

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

For

**ECOTRICITY (ECOT)**

Prepared by: Ewa Glowacka

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## TABLE OF CONTENTS

Executive summary .....	5
Audit summary .....	6
Non-compliances .....	6
Recommendations .....	8
Issues	8
1. Administrative .....	9
1.1. Exemptions from Obligations to Comply with Code (Section 11) .....	9
1.2. Structure of Organisation .....	9
1.3. Persons involved in this audit .....	9
1.4. Use of Agents (Clause 15.34) .....	10
1.5. Hardware and Software .....	10
1.6. Breaches or Breach Allegations .....	10
1.7. ICP Data .....	10
1.8. Authorisation Received .....	11
1.9. Scope of Audit .....	11
1.10. Summary of previous audit .....	13
2. Operational Infrastructure .....	16
2.1. Relevant information (Clause 10.6, 11.2, 15.2) .....	16
2.2. Provision of information (Clause 15.35) .....	19
2.3. Data transmission (Clause 20 Schedule 15.2) .....	20
2.4. Audit trails (Clause 21 Schedule 15.2) .....	21
2.5. Retailer responsibility for electricity conveyed - participant obligations (Clause 10.4) .....	22
2.6. Retailer responsibility for electricity conveyed - access to metering installations (Clause 10.7(2),(4),(5) and (6)) .....	22
2.7. Physical location of metering installations (Clause 10.35(1)&(2)) .....	23
2.8. Trader contracts to permit assignment by the Authority (Clause 11.15B) .....	23
2.9. Connection of an ICP (Clause 10.32) .....	24
2.10. Temporary Electrical Connection of an ICP (Clause 10.33) .....	25
2.11. Electrical Connection of Point of Connection (Clause 10.33A) .....	25
2.12. Arrangements for line function services (Clause 11.16) .....	26
2.13. Arrangements for metering equipment provision (Clause 10.36) .....	26
3. Maintaining registry information .....	27
3.1. Obtaining ICP identifiers (Clause 11.3) .....	27
3.2. Providing registry information (Clause 11.7(2)) .....	27
3.3. Changes to registry information (Clause 10 Schedule 11.1) .....	28
3.4. Trader responsibility for an ICP (Clause 11.18) .....	30
3.5. Provision of information to the registry manager (Clause 9 Schedule 11.1) .....	30
3.6. ANZSIC codes (Clause 9 (1)(k) of Schedule 11.1) .....	31
3.7. Changes to unmetered load (Clause 9(1)(f) of Schedule 11.1) .....	32
3.8. Management of “active” status (Clause 17 Schedule 11.1) .....	33
3.9. Management of “inactive” status (Clause 19 Schedule 11.1) .....	34
3.10. ICPs at new or ready status for 24 months (Clause 15 Schedule 11.1) .....	35
4. Performing customer and embedded generator switching .....	36
4.1. Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3) .....	36

4.2.	Losing trader response to switch request and event dates - standard switch (Clauses 3 and 4 Schedule 11.3) .....	36
4.3.	Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3) ....	37
4.4.	Retailers must use same reading - standard switch (Clause 6(1) and 6A Schedule 11.3).....	38
4.5.	Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3) .....	39
4.6.	Disputes - standard switch (Clause 7 Schedule 11.3).....	40
4.7.	Gaining trader informs registry of switch request - switch move (Clause 9 Schedule 11.3) ..	40
4.8.	Losing trader provides information - switch move (Clause 10(1) Schedule 11.3) .....	41
4.9.	Losing trader determines a different date - switch move (Clause 10(2) Schedule 11.3).....	42
4.10.	Losing trader must provide final information - switch move (Clause 11 Schedule 11.3) .....	43
4.11.	Gaining trader changes to switch meter reading - switch move (Clause 12 Schedule 11.3) ..	43
4.12.	Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3) .....	44
4.13.	Losing trader provision of information - gaining trader switch (Clause 15 Schedule 11.3) ....	45
4.14.	Gaining trader to advise the registry manager - gaining trader switch (Clause 16 Schedule 11.3) .....	46
4.15.	Withdrawal of switch requests (Clauses 17 and 18 Schedule 11.3).....	46
4.16.	Metering information (Clause 21 Schedule 11.3) .....	48
4.17.	Switch saving protection (Clause 11.15AA to 11.15AB).....	48
5.	Maintenance of unmetered load .....	50
5.1.	Maintaining shared unmetered load (Clause 11.14).....	50
5.2.	Unmetered threshold (Clause 10.14 (2)(b)) .....	51
5.3.	Unmetered threshold exceeded (Clause 10.14 (5)) .....	51
5.4.	Distributed unmetered load (Clause 11 Schedule 15.3, Clause 15.37B).....	51
6.	Gathering raw meter data .....	53
6.1.	Electricity conveyed & notification by embedded generators(Clause 10.13, Clause 10.24 and 15.13) .....	53
6.2.	Responsibility for metering at GIP(Clause 10.26 (6), (7) and (8)).....	53
6.3.	Certification of control devices (Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3) ....	54
6.4.	Reporting of defective metering installations (Clause 10.43(2) and (3)) .....	54
6.5.	Collection of information by certified reconciliation participant (Clause 2 Schedule 15.2) ...	55
6.6.	Derivation of meter readings (Clause 3(1), 3(2) and 5 Schedule 15.2) .....	56
6.7.	NHH meter reading application (Clause 6 Schedule 15.2) .....	57
6.8.	Interrogate meters once (Clause 7(1) and (2) Schedule 15.2) .....	57
6.9.	NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2) .....	58
6.10.	NHH meters 90% read rate (Clause 9(1) and (2) Schedule 15.2) .....	59
6.11.	NHH meter interrogation log (Clause 10 Schedule 15.2) .....	61
6.12.	HHR data collection (Clause 11(1) Schedule 15.2) .....	61
6.13.	HHR interrogation data requirement (Clause 11(2) Schedule 15.2) .....	61
6.14.	HHR interrogation log requirements (Clause 11(3) Schedule 15.2).....	62
7.	Storing raw meter data .....	64
7.1.	Trading period duration (Clause 13 Schedule 15.2) .....	64
7.2.	Archiving and storage of raw meter data (Clause 18 Schedule 15.2) .....	64
7.3.	Non metering information collected / archived (Clause 21(5) Schedule 15.2).....	64
8.	Creating and managing (including validating, estimating, storing, correcting and archiving) volume information.....	66
8.1.	Correction of NHH meter readings (Clause 19(1) Schedule 15.2).....	66

8.2.	Correction of HHR metering information (Clause 19(2) Schedule 15.2).....	66
8.3.	Error and loss compensation arrangements (Clause 19(3) Schedule 15.2) .....	67
8.4.	Correction of HHR and NHH raw meter data (Clause 19(4) and (5) Schedule 15.2) .....	67
9.	Estimating and validating volume information.....	69
9.1.	Identification of readings (Clause 3(3) Schedule 15.2).....	69
9.2.	Derivation of volume information (Clause 3(4) Schedule 15.2).....	69
9.3.	Meter data used to derive volume information (Clause 3(5) Schedule 15.2).....	70
9.4.	Half hour estimates (Clause 15 Schedule 15.2).....	70
9.5.	NHH metering information data validation (Clause 16 Schedule 15.2) .....	71
9.6.	Electronic meter readings and estimated readings (Clause 17 Schedule 15.2) .....	71
10.	Provision of metering information to the GRID OWNER in accordance with subpart 4 of Part 13 (clause 15.38(1)(f)) .....	74
10.1.	Generators to provide HHR metering information (Clause 13.136) .....	74
10.2.	Unoffered & intermittent generation provision of metering information (Clause 13.137) ...	74
10.3.	Loss adjustment of HHR metering information (Clause 13.138).....	75
10.4.	Notification of the provision of HHR metering information (Clause 13.140) .....	75
11.	Provision of submission information for reconciliation.....	76
11.1.	Buying and selling notifications (Clause 15.3).....	76
11.2.	Calculation of ICP days (Clause 15.6) .....	76
11.3.	Electricity supplied information provision to the reconciliation manager (Clause 15.7).....	77
11.4.	HHR aggregates information provision to the reconciliation manager (Clause 15.8) .....	78
12.	Submission computation .....	81
12.1.	Daylight saving adjustment (Clause 15.36) .....	81
12.2.	Creation of submission information (Clause 15.4).....	81
12.3.	Allocation of submission information (Clause 15.5) .....	81
12.4.	Grid owner volumes information (Clause 15.9) .....	83
12.5.	Provision of NSP submission information (Clause 15.10) .....	83
12.6.	Grid connected generation (Clause 15.11).....	83
12.7.	Accuracy of submission information (Clause 15.12) .....	84
12.8.	Permanence of meter readings for reconciliation (Clause 4 Schedule 15.2).....	85
12.9.	Reconciliation participants to prepare information (Clause 2 Schedule 15.3) .....	87
12.10.	Historical estimates and forward estimates (Clause 3 Schedule 15.3).....	87
12.11.	Historical estimate process (Clause 4 and 5 Schedule 15.3) .....	88
12.12.	Forward estimate process (Clause 6 Schedule 15.3) .....	90
12.13.	Compulsory meter reading after profile change (Clause 7 Schedule 15.3).....	91
13.	Submission format and timing.....	92
13.1.	Provision of submission information to the RM (Clause 8 Schedule 15.3) .....	92
13.2.	Reporting resolution (Clause 9 Schedule 15.3) .....	93
13.3.	Historical estimate reporting to RM (Clause 10 Schedule 15.3) .....	93
Conclusion	.....	96
Participant response	.....	96

## EXECUTIVE SUMMARY

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

Ecotricity gained 656 ICPs. The company mainly trades HHR customers. At the time of the audit, 380 ICPs were reconciled as NHH, which is less than 6.3%. Ecotricity's business strategy is to replace all newly gained ICPs which have NHH meters installed, with HHR meters.

