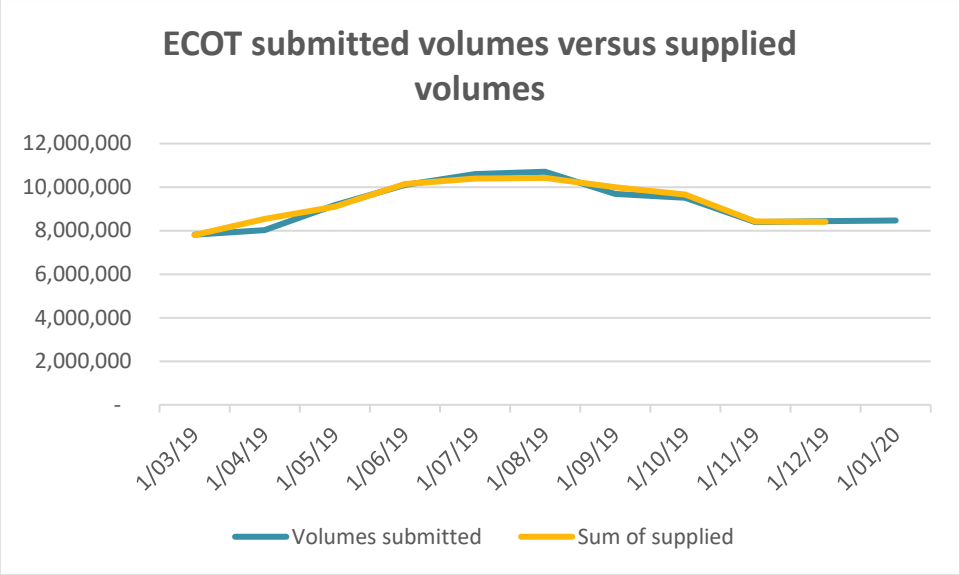
15.7(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.

Audit observation

Ecotricity submits AV-120 every month for the current month and scheduled revisions.

Audit commentary

The graph below shows a comparison between volumes submitted and supplied (billed) for the period Mar'19 to Jan'20.



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 April'19 and Jan'20. We compared the volumes in HHRVOLS and HHRAGGR for selected months.

We checked the GR-090 (ICP missing) file for April'19 and Jan'20 (day 4 submissions).

Audit commentary

GR-090 files (day 4) were reviewed. The table below shows the results of the analysis.

Month	Number of ICPs
03/19	**182**
A	96
R	86
04/19	**450**
A	402
R	48
05/19	**25**
A	2
R	23
06/19	**131**
A	0
R	131
07/19	**37**
A	1
R	36
08/19	**45**
A	3
R	42
09/19	**43**
A	12
R	31
10/19	**91**
A	27
R	64
11/19	**67**
A	4
R	63
12/19	**43**
A	1
R	42
01/20	**61**
A	0
R	61
02/20	**51**
A	2
R	49

Legend

A – ICP volumes not included in HHRAGGR

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

The overall number of discrepancies has increased. It would appear that many volumes are submitted because of a mismatch of the ICP status between the registry and ORION. The last audit described a process where every week ORION was synchronised with a specially designed spreadsheet. The synchronisation between the registry and ORION occurs before submitting files to the reconciliation manager. Currently the status reason is used as a comparison parameter not the status, which could be confusing. Additionally a check of statuses is done only from ORION's point of view not the registry.

We had a closer look at GR-090 for Jan'20. We are not sure if GR-090 provides accurate information. We checked GR-090 for Jan'20 and came to the conclusion that 29 ICPs (47%), according to the registry

records, were disconnected, decommissioned or were traded by another retailer. Ecotricity confirm that all ICPs in question had the status "active" in the registry therefore volumes were submitted.

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-19 To: 29-Feb-20	HHRAGGR files do not contain electricity supplied information Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Ecotricity submits submission volumes as per the reconciliation manager specification.

Actions taken to resolve the issue	Completion date	Remedial action status
We will continue to submit volumes in accordance with RM specification.		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will continue to submit volumes in accordance with RM specification		

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 meter data is collected by MEPs, EDMI and AMCI as agents.

