

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

For

**ECOTRICITY**

Prepared by: Ewa Glowacka

Date audit commenced: 8 March 2018

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Audit report due date: 01-Apr-18

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## EXECUTIVE SUMMARY

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

Ecotricity mainly trades HHR customers. At the time of the audit, 237 ICPs were reconciled as NHH, which is about 10%. However Ecotricity routinely upgrades all new NHH, wherever possible to HHR or HHA meters.

The audit found 22 non-compliances and two recommendations. The level of compliance has improved in the following areas:

- Switching
- Provision of RR files
- The timeliness of the registry updates

The main issues identified during this audit are:

- Improvement is required in the management of NHH reads conducted by WELLS
- SUML and UML is not reconciled
- Not meeting targets for Historical estimates
- Management of volumes for non-communication smart meters (20)
- Improvements are required to manage ANZSIC code in the registry
- Incorrect calculation of Historic estimates conducted by ORION, which is non-compliant with the Code, it was identified in the previous audit
- Lack of log files from MEPS

Two recommendations were made in this report:

- Review management of NHH reads provided by WELLS
- Review ANZSIC code after a switch is finalised and after a new connection changes from BTS to permanent

Ecotricity recognises the improvements made from the last audit have been due to increased staff resourcing in the area needing the most attention, for instance switching. Ecotricity, at the time of writing this report, has appointed an extra staff member to support ICP registry maintenance and NHH reporting.

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 48 which results in an indicative audit frequency of 6 months. We agree with the result.

We thank Ecotricity's staff for their full and complete cooperation in this audit. Their response to any request for information or clarification was answered in a timely manner and each time in depth, supporting evidence was provided.

## 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 ANZSIC code for some ICPs. Incorrect information in registry for type of profile assigned to some ICPs	Moderate	Low	2	
Provision of information	2.2	15.5	AV-120 file was sent late once. Meter Reading Frequency report not sent regularly	Moderate	Low	2	
Changes to registry information	3.3	10 of Schedule 11.1	Late trader's updates to registry, 38% of all entries, delayed updates to ICPs "active" status	Weak	Low	3	
Provision of information the registry manager	3.5	9 of Schedule 11.1	Some ICP for new connections were updated to "active" late	Moderate	Low	2	
ANZSIC codes	3.6	9(1)(k) of Schedule 11.1	34 ICPs have incorrect ANZSIC codes assigned	Weak	Low	3	
Management of "active" status	3.8	17 of Schedule 11.1	A number of ICPs have incorrectly assigned "inactive" status when it should be "active"	Moderate	Low	2	
Management of "inactive" status	3.9	19 of Schedule 11.1	A number of ICPs had incorrect "inactive" status assigned in the registry	Moderate	Low	2	
Losing trader must provide final information – standard switch	4.3	5 of Schedule 11.3	One CS file late and incorrect type of reading flag in one CS file randomly chosen to assess compliance.	Strong	Low	1	
Traders must use the same readings – standard switch	4.4	6(1) & 6A of §schedule 11.3	Three RR files were sent later than 4 calendar months. RR file not sent for one ICP	Moderate	Low	2	
Losing trader provides information – switch move	4.8	11 of Schedule 11.3	CS file for one ICP was sent later than 5BD (4 days)	Strong	Low	1	
Gaining trader	4.11	12 of	Ecotricity did not use the	Strong	Low	1	

changes to switch meter reading – switch move		Schedule 11.3	same read as the gaining trader for two ICPs				
Gaining trader to advise the registry manager – gaining trader switch	4.14	16 of Schedule 11.3	ICP 1001282351LCDF7 switch was completed later than 3 business days	Strong	Low	1	
Maintaining shared unmetered load	5.1	11.14(6)(7)	Daily Unmetered kWh are recorded for shared unmetered load for one ICP	None	Low	5	
Interrogate meters once	6.8	7(1)(2) of Schedule 15.2	The requirement to use best endeavours to obtain a read for all ICPs not read during the period of supply was not met	Weak	Low	3	
NHH meters interrogated annually	6.9	8(1)(a)(2) of Schedule 15.2	The requirements to use best endeavours to obtain a read for all ICPs annually was not met. The last time a Reading Frequency Report was submitted for Nov'17	Weak	Low	3	
NHH meters 90% read rate	6.10	9(1)(3) of Schedule 15.2	The requirements to use best endeavours to obtain a read for all ICPs annually was not met. The last time a Reading Frequency Report was submitted for Nov'17	Weak	Low	3	
Electricity supplied information provided to the reconciliation manager	11.3	15.7	AV-120 file for the month of January'18 was not submitted by 1600 hour on day 4.	Strong	Low	1	
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

Allocation of submission information	12.3	15.5	Allocation of volumes information for some ICPs to another NSP than indicated by the data held in the registry for the relevant consumption period	Moderate	Low	2	
Permanence of meter readings for reconciliation	12.8	4 of Schedule 15.2	Permanence of meter reading for the period May'16 to Dec'16 not achieved.	Moderate	Low	2	
Reconciliation participants to prepare information	12.9	2(c) of Schedule 15.3	Shared unmetered and unmetered load ICPs not reconciled. Reconciliation volumes for 20 ICPs are submitted as HHR. Volumes are profiled using NHH reads	Moderate	Low	2	
Historical estimates and forward estimates	12.10	4 of Schedule 15.3	Incorrect calculation of historical estimates conducted by ORION	Weak	Low	3	
Historical estimate reporting to RM	13.3	10 of Schedule 15.3	Historically HE targets not met for revision 3, 7, and 14.	Moderate	Low	2	
Future Risk Rating						48	

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

Based on Table 1 of the Guidelines for Reconciliation Participant audit, the next audit should happen within the next 6 months. We agree with the recommendation.