The audit found 18 non-compliances. The level of compliance has substantially improved in the following areas:

- Quality of synchronisation of information with the registry
- ICP days calculation

The main issues identified during this audit are:

- Not meeting targets for Historical Estimates
- Meter Frequency Report not being sent to the Authority as per the Code requirements
- Management of NHH reads
- NHH volume submissions to RM – lack of sufficient monitoring of accuracy

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 31 which results in an indicative audit frequency of 12 months. We agree with the result.

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

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	11.2	Incorrect information for a small number of ICPs	Moderate	Low	2	Identified
Provision of information	2.2	15.35	Meter Reading Frequency report not sent to the Authority; incorrect submissions for SVL0331	Moderate	Low	2	Identified
Changes to registry information	3.3	10 of Schedule 11.1	Late trader's updates to registry, delayed updates to ICPs "active" status	Moderate	Low	2	Identified
ANZSIC codes	3.6	9(1)(k) of Schedule 11.1	Incorrect ANZSIC code assigned to a small number of ICPs	Moderate	Low	2	Identified
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	Information for some UML/SUML not populated or incorrect	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
Losing traders must provide final information - standard switch	4.3	5 of Schedule 11.3	CS file sent late by one day for 0000967181TU523	Strong	Low	1	Identified
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	Strong	Low	1	Identified
Losing trader response to switch request and event dates – standard switch	4.8	Losing trader response to switch request and event dates –	6 switches were finalised late, for 2 switches the event date was not accepted and moved back by one day, 2 incorrect CS	Moderate	Low	2	Identified

		standard switch	files				
Withdrawal of switch requests	4.15	17 of Schedule 11.3	For ICP 0000011210WEB4C NW was sent later than 2 calendar months after the event date of the switch	Strong	Low	1	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)of Schedule 15.2	90% attainment was not achieved for more than 10 NSPs over 6 months	Moderate	Low	2	Identified
Electronic meter readings and estimated readings	9.6	17 of Schedule 15.2	HHR data is not checked for unexpected 0 values	Moderate	Low	2	Identified
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHRAGGR files do not contain electricity supplied information	Strong	Low	1	Not required. The Code change required a line up with RN file specification. Breach risk rating excluded from total
Creation of submission information	12.3	15.5	Volumes for ICPs were submitted against different NSPs than that which was recorded in the registry	Moderate	Low	2	Identified
Accuracy of submissions	12.7	15.12	Incorrect submissions for SVL0331 for two months	Weak	Medium	6	Identified
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	Moderate	Low	2	Identified
Historical Estimate	12.11	4 of Schedule	Incorrect calculation of	Moderate	Low	2	Identified

process		15.3	historical estimates for two scenarios conducted by ORION				
Historical estimate reporting to RM	13.3	10 of Schedule 15.3	Historical Estimates targets not met for revision 3, 7, and 14.	Moderate	Low	2	Identified
Future Risk Rating						37	
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
			Nil

**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

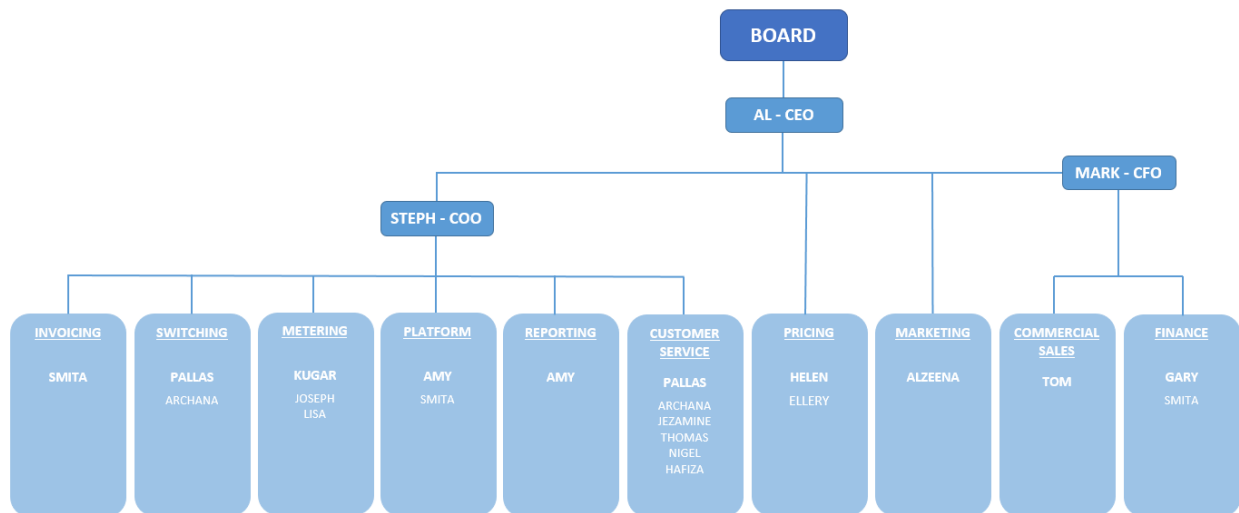
Ecotricity does not have any exemptions granted to exempt them from compliance with all or any of the clauses.

#### 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

The structure of Ecotricity is as follows:



### 1.3. Persons involved in this audit

Name	Title	Company
Al Yates	Chief Executive Officer	Ecotricity
Mark Yates	Chief Financial Officer	Ecotricity
Stephanie Blucher	Chief Operating Officer	Ecotricity
Amy Chai	Finance & Billing Analyst	Ecotricity
Kugar Thompson	Metering Installation Coordinator	Ecotricity
Pallas Seow Lyon	Metering Installation Coordinator	Ecotricity
Jamie Aitken	Consultant	Contractor
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates

#### 1.4. Use of Agents (Clause 15.34)

##### Code reference

Clause 15.34

##### Code related audit information

*A reconciliation participant who uses an agent*

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

##### Audit observation

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

##### Audit commentary

As a part of this audit we reviewed the WELLS, EDMI, and AMCI audit reports. The audits were older than 7 months, but we talked to their auditor who confirmed that new audits were conducted, and no non-compliances were identified.

#### 1.5. Hardware and Software

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

#### 1.6. Breaches or Breach Allegations

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

#### 1.7. ICP Data

Metering Category	Number of ICPs (22/5/19)	Number of ICPs (05/11/18)	Number of ICPs (05/03/2018)	Number of ICPs (2017)
1	5,773	5,142	2,766	1,907

2	147	139	97	61
3	18	15	8	6
4	5	5	3	1
5	0	0	0	0
9	0	16	2	0

Status	Number of ICPs (22/05/19)	Number of ICPs (5/11/18)	Number of ICPs (5/03/18)	Number of ICPs (2017)
Active (2,0)	5,895	5,238	2,485	1,951
Inactive – new connection in progress (1,12)	19	31	17	19
Inactive – electrically disconnected vacant property (1,4)	31	25	13	13
Inactive – electrically disconnected remotely by AMI meter (1,7)	12	17	7	9
Inactive – electrically disconnected at pole fuse (1,8)	1	1	1	0
Inactive – electrically disconnected due to meter disconnected (1,9)	3	3	1	0
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	1	2	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	5	6	4	3
Inactive – reconciled elsewhere (1,5)	0	0	0	0
Decommissioned (3)	29	18	7	0

### 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.

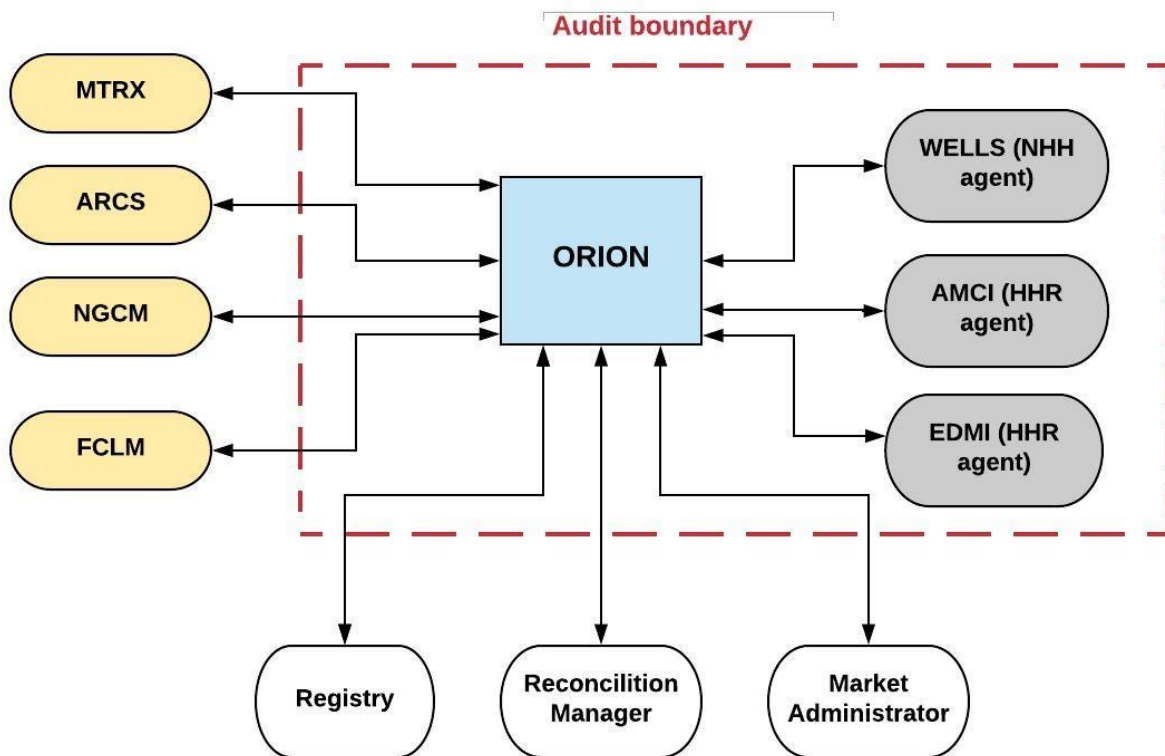
### 1.9. Scope of Audit

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

The audit was carried out on the 24 and 27 May 2019, at Level 6, 26 Swanson Street, Auckland.