Audit commentary

Audit commentary

Compliance with this clause has been demonstrated by the MEP audits. We reviewed agents audit reports provided by AMCI (AMS) and EDMI, which confirm compliance.

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

Ecotricity provided reconciliation data for Apr'19 and Jan'20.

Audit commentary

Ecotricity submits volumes for both NHH and HHR ICPs. Ecotricity prepares HHR and NHH submissions using ORION. Data was submitted in the time period covered by this audit with one exception. As described in **section 1.6**, HHRVOLS file for March'19 was late by 4 minutes.

Audit outcome

Non-compliant

Non-compliance	Description

Audit Ref: 12.2 With: 15.4 From: 01-Apr-19 To: 04-Apr-19	HHRVOLS for March'19 was late by 4 minutes Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are recorded as strong. The process in place is satisfactory. Audit risk rating is recorded as low because there is no impact on settlement outcomes.

Actions taken to resolve the issue	**Completion date**	**Remedial action status**
This was an abnormal off slip up and the file was provided as soon as the issue was identified.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
This was an abnormal off slip up and the file was provided as soon as the issue was identified.	Complete	

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 whereby, before the submission of volumes information, it compares the registry data and data stored in ORION. This process assures that all ICPs, for which they are responsible, have volumes allocated to the correct NSP indicated by the data held in the registry.

Audit commentary

The process to align the registry and ORION NSPs is part of a monthly routine to compare the registry records and ORION. We reviewed submission files for Jan'20 and confirm that volumes were allocated to the NSPs indicated by the data held in the registry.

Ecotricity provided analysis of HHR ICPs volume allocation to NSPs for Dec'18. The allocation was correct but the number of ICPs varied because of ICPs changing from NHH to HHR type of reconciliation. It was caused by delays of the registry information being updated after legacy meters are replaced by AMI-meters.

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

Ecotricity is not a grid owner.

Audit commentary

This clause is not applicable. 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

Ecotricity is not embedded network owner.

Audit commentary

This clause is not applicable. 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

Ecotricity is not a generator.

Audit commentary

This clause is not applicable. 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. It has not changed since the last audit.

Every month, before day 13, revision files are submitted for month 3, 7, and 14.

Audit commentary

ORION has a built-in functionality that as soon as meter readings are corrected, for example RR files, it flows through to submission volumes. It was part of the NHH scenarios described in **section 12.11**.

We reviewed GR-170NHH for Mar'19 to Oct'19 to check variances between subsequent monthly submissions. The highest difference was -10 % for May'19.

We reviewed HHR submissions for Dec'18. We analysed day 4 submission and the consecutive revisions. We checked if ICPs volume information was allocated to the NSP recorded in the registry. Our conclusion is that the NSP allocation clean-up project conducted by Ecotricity in the past has paid off, information was correct.

It is a different story to how volumes were allocated to NHHVOLS and HHRAGGR, in particular, revisions. Some ICPs were "moving" from NHHVOLS to HHRAGGR, the type of profile was changing due to meter changes or an incorrect setup in ORION which precluded the correct allocation of volumes to HHRVOLS, instead being allocated to NHHVOLS. ORION has great difficulty in managing the transition from NHH to HHR. The company strategy is to reconcile all ICPs as HHR therefore each month there are many meter changes occurring.

We identified 5 ICPs which were included in R0 but not R14. Our analysis was discussed with Ecotricity in detail, the company provided a very detailed explanation for each issue raised.

- 0000539590KE068 – Changed on 31 Jan 2020 to Deemed Site Class Id 1. This ICP is NOT in the AV80 NHH Detail.
- 0000601080TU980 – changed on 10 Feb 2020 to Deemed Site Class Id 1. This ICP is NOT in the AV80 NHH Detail.
- 0003551010AC8A5 – Changed on 4 Feb 2020 to Deemed Site Class Id 1. This ICP is NOT in the AV80 NHH Detail.
- 0000025816UNB24 – was submitted as NHH
- 0007184957RN8DF – was submitted as NHH

Ecotricity updated their processes for pre-submission validation of volume allocation following the findings of this audit.