## RECOMMENDATIONS

Subject	Section	Description	Recommendation
ANZSIC codes	3.6	Incorrect ANZIC code for permanent supplies	Review ANZSIC code after a switch is finalised and after a new connection changes from BTS to permanent
Interrogate NHH meters	6.8	Lack of robust followed up process for no read of NHH ICPs	Review management of NHH reads provided by WELLS



## ISSUES

Subject	Section	Description	Issue
			Nil

## 1. ADMINISTRATIVE

### 1.1. Exemptions from obligations to comply with Code (Section 11)

#### Code reference

*Section 11 of Electricity Industry Act 2010.*

#### Code related audit information

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

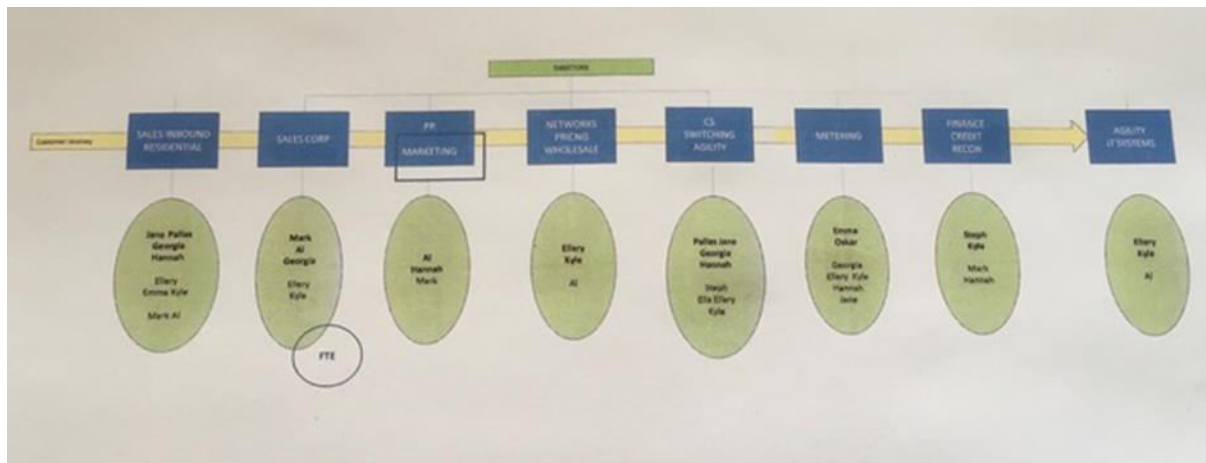
#### Audit observation

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

#### Audit commentary

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

### 1.2. Structure of Organisation



### 1.3. Persons involved in this audit

Name	Title	Company
AI Yates	Managing Director	Ecotricity
Mark Yates	Director	Ecotricity
Kyle Liu	Finance & Billing Analyst	Ecotricity
Kugar Thompson	Metering Installation Coordinator	Ecotricity
Pallas Seow Lyon	Metering Installation Coordinator	Ecotricity
Stephanie Blucher	Financial Controller	Ecotricity
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates

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

##### Code reference

Clause 15.34

##### Code related audit information

*A reconciliation participant who uses an agent*

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

##### Audit observation

ECOT engages two agents, WELLS for the provision of NHH data and AMCI 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 and AMCI audit reports.

#### 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

Ecotricity lodged a self-breach on 13/02/2018. Clause 15.4 was breached by not submitting AV-120 file (energy supplied) for the month of January'18 by 1600 hour on day 4.

#### 1.7. Authorisation Received

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

#### 1.8. ICP Data

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

Status	Number of ICPs (5/03/2018)	Number of ICPs (2017)	Number of ICPs (06/2016)
Active (2,0)	2,485	1,951	697
Inactive – new connection in progress (1,12)	17	19	1
Inactive – electrically disconnected vacant property (1,4)	13	13	1
Inactive – electrically disconnected remotely by AMI meter (1,7)	7	9	0
Inactive – electrically disconnected at pole fuse (1,8)	1	0	0
Inactive – electrically disconnected due to meter disconnected (1,9)	1	0	0
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	4	3	1
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	7	0	0

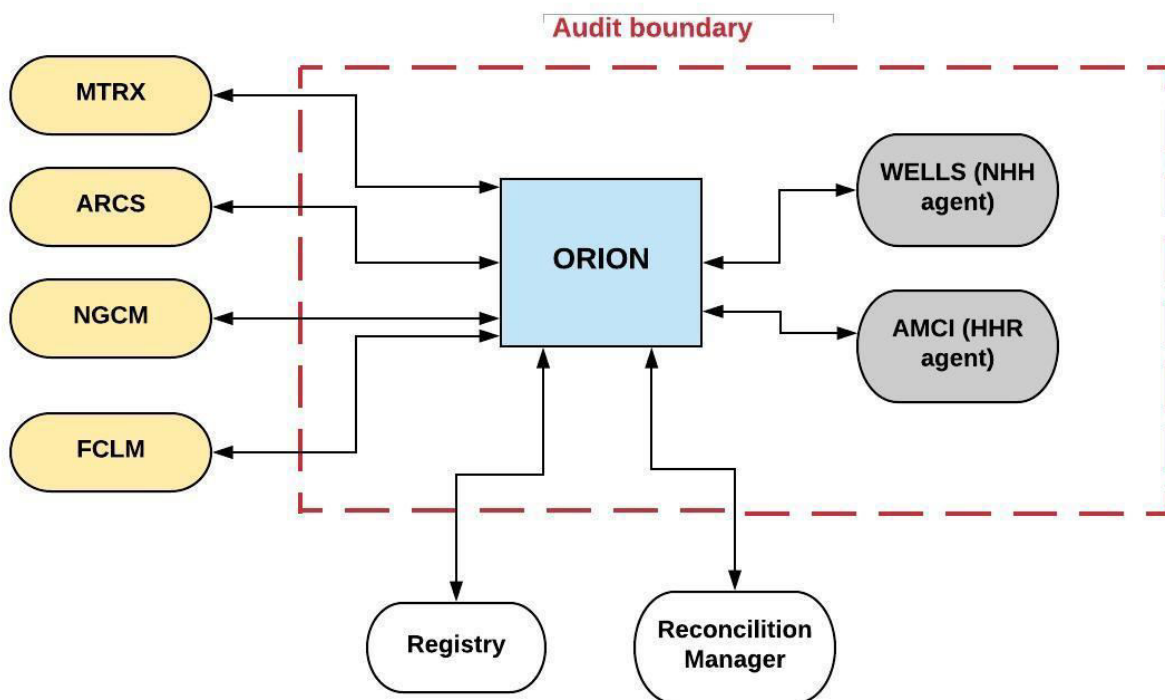
### 1.9. Scope of Audit

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 8 & 9th January 2018, at Level 6, 26 Swanson Street, Auckland.