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

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



### 1.10. Summary of previous audit

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

Subject	Section	Clause	Non-Compliance	Comment
Relevant information	<b>Error! Reference source not found.</b>	11.2, 15.2	Incorrect profile for ICPs with embedded generation installed. incorrect information for SUML	Still exists
Provision of information	<b>Error! Reference source not found.</b>	15.35	Meter Reading Frequency report not sent since July'18	Still exists
Changes to registry information	<b>Error! Reference source not found.</b>	10 of Schedule 11.1	Late trader's updates to registry, delayed updates to ICPs "active" status	Still exists
Provision of information the registry manager	<b>Error! Reference</b>	9 of Schedule 11.1	Lack of daily kWh for shared unmetered load. Incorrect profile	Cleared

	<b>source not found.</b>		used for some ICPs	
Management of “active” status	<b>Error! Reference source not found.</b>	17 of Schedule 11.1	A number of ICPs have incorrectly assigned “inactive” status when they should be “active”	Still exists
Management of “inactive” status	<b>Error! Reference source not found.</b>	19 of Schedule 11.1	A number of ICPs had incorrect “inactive” status assigned in the registry	Cleared
Losing trader response to switch request and event dates – standard switch	<b>Error! Reference source not found.</b>	3 of Schedule 11.3	One AN file late by one day; incorrect AN response Code in a small number of AN files	Cleared
Traders must use the same readings – standard switch	<b>Error! Reference source not found.</b>	6(1) & 6A of Schedule 11.3	12 ICPs were not switched on the same read	Still exists
Losing trader response to switch request and event dates – standard switch	<b>Error! Reference source not found.</b>	10(1) of Schedule 11.3	Incorrect AN response Code in a small number of AN files	Still exists
Gaining trader changes to switch meter reading – switch move	<b>Error! Reference source not found.</b>	12 of Schedule 11.3	2 ICPs were not switched on the same read	Cleared
Maintaining shared unmetered load	<b>Error! Reference source not found.</b>	11.14(6)(7)	Daily Unmetered kWh are not recorded for shared unmetered load for five ICPs	Cleared
NHH meters interrogated annually	<b>Error! Reference source not found.</b>	8(1) of Schedule 15.2	Ecotricity did not have 100% attainment in the previous 12 months for 14 NSPs.	Still exists

NHH meters 90% read rate	<b>Error! Reference source not found.</b>	9(1) of Schedule 15.2	The target of 90% was not achieved for 12 NSPs	Still exists
Electronic meter readings and estimated readings	<b>Error! Reference source not found.</b>	17 of Schedule 15.2	HHR data is not checked for unexpected 0 values	Still exists
HHR aggregates information provision to the reconciliation manager	<b>Error! Reference source not found.</b>	15.8	HHRAGGR files do not contain electricity supplied information	Not required. The Code change required a line up with RN file specification
Creation of submission information	<b>Error! Reference source not found.</b>	15.4	Volumes for ICP 1001292857LC797 were not submitted for months before March'18	Cleared
Accuracy of submission information	<b>Error! Reference source not found.</b>	15.12	The most recent seasonal adjustment file (GR-030) was not used for the calculations of historical estimates	Cleared
Permanence of meter readings for reconciliation	<b>Error! Reference source not found.</b>	4 of Schedule 15.2	Permanence of meter reading for the period Jan'17 to Aug'1 not achieved	Still exists
Reconciliation participants to prepare information	<b>Error! Reference source not found.</b>	2 of Schedule 15.3	Shared unmetered load ICPs are not reconciled. Incorrect profile used for embedded generation	Cleared
Historical Estimate process	<b>Error! Reference source not found.</b>	4 of Schedule 15.3	Incorrect calculation of historical estimates for a small number of scenarios conducted by ORION	Still exists
Historical estimate reporting to RM	<b>Error! Reference</b>	10 of Schedule 15.3	Historical Estimates targets not met for revision 3, 7, and 14.	Still exists

	source not found.			
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## 2. OPERATIONAL INFRASTRUCTURE

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

#### Code reference

Clause 10.6, 11.2, 15.2

#### Code related audit information

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

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

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

#### Audit observation

The LIS file dated 22/5/19 was examined to identify any inaccuracies. The Event Detail (EDA) file for the period 1/11/18 to 15/5/19 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,	2,332	
Highest Metering Category >2 with residential ANZSIC code assigned (000000)	0	No evidence of this occurring
ANZSIC code = blank or T994, T994000, T99, T999, T9999999, T995, T995000, T997, T997000, T998, T998000	0	No evidence of this occurring
ICP with B or G Inst Type, or non-null Fuel or Gen Capacity that do not have a corresponding Injection Register	20	Some of these ICPs switched in recently and FCLM was nominated as the MEP
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	50	

All Active ICPs (ICP Status = 2) with Shared ICP List not blank	5	0006026192RN50F 0005165571RN9A6 0006466923RN9DF 0006792073RN776 0006799647RN862
All ICPs at ICP Status 001,12	31	
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	0006026192RN50F 0005165571RN9A6 – corrected during the audit 0006466923RN9DF - corrected during the audit 0006792073RN776 - corrected during the audit 0006799647RN862 - corrected during the audit
All active ICPs with UNM Flag = Y	5	
All active ICPs with load in excess of 6kWh (Daily Unmetered kWh greater than 16.4 daily)	0	No evidence of this occurring
All active ICPs with load between 3-6k kWh (Daily Unmetered kWh between 8.2-16.4 daily)	0	No evidence of this occurring
All active ICPs with Engineered profile (Daily Unmetered kWh = ENG)	0	No evidence of this occurring

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

- 34 ICPs had the profile only PV1 or EG1 assigned, submission files were submitted using RPS profile (section 12.9).
- 0007178693RNF29 had the HHR profile assigned but the reconciliation type was NHH. It was corrected during the audit.
- 10 ICPs had HHA profile assigned but the MEP was FCLM.
- 20 ICPs - solar noted in the registry by networks but no Import/Export meter installed. It was discussed during the audit the company provided the following response;

ICP	Comment
0000027729UNF4D	according to POCO was installed on 8/5/17, have you spoken with a customer
0000031729TR8B4	ICP will eventually have panels installed. Waiting on confirmation from solar company to have meter installed.
0000042377HRF0D	solar removed
0000053378CPFAB	problem with installation of meters
0000054395CPE2A	Job in progress with metering

0000057749TR0DC	ICP will eventually have panels installed. Waiting on confirmation from solar company to have meter installed.
0000063224TR2DE	ICP will eventually have panels installed. Waiting on confirmation from solar company to have meter installed.
0000070334TRB76	ICP will eventually have panels installed. Waiting on confirmation from solar company to have meter installed.
0000171818UN927	No solar panels installed.
0000268458HB574	ICP will eventually have panels installed. Waiting on confirmation from solar company to have meter installed.
0000310324HBFEO	No longer installing solar.
0000469723HBD39	Job has been turned down due to complications, another job for import/export has been raised.
0000604997HB82A	Job is in progress for metering.
0000690631TU715	No longer installing solar.
0000842093HB46A	import/export meter installed; registry not updated
0001560270ALOCA	Job has been turned down a few times due to complications, another job for import/export will be raised.
0011002947PCD94	Does not have solar panels, if so we have not received any notification or DG approval to have an import/export meter installed.
0044250384PC8A8	Job has been turned down a few times due to complications, another job for import/export has been raised.
1001149074CK763	No longer installing solar.
1001149088CK46A	Does not have solar panels, if so we have not received any notification or DG approval to have an import/export meter installed.

It would appear that some networks record solar panels in the registry before they are installed. We noted that Wellington Electricity does not change the type of installation flag to “B”.

As described in the previous audit, Ecotricity have set up monitoring tasks which are run every three days or weekly or before creating reconciliation files. In addition a new tool was recently developed which compares the registry information and ORION. The comparison is run every three days. This process works well, and the results are “visible” as ICPdays discrepancies between ORION and the registry have decreased substantially.

Once both data sets are identical, checks are continual, to check if the correct profile is assigned to each MEP and if the same profile is recorded for reconciliation as recorded in the registry (it does not apply to HHR profile).