The comparison? of HHR submissions for Jan'20 (day13) with the LIS file for Jan'20 showed the following

ICP	Recon status	Volume
0000000719DE717	not ECOT ICP	8.49
0000003542NT5AB	status updated to active on 2/4/20	
0000005583DE746	status updated to active on 2/4/20	
0000018912EA001	not ECOT ICP	3561.41
0000033997TRCD6	status updated to active on 2/4/20	
0000057300TE0BF	status updated to active on 2/4/20	
0000135652UN20D	not ECOT ICP	99
0000161821TR2B7	status updated to active on 2/4/20	
0000207852DE8D1	status updated to active on 2/4/20	
0000222470TEFA1	status updated to active on 2/4/20	
0000577444UN242	status updated to active on 2/4/20	
0001619533PC122	not ECOT ICP	0
0003133746AAE96	decom in Dec'19	156.35
0005281733RN6C8	status updated to active on 2/4/20	
0005707870RN094	not ECOT ICP	7.92
0005794870RN5B0	status updated to active on 2/4/20	
0006135463RN235	not ECOT ICP	0
0009901104LN959	status updated to active on 2/4/20	
0010402280EL98F	ECOT from 28/2/20	19.57

0071550555WAF67	status updated to active on 2/4/20	
0110243617LCCA5	status updated to active on 2/4/20	
0142945676LC8C0	status updated to active on 2/4/20	
0203814738LCCE8	status updated to active on 2/4/20	
0430371497LCABF	status updated to active on 2/4/20	
0891986555LC98F	status updated to active on 2/4/20	
1001143516UN72E	status updated to active on 2/4/20	
1002034822UN5AA	status updated to active on 2/4/20	
1002065346LC09E	status updated to active on 2/4/20	
	Total	3,852.74

1. Ecotricity submit volumes only for ICPs with the status "active" in the registry, which is the correct approach. The problem with this is that for 20 ICPs the status of "inactive" in the registry was not correct. It was corrected on 02/04/20, when the problem was identified during the audit. ICPs were "active" in ORION.
2. Volumes are submitted for ICPs which are not traded by Ecotricity. For January 2020 the volume of ICPs not traded by Ecotricity was 3,852.74 kWh

Audit outcome

Compliant

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

Code reference

Clause 4 Schedule 15.2

Code related audit information

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

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

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

Audit observation

AV-080 and GR-17-NHH were reviewed.

Audit commentary

The review of files showed that for the month Mar'18 to Dec'18 compliance was not met. The same non-compliance was recorded in previous audits.

The analysis of rev14 for reviewed months is shown below. The table shows the number of NSPs for which Ecotricity submitted volumes for NHH ICPs in the period covered by this audit.

Month	Number of NSP for which compliance was not met	Total number of NSPs
Mar'18	77	12
Apr'18	84	16
May'18	93	16
Jun'18	95	21
Jul'18	99	21
Aug'18	109	21
Sept'18	109	23
Oct'18	106	17
Nov'18	107	21

Ecotricity still does not review GR-170NHH and does not monitor compliance with this clause.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.8 With: 4 of Schedule 15.2 From: 01-Mar-19 To: 29-Feb-20	Permanence of meter reading for the period Mar'18 to Dec'18 not achieved 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. Ecotricity trades a small number of NHH ICPs for which metering is changed to HHR as soon as possible. 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
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

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

Code reference

Clause 2 Schedule 15.3

Code related audit information

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

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

Audit observation

Ecotricity provided submission files for the month of Mar'19 to Jan'20 which were reviewed.

Audit commentary

The incorrect profile of EG1 was used for embedded generation (solar). It should be PV1, but ORION does not have this profile.

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

Volumes for SUML were submitted. It was identified as a non-compliance in the last audit. There is still no functionality in ORION that allows to include UML volumes in AV-080. To remedy the problem, Ecotricity creates a separate file and adds to NHHVOLS.

Audit outcome

Compliant

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

Code reference

Clause 3 Schedule 15.3

Code related audit information

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

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

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

Audit observation

We examined AV-080 for Mar'19 and Jan'20.

Audit commentary

Historical and forward estimates are clearly identified in ORION. Historical estimates are correctly allocated in AV-080, it was checked in scenarios listed in **section 12.11**.

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 the 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 (day13).