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

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Relevant to audit	Agents Involved in Performance of Tasks
(a) - Maintaining registry information and performing customer and embedded generator switching	✓	
(b) – Gathering and storing raw meter data	✓	WELLS – NHH meter readings AMCI – 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 12<sup>th</sup> and 14<sup>th</sup> of July 2017. A summary of findings is shown below:

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Complete and accurate information	2.1	11.2 & 15.2	Incomplete or inaccurate information identified within sections of this report	Weak	Medium	3	Still existing
Gaining trader to inform registry	3.1.1	2 of Schedule 11.3	Switch for 3 ICPs was backdated, 2 ICPs had incorrect type of switch assigned	Weak	Low	3	
Losing trader must provide final information	3.1.3	5 of Schedule 11.3	Incorrect information in CS files such as read, and date of transfer read	Weak	Medium	6	
Traders must use the same readings	3.1.4	6 of Schedule 11.3	Ecotricity does not use the read provided by losing trader for switches NHH to HHR using AMI meter	Weak	Medium	6	Still existing
Move In – gaining trader to inform registry	3.2.1	9 of Schedule of 11.3	Registry notified later than 2 days after the arrangement comes into effect.	Weak	Low	3	

Losing trader must provide final information	3.2.2	10 of Schedule of 11.3	Final information for 10 ICPs was sent later than 5BD	Moderate	Low	32	Still existing
Gaining trader may change switch event meter reading	3.2.3	12 of Schedule of 11.3	Final information for 10 ICPs was sent later than 5BD	Weak	Low	3	
Withdrawal if switch request	3.2.7	17 of Schedule 11.3	NW for ICP 0000000201TR27C was sent later than two calendar months after the event date (5 months)	Strong	Low	1	
Provision of ICP information to registry	3.3.2	9 of Schedule 11.1	Incorrect information in the registry	None	Medium	8	Still existing
ANZSIC code	3.3.3	9(1)(k) of Schedule 11.1	Incorrect ANZSIC code in the registry for 3 ICPs 9 ICPs appear to be incorrect	Weak	Low	3	Still existing
Changes to ICP information in the registry	3.3.5	10 of Schedule 11.1	Delayed transactions (32%) to update an ICP status to Active, 32% of trader transactions also delayed up to 231 days	Weak	Medium	6	Still existing
"Inactive" status	3.3.8	19 of Schedule 11.1	Incorrect use of status "Inactive in the registry for 11 ICPs	None	Low	5	Still existing
NHH readings every 4 months	4.1.11	9 of Schedule 15.2	90% target not met for 6 NSPs	Strong	Low	1	Still existing
Electronic meter readings	5.2.5	17 of Schedule 15.2	Metrix data was not validated for 10 months as required for HHA profile	Weak	Low		Cleared
Permanence of volume estimation	7.1.7	4 of Schedule 15.2	For month Augut'15, Jan'16, Feb'16, and Apr'16 estimated volumes were not replaced by permanent estimates	Weak	Low	3	Still existing
Historic and Forwards estimates	7.1.8	4 of Schedule 15.3	Incorrect calculation of historical estimates conducted by ORION (software used for creation of reconciliation files)	Weak	Low	3	

Reporting requirements for HE	7.2.3	10 of Schedule 15.3	Historically HE targets not met for rev 3, 7, and 14. A significant number of NSPs (19) did not meet the target in Mar'17	Weak	Low	3	Still existing
Future Risk Rating						59	

Subject	Section	Recommendation	Description
Provision of information to registry	3.3.2	Compare registry ICP files with ORION information on regular basis	Under development
Data estimated for ICP 0645085602LC874 did not balance register reads for 4/7/17	5.2.3	Discuss with Agility why data estimation for ICP 0645085602LC874 did not use register reads	
Log files for electronic meter readings	5.2.5	Request MEPs to send event log on a regular basis to assist data validation	Still existing



## 2. OPERATIONAL INFRASTRUCTURE

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

#### Code reference

Clause 10.6, 11.2, 15.2

#### Code related audit information

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

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

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

#### Audit observation

To assess compliance with these clauses we examined the process of validating information in the registry. The LIS file dated 5<sup>th</sup> March 2018 was examined to identify any inaccuracies. The Event Detail (EDA) file for the period 01/07/2017 to 28/02/2018 was examined to determine how quickly Ecotricity provides information to the registry for new connections and corrects information which was identified as inaccurate.

#### Audit commentary

To meet compliance with the above clauses Ecotricity set up daily and weekly monitoring tasks. Ecotricity provided a list of the tasks. Some tasks were as follows

- Check for RPS ICPs to put on manual read cycle
- Run missing meter reads and send to MEPS
- Check for changes in ICP profiles from RPS and HHR/HHA
- Check ANZSIC code
- Check for AMI ICPs to take off manual read cycle

It is quite a comprehensive list with most of these tasks being run daily. In our view some checks should be introduced to line up information held by the registry with ORION on frequent basis.

Analysis of the LIS file and Metering Installation Information (PR-255) showed that the overall quality of information in the registry has improved since the last audit.

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,	741	
Highest Metering Category >2 with residential ANZSIC code assigned (000000)	0	No evidence of this occurring
ANZSIC code = blank or T994, T994000, T99, T999, T999999, T995, T995000, T997, T997000, T998, T998000	2	0000171431TRCF7, 0176075542LC676  Further analysis of the LIS file showed that a number of ICPs have incorrect ANZSIC code assigned. This is described

		in section 3.6
ICP with B or G Inst Type, or non-null Fuel or Gen Capacity that do not have a corresponding Injection Register	5	<ul style="list-style-type: none"> <li>0000027729UNF4D – no solar installed</li> <li>0000190019HB3BD – problem with metering</li> <li>0000209525UNF81 – wiring issue</li> <li>0000444060TP775 – solar not installed yet, a customer plans to do in the future, no date set</li> <li>1002023508UN3E7 – not enough room for a new meter on a meter board</li> </ul>
Highest Metering Category greater than 2, Submission Type HHR = No	0	No evidence this occurring
Highest Metering Category = 9, UNM Flag=N	0	No evidence this occurring
All active ICPs with Initial Energisation Date populated during a defined period	42	
All Active ICPs (ICP Status = 2) with Shared ICP List not blank	1	0000036648CP82E, ICP is not reconciled, it will be discussed in relevant section
All ICPs at ICP Status 001,12	17	
Submission Type HHR = Y, Profile does not contain HH	0	No evidence this occurring
Submission Type HHR and Submission Type NHH both = Y	1	0000250055UN00D
All active ICPs where Distributor has indicated UML (UML Load Details not NULL) but Retailer has none (UNM Flag = N)	1	0000036648CP82E, incorrect entry in the registry
All active ICPs with UNM Flag = Y	1	0000181384HB943
All active ICPs with load in excess of 6kWh (Daily Unmetered kWh greater than 16.4 daily)	0	No evidence this occurring
All active ICPs with load between 3-6k kWh (Daily Unmetered kWh between 8.2-16.4 daily)	0	No evidence this occurring
All active ICPs with Engineered profile (Daily Unmetered kWh = ENG)	0	No evidence this occurring

We noted that the ANZSIC code for some ICPs was incorrect, shared unmetered load ICP does not have daily kWh populated, and one ICP has both NHH and HHR reconciliation flags active, which is incorrect.