#### Audit outcome

Non-compliant

Non-compliance	Description
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Audit Ref: 2.1 With: 11.2 From: 01-Nov-18 To: 15-May-19	Incorrect information for a small number of ICPs Potential impact: Low Actual impact: None Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
<b>Audit risk rating</b>	<b>Rationale for audit risk rating</b>		
<b>Low</b>	The controls are rated as moderate because there are some improvements that can be made. Both data sets are synchronised, the next step is to validate the correctness of data. The audit risk rating is low because there is no impact on the settlement outcome (small number of ICPs).		
<b>Actions taken to resolve the issue</b>		<b>Completion date</b>	<b>Remedial action status</b>
We have a robust ICP registry syncing system which has reduced substantially any ICPs which are out of sync.		1/5/2019	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>		<b>Completion date</b>	
The next improvement is daily checks from checks every three days.		1/5/2019	

## 2.2. Provision of information (Clause 15.35)

### Code reference

Clause 15.35

### Code related audit information

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

### Audit observation

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

### Audit commentary

It is discussed in part 6, 12, and 13. In **section 6.8 to 6.10** we identified that Meter Readings Frequency Reports have not been provided to the Authority since the last audit. It was rectified during this audit; all outstanding reports were emailed. It was confirmed by the Authority.

**Section 12.7**, incorrect submissions for SVL0331 for two months.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.2 With: 15.35  From: 01-Nov-18 To: 15-May-19	Meter Reading Frequency report not sent to the Authority; incorrect submissions for SVL0331  Potential impact: Low  Actual impact: None  Audit history: Twice previously  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as moderate because there are some improvements that can be made. The audit risk rating is low because there is no impact on the settlement outcome. Audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
A new internal report to supply meter frequency reports has been created which provides the correct data.  In relation to the SVL0331 reporting issue, more pre-submission checks will be used to check before submissions are made,		1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
The new report will be run as required.		1/5/2019	

### 2.3. Data transmission (Clause 20 Schedule 15.2)

#### Code reference

Clause 20 Schedule 15.2

#### Code related audit information

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

#### Audit observation

Ecotricity receives HHR data from the MEPs (AMS, MTRX) daily. Metering data from AMCI and 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 commentary

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

#### Audit outcome

Compliant

## 2.4. Audit trails (Clause 21 Schedule 15.2)

### Code reference

Clause 21 Schedule 15.2

### Code related audit information

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

*The audit trail must include details of information:*

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

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

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

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

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

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

### Audit observation

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

### Audit commentary

Ecotricity sends and receives data to and from the registry. It is an automated process. Each upload is recorded by ORION.

Reconciliation files are uploaded via the RM portal, which records date, time and a participant's login details.

Metering data provided by MEPs is automatically uploaded by ORION. ORION has a built-in functionality to record a complete audit trail for all data gathering and communication with the registry.

Meter data received from Wells is referenced by a file name, but we came across a few readings which were referenced only as "Wells file". The company provided evidence of the origin of the readings. We recommend that all readings from Wells be referenced with a file name, which is easy to locate.

The logs of activities includes the date and time of the activity, the operator identifier, and an activity identifier.

### Audit outcome

Compliant

Description	Recommendation	Audited party comment	Remedial action
Refence of Wells readings	Reference all Wells readings by a file name (easily located)		

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

### Code reference

Clause 10.4

### Code related audit information

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

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

### Audit observation

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

### Audit commentary

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

### Audit outcome

Compliant

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

### Code reference

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

### Code related audit information

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

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

*The trader must use its best endeavours to provide access:*

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

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

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

### Audit observation

We reviewed the Ecotricity Terms of Use.

### Audit commentary

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

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 10.35(1)&(2)*

#### **Code related audit information**

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

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

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

#### **Audit observation**

The majority of Ecotricity's installations are category 1 and 2. Ecotricity trades 23 installations of metering category 3 and above.

#### **Audit commentary**

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

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 11.15B*

#### **Code related audit information**

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

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



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

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

#### **Audit observation**

We reviewed the Ecotricity Terms of Use.

#### **Audit commentary**

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

#### **Audit outcome**

Compliant

## **2.9. Connection of an ICP (Clause 10.32)**

#### **Code reference**

*Clause 10.32*

#### **Code related audit information**

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

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

#### **Audit observation**

The new connection process was examined. The process for connection and reconnection on exiting ICPs was also examined.

#### **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. We examined ten new connections and confirm that the process was followed. The analysis of the EDA file did not show any new connections with backdated creation dates.

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

### Audit commentary

Since the last audit, Ecotricity gained 50 new connections. As part of the new connection process, an installation is electrically connected as a certified meter is installed, not before. In **section 2.9** we examined ten new connections, all of them met compliance with this clause.

### 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

The process is described in **section 2.9**. The process is managed by a dedicated team at Ecotricity which specialises in new connections.

##### Audit outcome

Compliant

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

##### Code reference

Clause 11.7(2)

##### Code related audit information

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

##### Audit observation

The new connection process was examined. The LIS file dated 22/05/19 and EDA for the period 1/11/18 to 15/5/19 were examined to check the correctness of information and if the registry was notified in the timeframe specified by the relevant clause.

#### Audit commentary

The new process was described in **section 2.9**. The information is entered into the registry as soon as the status “new connection in progress” is assigned.

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

The EDA for the period 1/11/18 to 15/5/19 was examined.

#### Audit commentary

We reviewed the timeliness of updates. We used the extreme case methodology examining the most backdated entries to the registry.

Activity	Status code	Total number of updates		No of updates later than 3BD		Date range of updates [BD]	
		2018	2019	2018	2019	2018	2019
Status (2)	Active	118	138	64 (54.2%)	70 (50.7%)	Up to 407	Up to 261
Status (1,12)	New connection in progress	67	66	9 (10.5%)	2 (3%)	Up to 115	Up to 26
Status (1,4)	Electrically disconnected vacant property -	27	52	0	0		
Status (1,7)	Electrically disconnected by AMI meter	23	34	2	0	Up to 27	
Status (1,6)	Electrically disconnected ready for decommissioning	4	5	4 (100%)	4 (80%)	Up to 59	Up to 257
Status (1,8)	Electrically disconnected at pole fuse	1	1	0	1 (100%)	Up to 7	

Status (1,11)	Electrically disconnected at meter box switch	2	2	1	0	U[p to 10	
Trader		2,792	982	582 (20.8%)	264 (26.9%)	Up to 192	Up to 629

### Status

A high number of backdated changes to the status “active” is the result of the project of synchronising the registry information and ORION. Ecotricity has undertaken the project to go back through all their ICPs history and correct information. The results of the project are “visible” in ICP days calculations (**section 11.2**).

There were 79 new connections, for 41 of them Ecotricity updated the status to “active” later than 5BD. We analysed 16 of the most backdated changes of ICP status “new connection in progress” to “active” to identify if the delay was caused by late notification by the MEP. Our conclusion was that it is not the case. It appears that there was a problem with the process in 2018. The number of late updates in 2019 is much lower after a change was made to the process to update the registry as soon as the MEP notified ECOT that the ICP was electrically connected.

### Trader

The number of backdated entries is higher than identified in the last audit. It is the result of synchronizing the registry profile and type of reconciliation between ORION and the registry.

### **Audit outcome**

Non-compliant

<b>Non-compliance</b>	<b>Description</b>		
Audit Ref: 3.3 With: 10 of Schedule 11.1 From: 01-Nov-18 To: 15-May-19	Late trader’s updates to registry, delayed updates to ICPs “active” status Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
<b>Audit risk rating</b>	<b>Rationale for audit risk rating</b>		
<b>Low</b>	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.		
<b>Actions taken to resolve the issue</b>		<b>Completion date</b>	<b>Remedial action status</b>
We have a robust ICP registry syncing system which has reduced substantially any ICPs which are out of sync.		1/5/2019	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>		<b>Completion date</b>	

The next improvement is daily checks from checks every three days.	Pending	
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### 3.4. Trader responsibility for an ICP (Clause 11.18)

#### Code reference

*Clause 11.18*

#### Code related audit information

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

*A trader ceases to be responsible for an ICP if:*

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

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

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

#### Audit observation

The LIS file dated 22/5/19 was analysed and we confirm that all ICPs have a MEP recorded in the registry. The new connection process was examined

#### Audit commentary

An MEP is nominated at the same time as the ICP status is changed to “new connection in progress”. In **section 3.3**, 5 ICPs were identified as marked “ready for decommissioning”. Every time a meter was removed the final read was taken by an MEP.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 9 Schedule 11.1*

#### Code related audit information

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

- a) *the participant identifier of the trader, as approved by the Authority (clause 9(1)(a))*
- b) *the profile code for each profile at that ICP, as approved by the Authority (clause 9(1)(b))*

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

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

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

#### **Audit observation**

We analysed the LIS and EDA files.

#### **Audit commentary**

We reviewed 9 new connections and checked installation certifications provided by MEPS. For all of them the active date, installation certification, and electrical connection date matched. The living agent was VircomEMS.

We confirm all information specified by this clause was uploaded to the registry.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 9 (1)(k) of Schedule 11.1*

#### **Code related audit information**

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

#### **Audit observation**

The LIS file was reviewed, and the switching processes examined.

#### **Audit commentary**

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

We randomly checked 19 commercial ICPs and found some of them incorrect. It applied to ICPs which used to be new connections therefore the code of E321 or E301 or similar were assigned and not updated once a connection became permanent.