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. 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	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.	Compliant
4	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	Compliant
5	Complete month without a read in the month	Read in the previous month and the month after, confirm correct HE for the month	Compliant
6	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
7	Half-hour meter installed during month	Confirm usage for both meters in reconciled for a day when a change occurred	Compliant
8	ICP days for all HE scenarios above	Confirm ICP days calculations are correct	Compliant
9	Unmetered load submission	Check that this works the same as a normal meter and is considered HE	Compliant
10	CS read modified by RR	Confirm that consumption is updated to match RR read replacing CS	Compliant

Audit outcome

Compliant

12.12. Forward estimate process (Clause 6 Schedule 15.3)

Code reference

Clause 6 Schedule 15.3

Code related audit information

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

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

Audit observation

ORION calculates forward estimates using daily kWh or values from the CS files if it is a new ICP previously not traded by Ecotricity. For traded ICPs, ORION uses Estimated Daily Usage to calculate forward estimates, which is updated as a new read is recorded.

Audit commentary

NHH ICPs are a small part of the Ecotricity business because their business strategy is to trade only HHR ICPs.

We checked 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. The analysis of GR170NHH showed that Ecotricity does not have such balancing areas.

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. A final read is taken by a MEP before it is removed and passed to Ecotricity to be recorded in ORION. We checked three examples of meter replacements and confirm a final read was recorded 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

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

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

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

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

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

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

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

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

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

Audit observation

Ecotricity provided submission files for Nov'19 and Jan'20. The company submits files for HHR and NHH ICPs.

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**.

Volumes for one UML ICP (0000185048HB831) are incorrectly calculated. Daily volumes should be 5.897 as per the registry, Ecotricity submits 0.5897 per day. The calculation was corrected during the audit.

We reviewed NHH submissions for April'19 to compare NHHVOLS with ICP detail report for the same month. We identified a difference of 2048.17 kWh between the two files. The volumes submitted were lower than volumes calculated in the ICP detail file. It was a single NSP, BPE0331, for which volumes were different.

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 Nov'19 and Jan'20.

Audit commentary

The process has not changed since the last audit. Submission volumes are rounded by ORION at the end of calculations using a method prescribed by this clause.

We also reviewed NHHVOLS for the same period and confirm that submission information is rounded to no more than two decimal places.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.3

Code related audit information

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

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

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

- *100% for revised data provided at the month 14 revision. (clause 10(3)(c))*

Audit observation

We reviewed GR-170NHH for the period Feb'18 to Nov'19, 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
Feb'18	6/79	5/79	14/79
Mar'18	5/77	5/77	12/77
Apr'18	6/84	6/84	16/84
May'18	5/93	5/93	16/93
Jun'18	7/95	7/95	21/95
Jul'18	7/99	6/99	21/99
Aug'18	8/109	11/109	21/109
Sept'18	5/109	8/109	23/109
Oct'18	8/106	7/106	17/106
Nov'18	10/107	10/107	21/107
Dec'18	11/104	11/104	18/104
Jan'19	10/101	8/101	
Feb'19	10/99	10/99	
Mar'19	10/99	8/99	
Apr'19	7/101	12/101	
May'19	14/97	13/97	
June'19	11/97	7/97	
July'19	9/94	9/94	
Aug'19	11/95		
Sept'19	13/98		
Oct'19	14/98		
Nov'19	14/100		

The areas highlighted in yellow indicate submissions in the period covered by this audit

We identified non-compliance because the targets specified by this clause are not met.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 13.3 With: 10 of Schedule 15.3 From: 01-Mar-19 To: 30-Nov-19	Historical Estimate targets not met for revision 3, 7, and 14 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, 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**
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are migrating to a new and more automated platform which we expect will resolve the root cause but also be able to report better.	May / June 2020	

CONCLUSION

PARTICIPANT RESPONSE

We appreciate the efforts of Ewa and our team involved in the audit.

There has been a number of improvements in the business, but more can and will be done.

A number of the issues which were repeated in this and previous audits have not been able to be technically resolved due to the current billing and reporting platform Ecotricity uses.

We have spent the last 6 months preparing to migrate onto a new platform which address the vast majority of the issues raised in this, and previous audit reports. This will happen due primarily to more automation, better registry syncing and better reporting.

AL Yates
CEO
Ecotricity