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

- three ICPs, for which FCLM is the MEP, HHA profile is assigned
- ICP 1001143686UNBCA, MTRX is the MEP, profile HHR was assigned
- Eight ICPs had the HHR profile assigned but the reconciliation type was NHH

Updates to the registry information will be analysed in section 3.3. In section 12.9 we identified a lack of submission volumes for SUML ICP.

Overall the quality of data in the registry has improved since the last audit but Ecotricity needs to introduce more rigid processes to assure the integrity of data.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: 11.2  From: 01-Jul-17 To: 28-Feb-18	<p>Incorrect ANZSIC code for some ICPs. Incorrect information in registry for type of profile assigned to some ICPs</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once previously</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are rated as moderate because there are some improvements that can be made to them. The list of tasks is comprehensive, but the outcome is not as successful as expected. The audit risk rating is low because the impact on the settlement outcome is minor.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>This is a reflection of the ORION issues that we have experienced which has taken the focus of key staff away from fulfilling this task.</p> <p>Ecotricity however do how take responsibility for not fulfilling and checking this function.</p>		5/4/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Meter upgrade staff have been briefed on corrective action.</p> <p>An extra staff member has been appointed and starts on 5/4/2018.</p>		20/3/2018	

## 2.2. Provision of information (Clause 15.35)

#### Code reference

Clause 15.35

#### Code related audit information

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

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

#### Audit observation

Provision of information was reviewed in section 8, 9, 11, and 12.

Ecotricity did not submit AV-120 file (energy supplied) for the month of January'18 by 1600 hour on day 4 in February'18. The company lodged a self-breach, which is described in section 1.6.

It was also noted that the Metering Frequency Report was last provided to the Market Administrator in Dec'17. As described in section 12.9, Ecotricity submits HHR volumes for 20 non-communicating ICPs, "constructed" using profiled NHH reads.

#### Audit commentary

Overall Ecotricity meets their obligations described in clause 15.35. There was one exception, when AV-120 file was not sent in Feb'18. It was caused by the fact that at the time the company had a lot of problems with billing therefore it has been very inaccurate. It was decided to delay the submission until after the consultation with the RM.

Meter Frequency reports were not sent regularly in the period covered by this audit and the last report was sent on 27/12/17.

There were no requests from the Authority.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.2 With: 15.35  From: 01-Dec-17 To: 28-Feb-18	AV-120 file was sent late once. Meter Reading Frequency report not sent regularly  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 to them particularly in relation to sending regular Meter Readings Frequency Report (MRF). It was noted that the task of sending MFR was not on the list of monthly tasks provided by Ecotricity. 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
A monthly task has been added for MRF in our Daily Processes check.		20/3/2018	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Additional staff have been appointed to fulfil these tasks in a timely manner.	5/4/2018	

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

#### Code reference

Clause 20 Schedule 15.2

#### Code related audit information

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

#### Audit observation

Ecotricity receives HHR data from the MEPs daily. 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

We found the process of data transmission between Ecotricity and MEPs and WELLS compliant. Any additional reads from WELLS are sent via email, which contain password protected files.

#### Audit outcome

Compliant

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

#### Code reference

Clause 21 Schedule 15.2

#### Code related audit information

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

*The audit trail must include details of information:*

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

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

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

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

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

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

#### **Audit observation**

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. Once the data is uploaded it is moved to an archive directory. Any files which fail to load are transferred to an "error" directory.

Ecotricity communicates with other participants via email e.g. notification of sending RR or NW files. All emails are archived.

#### **Audit commentary**

ORION has a built-in functionality to record a complete audit trail for all data gathering and communication with the registry.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 10.4*

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

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

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

#### **Audit observation**

Ecotricity publishes Terms of Use – Residential and Terms of Use – Commercial on their website. There are no long-term contracts for residential customers, however 30 days' notice is required before cancelling a customer agreement with Ecotricity. The agreement remains in force until the switch to another retailer is complete.

Terms of Use – Commercial specifies that all contracts are fixed for three years unless a term is expressly specified.

The Terms of Use covers contractors or agents, the Line Companies, the meter owner, and meter reader and any of their employees, contractors or agents.

#### **Audit commentary**

Compliance confirmed based on a review of the Terms of Use.

#### **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

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 commentary

Compliance confirmed based on a review of the Terms of Use.

### 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 12 installations of metering category 3 and above. None of the metering installations requires a compensation factor applied due to the location of the installation as per MEP's advice.

#### Audit commentary

We checked the ORION's functionality and confirmed that multipliers are applied to submission and billing information. We randomly chosen three examples and confirm compliance.

#### 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

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 commentary

Compliance confirmed based on the Terms of Use.

#### 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

Since the last audit Ecotricity had 42 new connections. At the time of the audit 17 new connections were in progress. The ICP is provided by a customer or by a network. Ecotricity accept an ICP in the registry, changes the status to "New connection in progress", and nominates the MEP - FCLM. We sampled 10 installations and the results are shown below:

ICP	ICP created	Status "New connection in progress"	MEP nomination
1000027495BP73B	18/07/17	18/07/17	18/07/17
0000012322KP720	15/12/17	27/12/17	27/12/17
0000257526MP85F	08/12/17	12/12/17	12/12/17
0000277077MP0DA	04/10/17	19/10/17	19/10/17
0000223264MP944	28/11/17	01/12/17	01/12/17
0000201754CTD20	12/12/17	11/01/18	11/01/18
0000569241NR79E	26/10/17	02/11/17	02/11/17
0000569261NRACB	01/11/17	03/11/17	03/11/17
0007011700AL9C1	18/05/17	23/05/17	23/05/17
0004265995TP8C5	12/12/17	19/12/17	19/12/17

### Audit commentary

Compliance with this clause confirmed based on the process and review. The MEP nominated for new connections is always FCLM, an arrangement between the two parties is in place.

### Audit outcome

Compliant

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

### Code reference

Clause 10.33(1)

#### Code related audit information

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

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

#### Audit observation

Ecotricity was not asked by any MEP to temporarily electrically connect a point of connection.