#### **Audit outcome**

Non-compliant



Non-compliance	Description		
Audit Ref: 3.6 With: 9(1)(k) of Schedule 11.1 From: 01-Nov-18 To: 15-May-19	Incorrect ANZSIC code assigned to a small number of ICPs Potential impact: Low Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	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 have a robust ICP registry syncing system which has reduced substantially any ICPs which are out of sync.		1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Specific to ANZIC codes, we have added a new check with regards to sites whereby they are commercial sites on residential addresses for more than 12 months.		1/5/2019	

### 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 reviewed.

#### Audit commentary

Ecotricity trades 5 SUML ICPs and 1 UML. As described in **section 2.1**, information for 1 UML ICP and 4 SUML ICPs were corrected (type of reconciliation and daily usage) during the audit. Daily usage for 0000030354CP158 is not correct . It should be 0.45kWh not 0.455 kWh because the number of hours per day is 12 not 11.7.

0006026192RN50F is still to be corrected.

Volumes are reconciled but as soon as a HHR meter is installed ORION deletes the UML information in the registry. Information must be re-entered manually.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.7 With: 9(1)(f) of Schedule 11.1  From: 01-Nov-18 To: 15-May-19	Information for some UML/SUML not populated or incorrect  Potential impact: Low  Actual impact: None  Audit history: None  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as moderate because there are some improvements that can be made. More monitoring of UML information in the registry is required. 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 have a robust ICP registry syncing system which has reduced substantially any ICPs which are out of sync.		1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
An issue was found by one network where we have inadvertently cleared SUML descriptions on the registry, but which were re-instated subsequently.		Ongoing	

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

#### Code reference

Clause 17 Schedule 11.1

#### Code related audit information

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

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

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

- the ICP has only 1 customer, embedded generator, or direct purchaser (clause 17(2)(a))
- the electricity consumed is quantified by a metering installation or a method of calculation approved by the Authority (clause 17(2)(b)).

### Audit observation

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

### Audit commentary

In **section 3.3** it was noted that 50.7% of updates of the “active” status were later than 5BD. Ecotricity has undertaken the project to go back through all their ICPs history in ORION and correct information.

In **section 3.3**, we also described late changes of ICP status from “new connection in progress” to “active”.

### Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 3.8 With: 17 of Schedule 11.1 From: 01-Nov-18 To: 15-May-19	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	
<b>Low</b>	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 (details are in the EDA file)	
Actions taken to resolve the issue	Completion date	Remedial action status
We have a robust ICP registry syncing system which has reduced substantially any ICPs which are out of sync.	1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
The next improvement is daily checks from checks every three days.	1/5/2019	

### 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**

The registry was updated in a timely manner, except 4 ICPs, marked “to be decommissioned”.

Ecotricity provided evidence of correspondence in relation to ICPs “electrically disconnected at meter box switch” and “electrically disconnected at pole fuse”.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 15 Schedule 11.1*

#### **Code related audit information**

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

#### **Audit observation**

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 updated 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

Ecotricity provided the Event Listing file (EDA) and Switch Breach History details report for the time period of 1/11/18 to 15/5/19.

#### Audit commentary

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

Ecotricity sent 789 NTTR 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 4 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 process adopted by Ecotricity is to reply to the registry notification 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.

**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**

According to the Switch Breach Report, Ecotricity sent CS files for one standard switch (0000967181TU523) later than 5 business days after the event date, just one day. Information contained in the CS file was correct.

**Audit outcome**

Non-compliant

Non-compliance	Description
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Audit Ref: 4.3 With: 5 of Schedule 11.3 From: 01-Nov-18 To: 15-May-19	CS file sent late by one day for 0000967181TU523 Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
<b>Audit risk rating</b>	<b>Rationale for audit risk rating</b>		
<b>Low</b>	Controls are recorded as strong. Standard switch process is managed well. No impact on settlement outcome. Audit risk rating is recorded as low.		
<b>Actions taken to resolve the issue</b>		<b>Completion date</b>	<b>Remedial action status</b>
We have strong controls for switching which will continue.		1/5/2019	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>		<b>Completion date</b>	
We are looking to add more automated processes to avoid this happening again.		Ongoing	

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

##### Code reference

Clause 6(1) and 6A Schedule 11.3

##### Code related audit information

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

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

If the gaining trader disputes a switch meter reading because the switch event meter reading provided by the losing trader differs by 200 kWh or more, the gaining trader must, within 4 calendar months of the 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 were analysed to assess compliance with clause 6A of Schedule 11.3. The last audit found Ecotricity non-compliant with this clause.

**Audit commentary**

Ecotricity sent 64 RR files for standard switch. All files were sent within less than 4 months. 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 good robust process. It is a time-consuming process because it is done manually. ORION still does not have built-in functionality.

We reviewed 9 RR files which were firstly rejected by losing traders. All of them were accepted in the end.

We came across one ICP 1099575765CN6B2. It was an ICP which Ecotricity was planning to reconcile as half hour. The switch read meter provided in the CS file was estimated. Ecotricity sent the RR file from AMI certified meter, which was rejected by the losing trader. It was probably rejected because it was sent later than 5 business days. Ecotricity was waiting for metering data from the MEP. No reason for rejection was given by the losing trader. The reading provided by the losing trader was over-estimated by 3,961 kWh. It means that a customer was charged for energy which was never used by them. It is a technical breach because Ecotricity did not switch on the same read.

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: 6(1) of Schedule 11.3 From: 25-Jan-19 To: 08-Feb-19	ICP 1099575765CN6B2 did not switch on the same read Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are recorded as strong. The losing trader refused to accept RR file. 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 have strong controls for switching which will continue.		1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We are looking to further automate this process.		Ongoing	

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

**Code reference**

Clause 6(2) and (3) Schedule 11.3



### Code related audit information

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

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 6(2)(b));*
- *the gaining trader within 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 Switch breach report were analysed. The process was examined.

### Audit commentary

Ecotricity received only one RR file. The meter reading from the file was used in the reconciliation process.

### 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 Event Listing file (EDA) and Switch Breach History details report for the time period of 1/11/18 to 15/5/19.

#### **Audit commentary**

Ecotricity sent 337 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:
  - o confirmation of the switch event date; and
  - o a valid switch response code; and
  - o final information as required under clause 11; or
- 10(1)(b) If the losing trader does not accept the event date proposed by the gaining trader, the losing trader must acknowledge the switch request to the registry manager and determine a different event date that—
  - o is not earlier than the gaining trader’s proposed event date, and
  - o is no later than 10 business days after the date the losing trader receives notice; or
- 10(1)(c) request that the switch be withdrawn in accordance with clause 17.

#### **Audit observation**

Ecotricity provided the Event Listing file (EDA) and Switch Breach History details report for the time period of 1/11/18 to 15/5/19.

#### **Audit commentary**

Ecotricity sent AN files for 5 ICPs. . All of them were provided within the timeframe described by this clause. For 3 ICPs Ecotricity did not accept the switch even read requested by gaining traders.

Switch Move for 6 ICPs was finalised later that specified by this clause. There is still confusion within the Switching Team about the time table for a switch move. They are treated as standard switches.

For 2 ICPs (0075322275WEF68 and 0000519145TP353) Ecotricity did not accept the switch event read requested by gaining traders. The switch was finalised one day earlier which is non-compliance. It was human error due to a lack of training.

We checked 2 CS files and noted they contained incorrect information, such as a switch with incorrect dates.

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 4.8 With: 10(1) of Schedule 11.3  From: 01-Nov-18 To: 15-May-19	6 switches were finalised late, for 2 switches the event date was not accepted and moved back by one day, 2 incorrect CS files  Potential impact: Low  Actual impact: Low  Audit history: Twice previously  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are recorded as moderate. The process must be corrected, more training is required. Impact on settlement outcome is minor. Audit risk rating is recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
More training and sharing of knowledge in the switching process. The team are completing switching correctly, but a few errors have appeared which we are addressing.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We are looking to further automate the process.		Ongoing	

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

**Code reference**

Clause 10(2) Schedule 11.3

**Code related audit information**

*If the losing trader determines a different date, 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**

Ecotricity provided the Event Listing file (EDA), which was examined.

#### **Audit commentary**

For ICP 0000200964CTD73 Ecotricity did not accept a switch event read requested by gaining traders. The event day proposed was for the next day, which meets compliance.

#### **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**

We examined the EDA file.

#### **Audit commentary**

As per **section 4.9**, for one ICP, a proposed switch date as not accepted. Ecotricity provided a switch event meter reading which was actual.

#### **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 process for the management of read requests was examined.

#### **Audit commentary**

Ecotricity sent 104 RR files for Switch Move ICPs. All of them were sent within the time frame specified by this clause. Two RR files were first rejected than accepted by a losing trader.

#### **Audit outcome**

Compliant

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

#### **Code reference**

Clause 14 Schedule 11.3

#### **Code related audit information**

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

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

- *the gaining trader will trade electricity through a non-AMI non half hour metering installation and the losing trader trades electricity through a non-AMI half hour metering installation*

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

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

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

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

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

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

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

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

#### **Audit observation**

Ecotricity provided the Event Listing file (EDA) and Switch Breach History details report for the time period of 1/11/18 to 15/5/19.

#### **Audit commentary**

One ICP 0110111503PS856 was gained using this process.

#### **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**

Ecotricity provided the Event Listing file (EDA) and Switch Breach History details report for the time period of 1/11/18 to 15/5/19.

### Audit commentary

Ecotricity did not lose any ICPs using this process.

### 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

Ecotricity provided the Event Listing file (EDA) and Switch Breach History details report for the time period of 1/11/18 to 15/5/19.