#### Audit commentary

Compliance confirmed by a verbal assurance by Ecotricity.

#### Audit outcome

Compliant

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

#### Code reference

Clause 10.33A (1)

#### Code related audit information

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

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

#### Audit observation

We reviewed the new connection process. In section 2.9, we sampled ten new connections and confirm that Ecotricity was recorded in the registry as a responsible party, metering installation was certified and the network owner has given approval to electrically connect an installation by allowing an approved contractor to work on its network.

We also reviewed the process of connections and disconnections, which are done by MEPs.

#### Audit commentary

The EDA file for the period covered by this audit showed that Ecotricity accepted responsibility for all new connections by changing the status to “new connection in progress”.

Compliance confirmed based on a review of the new connection process and sampling of connections and reconnections (section 3.8).

#### Audit outcome

Compliant

### 2.12. Arrangements for line function services (Clause 11.16)

## Code reference

Clause 11.16

## Code related audit information

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

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

## Audit observation

Ecotricity has an arrangement with all relevant networks. Agreements are always in place before any ICP is switched in. Ecotricity submits volumes for 86 NSPs, it covers a significant number of networks in NZ.

## Audit commentary

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

## Audit outcome

Compliant

## 2.13. Arrangements for metering equipment provision (Clause 10.36)

## Code reference

Clause 10.36

## Code related audit information

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

## Audit observation

For new connections Ecotricity always uses FCLM as the MEP. For any new switches, Ecotricity accepts an existing MEP. If a NHH installation is changed to HHR, FCLM is always nominated as the MEP.

## Audit commentary

Ecotricity has an arrangement with all MEPs which provide metering services to them. The MEP is always nominated after acceptance of a new ICP or when a change of metering is requested.

## 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 process for new connections was reviewed.

According to the process a customer applies to a relevant network for an ICP identifier. It is how the majority of networks operate, a customer requests a connection, not a trader. The network sends a notification of an ICP identifier to Ecotricity. Ecotricity replies to a network confirming acceptance of the ICP. The status of the ICP is changed from "ready" to "new connection in progress".

##### Audit commentary

Compliance confirmed based on a review of the process and sampling of ten new connections described in section 2.9

##### 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**

As per the new connection process, as Ecotricity is notified of an ICP identifier, it changes the status of the ICP to “new connection in progress” and nominates FCLM as the MEP. Once a meter is installed and an installation electrically connected, the ICP status is changed to “active” and the trader’s fields in the registry are populated.

We reviewed the EDA and the LIS files to assess compliance.

#### **Audit commentary**

We confirm that all registry fields are populated as per clause requirement.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 10 Schedule 11.1*

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

*If information provided by a trader to the registry manager about an ICP changes, the trader must provide written notice to the registry manager of the change no later than 5 business days after the change.*

#### **Audit observation**

We analysed the EDA file for the period 01/07/2017 to 28/02/2018. Ecotricity uploaded 1,412 trader’s transactions to the registry. 548 updates (38.8%) were uploaded later than 5BD. The range of backdated days are from -6 to -328. The level of compliance has not improved since the last audit. The last audit recorded 33.18% of late trader’s updates.

We closely analysed ten of the most backdated trader’s changes to the registry

#### **Audit commentary**

The table below shows the level of compliance for status changes, trader events such as profile, type of reconciliation.

Activity	Reason code	No of updates	No of updates later than 5BD	Date range of updates [BD]	Comment
Status (2,0)	active	117	57 (48.7%)	7 to 284	
Status (1,12)	new connection in progress	45	3	9 to 24	0000277077MP0DA - a day before changing to “active” 0000505766CE97C - a day before changing to “active” 0000506988CE4B6 – it matched the date of ICP creation

Status (1,4)	De-energised - vacant	10	0		
Status (1,7)	De-energised remotely	37	0		
Status (1,8)	De-energised at pole fuse	1	1		
Status (1,9)	De-energised due to a meter disconnected	1	1	45	0000921240TEB7A
Status (1,6)	De-energised – ready for decommissioning	4	2	29 to 86	1000558221PC87F and 0000008390TE54C
Trader		1412	548 (38.8%)	6 to 328	

The level of compliance for changes to the status “de-energized” has improved but the number of backdated changes to the status “active” has increased from 31.8% to 48.7%.

The list below shows the ICPs where the status was most backdated:

- 0000143611UN311 – change from “vacant” to “active” – backdated by 277 BD
- 0000880560TEA09 - change from “vacant” to “active” – backdated by 271 BD
- 0370781538LC41B - change from “de-energized at AMI meter” to “active” – backdated by 188 BD
- 0000954498TU716 - change from “de-energized at AMI meter” to “active” – backdated by 147 BD
- 1001146364LC9C4 - change from “vacant” to “active” – backdated by 87 BD

It was discussed with Ecotricity and there was not a simple explanation as to why the status of updates was missed. The company stated that volumes were submitted regardless of site status on the registry as reports are based on raw data. Ecotricity provided HHRAGGR from Jul’16 to Feb’18 to confirm it. The randomly chosen few months for each ICP listed above confirmed it.

The most backdated trader’s entries are shown below:

ICP	Effective Date	Input Date	BD	Comment
0000676530WP6C3	27/03/17	5/02/18	215	Reversing FCLM MEP nomination
0007178693RNF29	25/01/17	20/09/17	166	Change of reconciliation type to HHR
0192108778LCC6B	10/10/16	5/02/18	328	Reversing FCLM MEP nomination
0000008250TEBA7	28/10/16	22/01/18	305	Nomination of FCLM as the MEP
0000047260NTA6C	27/06/17	7/02/18	154	Change of reconciliation type to HHR
0000154454UNA7D	13/01/17	20/09/17	173	Change of reconciliation type to NHH
0000266404MPC07	28/01/17	20/09/17	163	Change of reconciliation type to HHR
0000528559TP66D	22/03/17	23/11/17	172	Nomination of TPCO as the MEP

We also reviewed trader’s updates this year to check if the number of updates decreased. In the year 2018, the number of trader updates was 460. Out of this number 175 updates were later than 5

business days, which is 38%. It would appear that Ecotricity has an on-going problem with compliance with this clause.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.3 With: 10 of Schedule 11.1  From: 01-Jul-17 To: 28-Feb-18	Late trader's updates to registry (38.8% of all entries), delayed updates to ICPs "active" status  Potential impact: Low  Actual impact: Low  Audit history: once previously  Controls: Weak  Breach risk rating: 6		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are recorded as weak. 38.8 % of traders' updates are backdated more than 5 BD and 48.7% updating the status to "active". Ecotricity is a small trader. Status changes can have a minor impact on settlement outcomes if submission volumes are based on the registry information and later on are corrected using the revision process. ORION calculates submission volumes regardless of site status in registry, submissions are based on raw data. Incorrect information of the ICPs status can affect switching and customer invoicing. Audit risk rating is recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
This is a staff resourcing issue as opposed to a process issue. Additional staff have been appointed to fulfil these tasks in a timely manner.		5/4/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Additional staff have been appointed to fulfil these tasks in a timely manner.		5/4/2018	

### 3.4. Trader responsibility for an ICP (Clause 11.18)

#### Code reference

Clause 11.18

#### Code related audit information

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

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

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

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

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

#### **Audit observation**

The LIS file dated 8<sup>th</sup> of March 2018 was analysed and we confirm that all ICPs have an MEP recoded in the registry. The new connection process was examined and an MEP is nominated at the same time as the ICP status is changed to “new connection in progress”.

Ecotricity has four ICPs, which are marked as “ready for decommissioning (1,6)”. During the period covered by this audit, only one ICP, 0000008390TE54C, was marked as “1,6”. It was done at the customer’s request, who decided not to go ahead with the building of a new house. The company provided a copy of correspondence with the customer.

#### **Audit commentary**

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

#### **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)(e))
- e) if a settlement type of UNM is assigned to that ICP, either:
  - the code ENG if the load is profiled through an engineering profile in accordance with profile class 2.1 (clause 9(1)(f)(i)); or
  - in all other cases, the daily average kWh of unmetered load at the ICP (clause 9(1)(f)(ii)).
  - the type and capacity of any unmetered load at each ICP (clause 9(1)(g))
  - the status of the ICP, as defined in clauses 12 to 20 (clause 9(1)(j))



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

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

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

#### Audit observation

The new connection process was examined in detail. We analysed the EDA and LIS files to evaluate the updating of the registry in relation to new connections. A few examples are shown below:

ICP	Installation Electrically connected	Status Active	Updated in the registry	BD	Comment
1000027495BP73B	31/07/17	31/07/18	11/08/17	-8	Active date is correct as per metering report
0000012322KP720	12/01/18	12/01/18	23/01/18	-7	Active date is correct as per metering report
0000277077MP0DA	20/10/17	20/10/17	8/11/17	-13	Active date is correct as per metering report
0000223264MP944	11/12/17	11/12/17	18/12/17	-6	Active date is correct as per metering report
0000201754CTD20	12/02/18	12/02/18	15/02/18	-4	Active date is correct as per metering report
0000569241NR79E	20/12/17	20/12/17	10/01/18	-11	Active date is correct as per metering report
0000569261NRACB	20/12/17	20/12/17	10/01/18	-11	Active date is correct as per metering report
0007642530AL4CD	25/01/18	25/01/18	08/03/18	-30	Active date is correct as per metering report

#### Audit commentary

The process for MEP nomination is sound. As soon as a customer asks for a connection, the registry status is changed to “new connection in progress” and a MEP is nominated. This part of the process works well. The part which does not work well is the timing of changes of the status to “active”. This problem is evident also for existing metering installations.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: 9 of Schedule 11.1  From: 01-Jul-17 To: 28-Feb-18	Some ICPs of new connections were updated to “active” late  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>	The controls are recorded as moderate. The information for new connections is correct but updates to the “active” status is often late. Audit risk rating is recorded as low because there was impact on settlement outcomes as submission volumes are based on raw data in ORION.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have the controls necessary to avoid this breach. We have however been under resourced in this area from a number of staffing perspective.		5/4/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Additional staff have been appointed to fulfil these tasks in a timely manner.		5/4/2018	

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

#### Code reference

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

#### Code related audit information

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

#### Audit observation

The LIS file was analysed to assess compliance. We identified two ICPs, 0000171431TRCF7 and 0176075542LC676, to which ANZSIC code of T99 is assigned which is incorrect.

#### Audit commentary

The analyses of the LIS files from the point of view of validity of assigned ANZSIC code revealed that for about 34 ICPs incorrect code of E301, E302, E310900, E301100 is assigned. Previously they were new connections but not anymore. Some of these incorrect codes were “inherited” from previous traders, some of them new connections for Ecotricity which changed from temporary connection to permanent.

The same non-compliance was identified during the last audit, Ecotricity does not have a good process to validate this information. The process is part of weekly checks but these checks are not always done. Overall the level of compliance has improved because the number of ICPs with the code T99xx is smaller, only two. During the last audit we did validate assigned ANZSIC codes and we found 11 ICPs

with the incorrect code, this time we identified 34 ICPs. We checked if Ecotricity corrected the ANZSIC codes for the 11 ICPs identified in the last audit, two of them were corrected.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.6 With: 9(1)(k) of Schedule 11.1  From: 01-Jul-17 To: 28-Feb-18	34 ICPs have incorrect ANZSIC codes assigned Potential impact: Low Actual impact: Low Audit history: once previously Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as moderate because the checks are in place. The level of non-compliance has not improved since last year. Incorrect ANZSIC codes identified in the last audit were not corrected.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have the controls necessary to avoid this breach. Metering staff in particular have been re-briefed on resolving this issue. We have also been under resourced in this area from a number of staffing perspective.		5/4/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Additional staff have been appointed to fulfil these tasks in a timely manner.		5/4/2018	

Description	Recommendation	Audited party comment	Remedial action
Incorrect ANZIC code for permanent supplies	Review ANZSIC code after a switch is finalised and after a new connection changes from BTS to permanent	Metering staff in particular have been re-briefed on resolving this issue.	Identified

#### 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

According to the LIS file, Ecotricity trades one ICP 0000181384HB943, which has UML attached to it. They are 2x100W fluoro under-verandah lighting (0.252 kW).

### Audit commentary

Information is populated correctly in the registry. Daily usage is 3 kWh.

### Audit outcome

Compliant

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

### Code reference

Clause 17 Schedule 11.1

### Code related audit information

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

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

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

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

### Audit observation

The analysis of the EDA file showed that for some ICPs the status in the registry is incorrect or updates are backdated by many days. In section 3.3 it was noted that 48.7% updates of the “active” status were later than 5BD.