### Audit commentary

One ICP 0110111503PS856 was gained using this process. We walked through all transactions and confirm compliance.

### 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

Ecotricity provided the Event Listing file (EDA) and Switch Breach History details report for the time period of 1/11/18 to 15/5/19.

#### Audit commentary

Ecotricity sent 305 NW files. 70% of NW files had the reason code "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.

One file for 0000011210WEB4C was sent later than 2 calendar months after the event date of the switch, it was a customer request.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.15 With: 6(1) of Schedule 11.3  From: 13-Aug-18 To: 29-Jan-19	For ICP 0000011210WEB4C NW was sent later than 2 calendar months after the event date of the switch  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are recorded as strong. Impact on settlement outcome is none, it was only one ICP. Audit risk rating is recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Controls are strong, however a couple of lapses have occurred.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	



We are looking to automate the process as time goes on.	Ongoing	
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#### 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. As is described in relevant sections, extensive validation is conducted upon uploading readings to ORION.

##### 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

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

#### **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.

We analysed NW files with the reason code "CX" and found it compliant.

#### **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 trades 5 shared unmetered load ICPs. Daily kWh were not recorded in the registry as per **section 3.7**. It was updated during the audit.

ORION does not have the functionality to calculate unmetered volumes for ICPs reconciled as HHR. 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.

#### 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 analysed.

### Audit commentary

The analysis of the LIS file showed that Ecotricity trades one UML ICP (0000030354CP158). Its daily usage is 0.455 kWh.

### Audit outcome

Compliant

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

### Code reference

*Clause 10.14 (5)*

### Code related audit information

*If the unmetered load limit is exceeded the retailer must:*

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

### Audit observation

The analysis of the LIS file showed that Ecotricity trades one UML.

### Audit commentary

Unmetered load for 0000030354CP158 has not exceeded the threshold. It uses only 166 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 was analysed.

### **Audit commentary**

Ecotricity does not trade DUML and does not have such plans. Compliance was not assessed.

### **Audit outcome**

Compliant

## 6. GATHERING RAW METER DATA

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

#### Code reference

*Clause 10.13, Clause 10.24 and Clause 15.13*

#### Code related audit information

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

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

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

- *there is 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 22/05/19 was reviewed.

#### Audit commentary

Ecotricity trades NHH and HHR ICPs. There are 6 ICPs to which standard or shared unmetered load is attached. No subtraction is used to determine submission information.

Ecotricity trades 2,332 ICPs for which embedded generation is recorded. We cross checked submission files against registry files and confirm that import volumes for all ICPs are submitted.

We identified 20 ICPs for which Import/Export meters are not installed. Details are in **section 2.1**.

#### Audit outcome

Compliant

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

#### Code reference

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

#### Code related audit information

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

- *provide to the grid owner a copy of the metering installation design (before ordering the equipment)*
- *provide at least 3 months for the grid owner to review and comment on the design*
- *respond within 3 business days of receipt to any request from the grid owner for additional details or changes to the design*

- ensure any reasonable changes from the grid owner are carried out.

The participant responsible for the metering installation must:

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

#### **Audit observation**

The LIS file was reviewed to confirm that Ecotricity is not responsible for any GIPs.

#### **Audit commentary**

This clause is not applicable. Compliance was not assessed.

#### **Audit outcome**

Not applicable

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

#### **Code reference**

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

#### **Code related audit information**

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

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

#### **Audit observation**

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

#### **Audit commentary**

Ecotricity uses HHR, RPS and EG1 for reconciliation purposes. Control devices are not used for reconciliation purposes.

#### **Audit outcome**

Compliant

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

#### **Code reference**

Clause 10.43(2) and (3)

#### **Code related audit information**

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

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

#### **Audit observation**

The process for identifying defective metering was examined.

#### Audit commentary

HHR data is provided by MEPs and two agents. WELLS and customers (emergency reads) provide readings for NHH ICPs.

Ecotricity closely monitors NHH reads. The company provided one example when data provided by EDMI was incorrect. It was caused by two meters being linked via a tiny-mesh setup. EDMI provided a replacement file.

#### Audit outcome

Compliant

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

#### Code reference

Clause 2 Schedule 15.2

#### Code related audit information

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

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

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

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

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

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

*2(6) – The interrogation systems must record:*

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

#### Audit observation

Data collection for HHR ICPs is conducted by EMS themselves or it is provided by AMS 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 (Business as Usual).

#### **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. Wells read all NHH reconciled ICPs. 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 last audit, Ecotricity has an automated email that asks customers to send photos of the meter and reads, if they have a legacy meter. Upon switch in, the system picks up that the customer does not have a smart meter and will send the email out. ECOT have also provided meter reader cards to WELLS for ECOT customers that they will leave at the property, when the meter reader does not have access to the meter, which asks their customers to send a photo to assist with billing.

The process for monitoring NHH reads is well executed but there is one flaw in it. Only ICPs which were sent to WELLS to be read are monitored and followed up. If for whatever reason, for example, an incorrect flag is recorded in ORION, it could mean an ICP is never on the list provided to WELLS and is consequently always estimated. We came across one ICP like that during the audit. Before the audit was finalised Ecotricity created a new report which will address this shortcoming.

WELLS also reads 12 non-AMI smart meters.

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

#### Audit outcome

Compliant

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

#### Code reference

Clause 6 Schedule 15.2

#### Code related audit information

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

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

#### Audit observation

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

#### Audit commentary

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

#### Audit outcome

Compliant

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

#### Code reference

Clause 7(1) and (2) Schedule 15.2

#### Code related audit information

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

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

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

#### Audit observation

The process was examined.

#### 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.

### Audit commentary

The reports are created but have not been sent to the Authority. It was rectified during the audit.

The reports are not reviewed by people responsible for reads from Wells, which could be an additional step to identifying missing reads.

We reviewed the Meter Reading Frequency Report from Nov'18 to Apr'19. According to the reports Ecotricity did have 100% attainment for a few months for a number of NSPs.

Month	Total NSPs where ICPs were supplied for 4 months	NSPs<100% read	Total number of ICPs not read for 12 months
201811	67	11	20
201812	65	13	20
201901	69	11	20
201902	72	13	23
201903	72	13	23
201904	74	16	25

### Audit outcome

Non-compliant

Non-compliance	Description
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Audit Ref: 6.9 With: 8(1(a)of Schedule 15.2  From: 01-Nov-18 To: 30-Apr-19	100% attainment was not achieved for more than 10 NSPs over 6 months  Potential impact: Low  Actual impact: Low  Audit history: Multiple times  Controls: Moderate  Breach risk rating: 2		
<b>Audit risk rating</b>	<b>Rationale for audit risk rating</b>		
<b>Low</b>	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.		
<b>Actions taken to resolve the issue</b>		<b>Completion date</b>	<b>Remedial action status</b>
Improved processes and reporting on reads attainment for meters where we are unable to upgrade them.		Ongoing	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>		<b>Completion date</b>	
Automation of call notes (action items) where reads are not received over a 6 month period.		Ongoing	

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 Nov’18 to Apr’19. According to the reports Ecotricity did have 100% attainment for a few months for a number of NSPs.

Month	Total NSPs where ICPs were supplied for 4 months	NSPs<90% read	Total number of ICPs not read for 4 months
201811	99	11	8
201812	95	8	5
201901	100	10	12
201902	101	13	16
201903	107	16	21
201904	105	15	18

Ecotricity closely monitors NHH reads, if there are no reads for three 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-Nov-18 To: 30-Apr-19	90% attainment was not achieved for more than 10 NSPs over 6 months Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	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
Improved processes and reporting on reads attainment for meters where we are unable to upgrade them. Note, there is a small number of ICPs where multiple attempts have been made to get reads, but due to access or the meter reader not being able to find the meter this has physically not been possible.		Ongoing.	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Automation of call notes (action items) where reads are not received over a 6 month period.		Ongoing.	

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

### Code reference

*Clause 10 Schedule 15.2*

### Code related audit information

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

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

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

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

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

### Audit observation

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

### Audit commentary

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

### Audit outcome

Compliant

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

### Code reference

*Clause 11(1) Schedule 15.2*

### Code related audit information

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

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

### Audit observation

HHR data is collected by ARCS, AMS, MTRX, and EDM1.

### Audit commentary

HHR interrogation data requirements were reviewed as part of their audits. We reviewed the EDM1 and AMCI audits and confirm compliance.

### Audit outcome

Compliant

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

### Code reference

*Clause 11(2) Schedule 15.2*

### Code related audit information

The following information is collected during each interrogation:

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

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

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

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

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

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

#### **Audit observation**

HHR data is collected by ARCS, AMS, MTRX, and EDM1.

#### **Audit commentary**

We reviewed the EMS, EDM1, and AMS audits and confirm compliance.

#### **Audit outcome**

Compliant

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

#### **Code reference**

Clause 11(3) Schedule 15.2

#### **Code related audit information**

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

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

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

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

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

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

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

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

#### **Audit observation**

HHR data is collected by ARCS, AMS, MTRX, and EDM1.

#### **Audit commentary**

We reviewed the EMS, EDM1, and AMS 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  $\pm 0.1\%$  ( $\pm 2$  seconds).*

#### Audit observation

Ecotricity receives HHR data from MTRX, AMS, ARCS, and EDMI.

#### Audit commentary

Compliance is confirmed based on Ecotricity agents audit reports. We reviewed data provided by AMS and MRTX 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

Ecotricity does not interrogate any meters themselves.