As a part of the audit we asked Ecotricity to show us correspondence for reconnections/disconnections. The ICPs checked were 0000184197CT4B8 (soft reconnection), 0005636736RN851(disconnection), 0007176971RN2D9 (removal of BTS), 1001146364LC9C4 (disconnected at pole fuse). The registry was updated in a timely manner

### Audit commentary

There is no reliable process to synchronise data between ORION and the registry. According to Ecotricity, every two weeks a comparison is done but the number of late updates shows that the process is not effective and needs a review.

The process of reconnection/connection is managed well. The issue is that the registry is not always updated at the same time as ORION.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.8 With: 17 of Schedule 11.1  From: 01-Jul-17 To: 28-Feb-18	A number of ICPs have incorrectly assigned “inactive” status when they should be “active”  Potential impact: Low  Actual impact: Low  Audit history: Once before  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are recorded as moderate. The process for disconnection/connection from the point of view of communication with MEPs and WELLS works well. The weak point is not updating the registry correctly as per section 3.3. No impact on settlement outcomes. Audit risk rating is low. Small number of ICPs affected.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have the controls necessary to avoid this breach.  We have been under resourced in this area from a number of staffing perspective.		5/4/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Additional staff have been appointed to fulfil these tasks in a timely manner.		5/4/2018	

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

#### Code reference

Clause 19 Schedule 11.1

#### Code related audit information

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

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

#### Audit observation

Analysis of the LIS file showed two ICPs for which the Initial Electrical Connection date was populated by a distributor, but the status was still “new connection in progress”.

- 0004265995TP8C5 was electrically connected on 19/12/2017, the registry was updated by a distributor on 22/12/17. This ICP was recorded in ORION, therefore volumes were never submitted to the reconciliation manager.
- 0007642530AL4CD electrically connected on 25/01/18, the registry was updated by a distributor on 26/01/18, the ICP is recorded on ORION but no readings. According to the notes in ORION, WELLS can't locate installation therefore “zero” data is submitted to the reconciliation manager

The table below shows the list of ICPs which had the status “de-energised” assigned in the registry. After comparing data with ORION, it became clear that information in the registry was incorrect. The registry was updated.

ICP	ICP Status code	ICP status reason	Status in ORION	Comment
0000184197CT4B8	1	7	active	status in registry updated to Active during the audit
0000187718CTACA	1	7	active	status in registry updated to Active during the audit
0001120718TG01A	1	4	active	status in registry updated to Active during the audit
0001177134ML56B	1	4	active	status in registry updated to Active during the audit
0001533240AL6A6	1	4	active	status in registry updated to Active during the audit
0030020430PC929	1	7	active	status in registry updated to Active during the audit
0030080324PCB64	1	4	active	status in registry updated to Active during the audit
0084838800PC56C	1	7	active	status in registry updated to Active during the audit
0104397039LCAB0	1	4	active	status in registry updated to Active during the audit
0169697371LCA6F	1	4	active	status in registry updated to Active during the audit
0315564024LC140	1	7	active	status in registry updated to Active during the audit
0612782807LC3DC	1	4	active	status in registry updated to Active during the audit

#### Audit commentary

Incorrect status's in the registry were corrected during the audit. Ecotricity showed paperwork (email), which confirmed that installations were connected. Information was correct in ORION but not in the registry. Reconciliation volumes were not affected because ORION calculates submission volumes based on raw data in the system, not based on what the ICP status is.

#### Audit outcome

## Non-compliant

Non-compliance	Description		
Audit Ref: 3.9 With: 19 of Schedule 11.1 From: 01-Jul-17 To: 28-Feb-18	A number of ICPs had incorrect "inactive" status assigned in the registry Potential impact: Low Actual impact: Low Audit history: Once before Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are recorded as moderate. The process for disconnection/connection from the point of view of communication with MEPs and WELLS works well. The weak point is not updating the registry correctly as per section 3.3. The LIS file had the status as "inactive" for 22 ICPs. No impact on settlement outcomes. Audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have the controls necessary to avoid this breach. We have been under resourced in this area from a number of staffing perspective.		5/4/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Additional staff have been appointed to fulfil these tasks in a timely manner.		5/4/2018	

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

#### Code reference

Clause 15 Schedule 11.1

#### Code related audit information

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

#### Audit observation

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

#### Audit commentary

Ecotricity has not been approached by any distributor asking for updates. As far as Ecotricity is concerned, they do not see the possibility of such queries.

## 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 1/07/2017 to 28/02/2018.

Customers can contact Ecotricity via their website or call the office and request a switch. The customer information form on the website requests from a customer their details, type of switch, transfer or move in. According to the EDA file, Ecotricity sent 807 notifications (NTTR) to the registry.

#### Audit commentary

The Switch Breach report did not have any backdated transfer switches. We also checked the EDA file and confirm that no switches were backdated.

#### Audit outcome

Compliant

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

#### Code reference

*Clauses 3 and 4 Schedule 11.3*

#### Code related audit information

*Within 3 business days after receiving notice of a switch from the registry manager, the losing trader must establish a proposed event date. The event date must be no more than 10 business days after the date of receipt of such notification, and in any 12-month period, at least 50% of the event dates must be no more than 5 business days after the date of notification. The losing trader must then:*

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

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

#### **Audit observation**

To assess compliance we analysed the EDA file for the period covered by this audit and Switch Breach Report for the same period. According to the EDA file, Ecotricity lost 281 ICPs to other traders.

#### **Audit commentary**

The Switch Breach Report did not report any breaches. We walked through the switching process and we found it is managed well. AN files are sent to a gaining trader using the registry web interface. The AN file is sent the same or following days after the notification is received. We randomly chose ten AN files to check if the correct response code was used. We noted three ICPs with the response code "OC". Residential customers do not sign a contract with Ecotricity but according to the Terms of Use they are required to give 30 days' notice before switching away.

Analysis of the EDA file showed that the event date in AN files was no more than 10 business days after the date of receipt of NT. The requirement that 50% of the event dates must be no more than 5 business days after the date of notification was met. On average a standard switch is completed within 3.3 BD.

#### **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**

To assess compliance, we used the EDA file and the Switch Breach Report for the period covered by this audit. CS files are triggered by an operator, through ORION and occasionally directly in the registry. The last audit identified many problems with the content of CS files.

The process for sending CS files was examined.

#### **Audit commentary**

One CS file was late by one day according to Switch Breach Report.