#### Audit commentary

Ecotricity keeps a copy of raw data for NHH 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 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**

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

**Audit commentary**

It was discussed during the audit; the company does not deal with any non-metering information.

**Audit outcome**

Compliant

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

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

#### Code reference

Clause 19(1) Schedule 15.2

#### Code related audit information

*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 is validated. Once it is done Ecotricity manually checks each read. If a meter reading is considered inaccurate during validation, WELLS is advised and asked to read it again. The previously provided read is flagged as “misread” and not used for reconciliation.

#### 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 company provided one example of incorrect HHR data, described in **section 6.4**.

### 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, AMS, EDMI, and WELLS.

#### **Audit commentary**

The company stated that, since the last audit, there were no instances of HHR data which required correction/alteration except an example described in **section 6.4**.

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

#### Audit commentary

We reviewed readings in ORION as a part of the review of RR and CS files (switching section). 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

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

Ecotricity trades 12 ICPs for which energy is recorded by smart meters which are non-AMI. They 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

Ecotricity provided 10 raw meter (copy) data examples from FCLM , NGCM and MTRX.

#### Audit commentary

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

#### Audit outcome

Compliant

### 9.4. Half hour estimates (Clause 15 Schedule 15.2)

#### Code reference

Clause 15 Schedule 15.2

#### Code related audit information

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

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

#### Audit observation

The ORION module identifies missing intervals and estimates using register reads. We asked Ecotricity to provide us with examples for HHR data estimation. Three scenarios were sampled.

#### Audit commentary

Three scenario examples were 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. ORION does not “allow” the changing of a type of customer from NHH to HHR and back. As a work around, AgilityCIS is provided the actual reads from WELLS and distribute volumes using HHR profile across the number of periods between the two actual reads and uploads to ORION. This type of estimation is not automatic. It is not an ideal way of estimating intervals based on manually read registers received from WELLS every two months, but it is the best solution that Agility can offer at the present time.

#### Audit outcome

Compliant

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

### Code reference

Clause 16 Schedule 15.2

### Code related audit information

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

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

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

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

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

### Audit observation

NHH readings from WELLS are uploaded to ORION manually.

### Audit commentary

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

### Audit outcome

Compliant

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

### Code reference

Clause 17 Schedule 15.2

### Code related audit information

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

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

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

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

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

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

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

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



**Audit observation**

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

**Audit commentary**

Every day, 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. Ecotricity is also notified by MEPs if any known issues with data were identified.

Events logs are provided by MEPs, which are reviewed. The company commented that, 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.

AgilityCIS provided Ecotricity with a new report which simplified tracing missing meter reads. It is a tool which has been a long coming.

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 9.6 With: 17 of Schedule 15.2 From: 01-Nov-18 To: 30-May-19	HHR data is not checked for unexpected 0 values Potential impact: Low Actual impact: Low Audit history: Once previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	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
There are number of situations where Ecotricity expects to get zero reads, for instance from solar generation at night. We are monitoring the situation by checking the data quality from MEPs.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will be introducing rules to support automatic checking of zero reads over the next 6 months.		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 required to provide information to the pricing manager.

#### 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 required to provide information to the pricing manager.

#### 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 required to provide information to the pricing manager.

#### 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 required to provide information to the pricing manager.

#### 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 22/5/19 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 May'19.

ORION 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

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

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

#### Audit commentary

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

Month	R0	R1	R3	R7	R14
Sep-17	-2.99%	-3.06%	-2.92%	-3.35%	-2.80%
Oct-17	-2.95%	-2.95%	-2.71%	-3.14%	-2.76%
Nov-17	-3.26%	-3.27%	-2.99%	-3.34%	-3.06%
Dec-17	-3.30%	-3.24%	-3.59%	-3.34%	-0.15%
Jan-18	-3.14%	-3.08%	-3.44%	-3.32%	-0.16%
Feb-18	-3.15%	-3.46%	-3.41%	-3.32%	-0.21%
Mar-18	-3.12%	-3.38%	-3.36%	-3.36%	
Apr-18	-3.47%	-3.65%	-3.60%	-3.37%	
May-18	-3.37%	-3.42%	-3.67%	-3.36%	
Jun-18	-3.28%	-3.37%	-3.32%	-3.11%	
Jul-18	-3.21%	-3.17%	-3.15%	-0.07%	
Aug-18	-2.94%	-2.97%	-2.86%	-0.18%	
Sep-18	-2.95%	-2.92%	-2.70%	-0.19%	
Oct-18	-2.80%	-2.57%	-2.65%		
Nov-18	-2.70%	-2.66%	-0.09%		
Dec-18	-2.74%	-2.68%	-0.07%		
Jan-19	-2.82%	-0.16%	-0.15%		
Feb-19	-1.72%	-0.08%			
Mar-19	-0.04%	-1.60%			
Apr-19	0.00%				

The areas highlighted in yellow indicate submissions in the period covered by this audit. It is noticeable that discrepancies between ICPdays calculated by the registry and ORION have decreased significantly. It is the result, as mentioned before, of the clean-up project and regularly synchronising ORION data with the registry.

**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.*

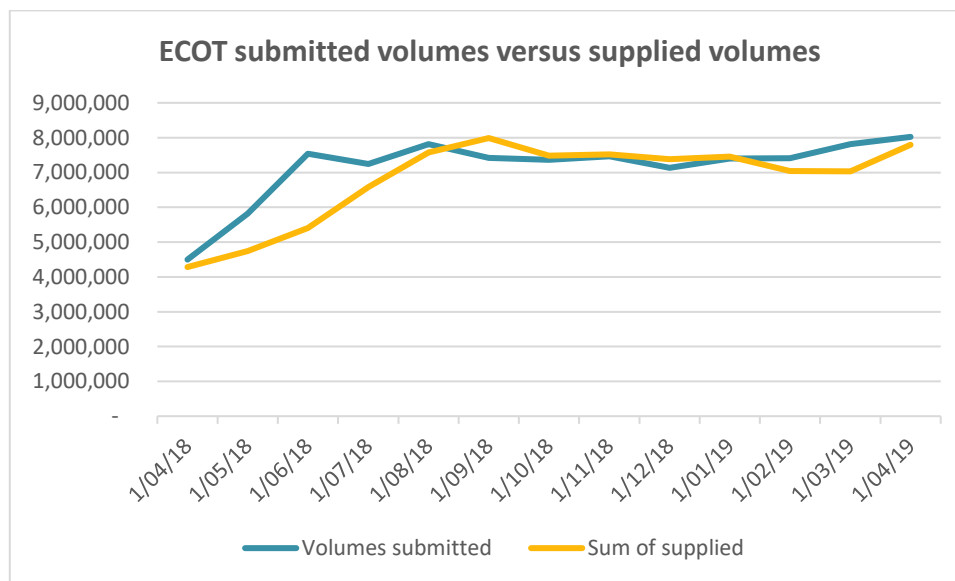
**Audit observation**

Ecotricity submits AV-120 every month for the current month and scheduled revisions. The process was reviewed.

## Audit commentary

The table below shows a comparison between volumes submitted and supplied (billed) for the period Apr'18 to Apr'19

Month	Volumes submitted	Sum of supplied
1/04/18	4,498,194	4,283,720
1/05/18	5,817,287	4,743,310
1/06/18	7,538,442	5,409,260
1/07/18	7,240,693	6,580,405
1/08/18	7,814,093	7,574,993
1/09/18	7,415,652	7,988,811
1/11/18	7,467,687	7,520,426
1/10/18	7,363,137	7,478,645
1/12/18	7,132,411	7,384,948
1/01/19	7,399,982	7,456,675
1/02/19	7,407,214	7,039,501
1/03/19	7,814,109	7,032,291
1/04/19	8,022,732	7,799,081



## 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 Apr'19 and May'19. We compared the volumes in HHRVOLS and HHRAGGR for a selected month.

We also checked the GR-090 (ICP missing) file for Nov'18 and Apr'19 (day4 submissions).

**Audit commentary**

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

Month	Number of ICPs
<b>11/2018</b>	<b>104</b>
A	71
R	33
<b>12/2018</b>	<b>206</b>
A	158
R	48
<b>01/2019</b>	<b>291</b>
A	257
R	34
<b>02/2019</b>	<b>125</b>
A	79
R	46
<b>03/2019</b>	<b>91</b>
A	48
R	43
<b>04/2019</b>	<b>225</b>
A	201
R	24

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 decreased. There was a sharp increase in the discrepancies in the Apr'19 submission. Closer analysis showed that it was caused by the incorrect allocation of ICPs on the Orion network. A number of ICPs were moved from BRY0661 to ISL0661. At the time Ecotricity' staff were very busy with updating changes to pricing introduced by networks, which took priority.

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
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Audit Ref: 11.4 With: 15.8 From: 01-Nov-18 To: 31-May-19	HHRAGGR files do not contain electricity supplied information Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
<b>Audit risk rating</b>	<b>Rationale for audit risk rating</b>		
<b>Low</b>	Ecotricity submits submissions volumes as per the reconciliation manager specification.		
<b>Actions taken to resolve the issue</b>		<b>Completion date</b>	<b>Remedial action status</b>
We have made major improvements on GXP synchronisation with the registry and the resulting substantial drop in missing ICP days.		1/5/2019	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>		<b>Completion date</b>	
This process is being automated in the medium term.		In progress	

## 12. SUBMISSION COMPUTATION

### 12.1. Daylight saving adjustment (Clause 15.36)

#### Code reference

Clause 15.36

#### Code related audit information

*The reconciliation participant must provide submission information to the reconciliation manager that is adjusted for NZDT using 1 of the techniques set out in clause 15.36(3) specified by the Authority.*

#### Audit observation

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

#### Audit commentary

Compliance with this clause has been demonstrated by ARCS and AMS as part of their MEP audit. 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 May'19.

#### 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.

#### Audit outcome

Compliant

### 12.3. Allocation of submission information (Clause 15.5)

#### Code reference

Clause 15.5

### Code related audit information

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

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

### Audit observation

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

Allocation of volumes for some ICPs were allocated against a different NSP than that which was recorded in the registry as per **section 11.4**.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.3 With: 15.5  From: 01-Nov-18 To: 31-May-19	Volumes for ICPs were submitted against different NSPs than that which was recorded in the registry  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are recorded as moderate, the current process of synchronising the registry data and ORION needs to be run more often. Minor impact on settlement outcomes is noted due to the same balancing area. Audit risk rating recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have made major improvements on GXP synchronisation with the registry and the resulting substantial drop in missing ICP days.		1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
This process is being automated in the medium term.		In progress.	

## 12.4. Grid owner volumes information (Clause 15.9)

### Code reference

Clause 15.9

### Code related audit information

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

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

### Audit observation

The LIS file was reviewed.

### Audit commentary

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

### Audit outcome

Not applicable

## 12.5. Provision of NSP submission information (Clause 15.10)

### Code reference

Clause 15.10

### Code related audit information

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

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

### Audit observation

The LIS file was reviewed.

### Audit commentary

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

### Audit outcome

Not applicable

## 12.6. Grid connected generation (Clause 15.11)

### Code reference

Clause 15.11

### Code related audit information

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

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

**Audit observation**

The LIS file was reviewed.

**Audit commentary**

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

**Audit outcome**

Not applicable

**12.7. Accuracy of submission information (Clause 15.12)**

**Code reference**

Clause 15.12

**Code related audit information**

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

**Audit observation**

The process for the calculation of initial and subsequent submission volumes was examined. 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**.

Analysis of the GR-170NHH showed irregularities of volumes submissions for SVL0331

NSP	Month	Revision	Volume
SVL0331	Dec'18	1	3137.78
	Dec'18	3	450,826.7
SVL0331	Feb'19	1	404,013.53
	Feb'19	3	1029.11

It was discussed during the audit. The explanation was:

*When there was a switch of customer mid March. This ICP was changed to NHH (Deemed) and a closing meter read was added. The Switching team member made a mistake of not removing the closing meter read when the Day 13 files were run.*

The Reconciliation Manager is aware of the above incorrect volumes and awaits wash up files when these months are next due.

It appears that it was an “unpredictable behaviour” of ORION. Our comment is that Ecotricity does not have a robust process to validate submission volumes. The problem with the reliability of ORION is well known therefore robust processes must be in place.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.7 With: 15.12 From: 01-Jan-19 To: 15-May-19	Incorrect submissions for SVL0331 for two months Potential impact: Medium Actual impact: Medium Audit history: None Controls: Weak Breach risk rating: 6		
Audit risk rating	Rationale for audit risk rating		
<b>Medium</b>	The controls are recorded as weak, there is no robust process in place to monitor submission volumes. Feb’19 volumes were rectified by a washup file but not Dember’18 . Ecotricity notified RM about the problem so proactive action was taken. Our concern is that the issue was not rectified before the files were submitted to the market. This issue affected two months therefore we recorded audit risk rating as medium. 0.4 GWh not a significant volume but unless the controls are improved upon this could result in more severe incorrect submissions.		
Actions taken to resolve the issue		Completion date	Remedial action status
Pre-checking submissions per GXP for consistency with previous submissions.		1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Automation of GXP consistency reporting during the month.		In progress	

#### 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**

Submission volumes were reviewed. We also downloaded GR-170NHH to assess compliance.

**Audit commentary**

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

Month	Number of NSP for which compliance was not met	Total number of NSPs
Jan'18	13	77
Feb'18	16	76

Ecotricity 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-Apr-19 To: 31-May-19	Permanence of meter reading for the period Jan'18 to Feb'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		
<b>Low</b>	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
Reporting process has been updated to ensure rev14 reads are permanent.		1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Reporting process has been updated to ensure rev14 reads are permanent.		1/5/2019	

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

### Code reference

Clause 2 Schedule 15.3

### Code related audit information

If a reconciliation participant prepares submission information for each NSP for the relevant consumption periods in accordance with the Code, such submission information 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 Jan'18, Feb'18, Apr'19, and May'19 which were reviewed, and compliance assessed.

### Audit commentary

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

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

Volumes for SUML were submitted. It was identified as a non-compliance in the last audit. There is still no functionality in ORION to deal with UML volumes but 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 Apr’19 and May’19.

**Audit commentary**

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

**Audit outcome**

Compliant

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

**Code reference**

*Clause 4 and 5 Schedule 15.3*

**Code related audit information**

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

*If a seasonal adjustment shape is not available, the methodology for preparing an historical estimate of volume information for each ICP must be the same as in clause 4, except that the relevant quantities kWh<sub>px</sub> 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<sub>px</sub>.*

**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	Status change to active during the month, read gained in the next month, full profile data available	Confirm that HE is calculated for the relevant part of the month	No scenarios found
4	Switch out on estimate during the month	Confirm that HE is calculated even though the reading is an estimate  Confirm that HE calculation ends on the correct day.	<b>Non-compliant</b> Difference 145 units
5	Switch out on actual during the month	Confirm that HE is calculated for the relevant part of the month, and calculation ends on correct day	No scenarios found
6	Complete month without a read in the month	Read in the previous month and the month after, confirm correct HE for the month	Compliant
7	Complete month with a read during the month	Confirm the two calculations for the month are correct	Compliant
8	GXP change during the month	Confirm submission against one GXP for part month then the other GXP for part month, with correct HE/FE balance on each	Compliant
10	Meter change during month	Confirm estimation is calculated for both meters, and summed correctly	No scenarios found
12	Half-hour meter installed during month	Confirm usage for both meters in reconciled for a day when a change occurred	Compliant
13	ICP days for all HE scenarios above	Confirm ICP days calculations are correct	Compliant
15	Unmetered load submission	Check that this works the same as a normal meter and is considered HE	<b>Non-compliant</b> Historical estimates currently exclude UML as actual load and assume that it is all estimated
16	No longer any ICPs with a particular combination of GXP,	Confirm that this row is "zeroed" in subsequent	No row for zero value. This change has been requested

	loss cat code etc.	submissions	of Agility
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2 scenarios were found non-compliant, they are the same as identified in the last audit.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.11 With: 4 of Schedule 15.3 From: 01-Nov-18 To: 15-May-19	Incorrect calculation of historical estimates for two scenarios conducted by ORION Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are recorded as moderate because there are some improvements that can be made to them. It is an on-going problem with ORION, the same non-compliant calculations. Audit risk is recorded as low as impact on settlement outcomes is minor		
Actions taken to resolve the issue		Completion date	Remedial action status
We note the issue and changed our process to capture this as an issue.		1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We are looking to automate the process in future.		Ongoing	

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

#### **Audit commentary**

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

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

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 7 Schedule 15.3*

#### **Code related audit information**

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

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

#### **Audit observation**

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

#### **Audit commentary**

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

#### **Audit outcome**

Compliant

## 13. SUBMISSION FORMAT AND TIMING

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

#### Code reference

*Clause 8 Schedule 15.3*

#### Code related audit information

*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 Apr'19 and May'19. 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**.

## 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 Apr'19 and May'19.

#### Audit commentary

Submission information is rounded to no more than two decimal places. We also reviewed NHHVOLS for the same period and confirm that submission information is rounded to no more than two decimal places. Ecotricity confirm that submission volumes are rounded by ORION at the end of calculations using a method prescribed by this clause.

## Audit outcome

Compliant

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

#### Code reference

*Clause 10 Schedule 15.3*

#### Code related audit information

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

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

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

#### Audit observation

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

#### Audit commentary

The results of analysis are shown below:

Month	R3	R7	R14
Sept'17	28/70	16/70	18/70
Oct'17	12/75	2/75	10/75
Nov'17	14/81	3/81	7/81
Dec'17	9/81	4/81	10/81
Jan'18	10/79	10/79	13/79
Feb'18	6/79	5/79	14/79
Mar'18	5/77	5/77	
Apr'18	6/84	6/84	
May'18	5/93	5/93	
Jun'18	7/95	7/95	
Jul'18	7/99	6/99	
Aug'18	8/109	11/109	
Sept'18	5/109	8/109	
Oct'18	8/107		
Nov'18	10/107		
Dec'18	11/104		
Jan'19	10/101		

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.

For revision 14 months, the target of 100% HE is not met for 17% of NSPs. The result is a little better than the previous audit.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 13.3 With: 10 of Schedule 15.3 From: 01-Nov-18 To: 15-May-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		
<b>Low</b>	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
Improving process with regards to NHH estimates. We note there also needs to be actuals with some of these cases.		Ongoing	Identified

<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
We are looking to automate this process more.	Ongoing.	



## CONCLUSION

### PARTICIPANT RESPONSE

We appreciate the feedback of this audit which has been beneficial to the business.

The Ecotricity team has made massive improvements over the last 6 months, in particular with regards to registry syncing, and hence our reporting accuracy has improved substantially.

Processes are continually being improved and over time we expect more processes to be automated.