We randomly chose nine CS files for standard switches and checked the content. We checked for the correct identification of meter readings, correct date of the last meter reading, and average daily

consumption against information recorded in ORION. We found that the CS file sent for ICP 0124947034LCF05 has an incorrect type of reading flag. It was recorded as “actual” but it was “estimate

We were not able to reconcile average daily consumption provided to a gaining trader against values recorded in ORION. Ecotricity’s explanation was as follows:

*There is a nightly process in ORION that updates the ‘Estimated Daily Consumption’ based of the raw data reads EVERY NIGHT – so when switch outs a processed and CS file is generated, the EDC value would be taken at the time of file generation, and another EDC value would be updated on the very night.*

Minor non-compliances identified. Overall the level of compliance in this area has significantly improved. In July’17 Agility applied a fix to ORION to address non-compliance.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.3 With: 5 of Schedule 11.3  From: 01-Jul-17 To: 28-Feb-18	One CS file late and incorrect type of reading flag in one CS file randomly chosen to assess compliance.  Potential impact: Low  Actual impact: Low  Audit history: Once before  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong. Only one CS file was late in the period covered by this audit. The impact on settlement outcomes is minor		
Actions taken to resolve the issue		Completion date	Remedial action status
Switching process have been vastly improved and will continue to be a strong point of our business.		20/3/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Switching staff have been involved in the Audit and will continue to improve where possible.		20/3/2018	

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

##### Code reference

Clause 6(1) and 6A Schedule 11.3

##### Code related audit information

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

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

*If the gaining trader disputes a switch meter reading because the switch event meter reading provided by the losing trader differs by 200 kWh or more, the gaining trader must, within 4 calendar months of the actual event date, provide to the losing trader a changed switch event meter reading supported by 2 validated meter readings.*

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

### Audit observation

The last audit found Ecotricity non-complaint with this clause. The management of read requests was examined. The EDA file and the Switch Breach Reports were analysed to assess compliance with clause 6A of Schedule 11.3.

Ecotricity sent 216 RR files and received 36 files.

There are two different types of standard switches from the point of view of the reconciliation type. The process for switches, where both traders reconcile as NHH, is reasonably easy to achieve compliance with clause 6(1) of Schedule 11.3. In the case where gaining trader reconciles HHR and a losing trader reconciles as NHH it is more difficult.

Ecotricity imports a switch event read, from CS files, to ORION for all switched. CS read is only used for NHH reconciled ICPs. HHR ICPs volumes are based on absolute volumes contained in metering readings provided by MEPs. Ecotricity checks manually each switch event read. The assumption is made that if a losing trader provides a read with the flag "A" it is true.

Ecotricity uses two processes to meet compliance with this clause 6(1) of Schedule 11.3

1. NHH to NHH – CS read is imported to ORION and validated with the next read received from MEPs or WELLS. If the difference is more than 200 kWh, RR file is sent. We randomly chose seven switches and confirm that a switch event read was used for reconciliation
2. NHH to HHR - If the meter type reading provided by a losing trader is "E", Ecotricity manually calculates a switch event reading using a HHR reading provided by MEPs and does a comparison. If the readings differ the RR file is sent to the losing trader.

### Audit commentary

We walked through the switch event read calculation for five ICPs. The methodology is correct, the process is slow and open to mistakes. Ecotricity would like to have this process, even partly, automated but it is fully dependent on Agility's ability to build complaint functionality.

The assumption that a losing trader assigns the correct flag to the switch event read could lead to mistakes. On the other hand, each trader is audited in this area to make sure that the given information is correct.

We randomly chose seven standard switches. We noted that for ICP 0000004146TE806, RR was not sent. The difference between the two switch event reads was 3 kWh.

We noted that for three ICPs 0000219261UNBCD, 0000219261UNBCD, and 1000012711BP674, RR files were sent later than 4 calendar months.

Any AC files sent as acknowledgement that RR file was sent in a timely manner.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: 6(1) of Schedule 11.3 From: 01-Jul-17 To: 28-Feb-18	Three RR files were sent later than 4 calendar months. RR file not sent for one ICP 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. It is a manual well managed process, to which additional improvements should give more confidence in accuracy and speed up the process. Minor impact on settlement outcomes because of the small number of ICPs.		
Actions taken to resolve the issue		Completion date	Remedial action status
The Switching process has been resourced up and has been vastly improved and will continue to be a strong point of our business.		20/3/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Switching staff have been involved in the Audit and will continue to improve where possible.		20/3/2018	

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

##### Code reference

Clause 6(2) and (3) Schedule 11.3

##### Code related audit information

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

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 6(2)(b));*
- *the gaining trader within 5 business days after receiving final information from the registry manager, may provide the losing trader with a switch event meter reading from that meter. The losing trader must use that switch event meter reading.*

##### Audit observation

The process for the management of read request was examined. As described in the previous section, Ecotricity uses AMI reads received from MEPs to compare a switch event read with the flag “E” received from a losing trader.

#### **Audit commentary**

We walked through the process and sampled six ICPs. The methodology used is correct.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 7 Schedule 11.3*

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

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

#### **Audit observation**

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

#### **Audit commentary**

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

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 9 Schedule 11.3*

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

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

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

*In the event of a switch move, the gaining trader must advise the registry manager of a switch and the proposed event date no later than 2 business days after the arrangement comes into effect.*

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

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

#### Audit observation

Ecotricity provided the Event Listing file (EDA) and Switch Breach History details report for the time period of 1/07/2017 to 28/02/2018.

Customers can contact Ecotricity via their website or call the office and request a switch. The customer information form on the website requests a customer give their details, type of switch, transfer or move in. The company does not allow the customer to backdate MI switches more than 3 months except in special circumstances.

#### Audit commentary

The switching process was examined. 485 NTMIs were sent to the registry. We discussed with Ecotricity five ICPs for which the switch date was in the past and in all situations, it was due to late notifications from customers.

#### 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 1/07/2017 to 28/02/2018.

#### Audit commentary

We identified one ICP 0000068192CEBCC, for which final information was provided later than 5 BD (9 days). Ecotricity uses the Switch Breach Report posted by the registry.

#### Audit outcome

Non-compliant

Non-compliance	Description
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Audit Ref: 4.8 With: 10(1) of Schedule 11.3 From: 01-Jul-17 To: 28-Feb-18	CS file for one ICP was sent later than 5BD (9 days) Potential impact: Low Actual impact: Low Audit history: 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. Well managed process. Audit risk rating recorded as low		
<b>Actions taken to resolve the issue</b>		<b>Completion date</b>	<b>Remedial action status</b>
The Switching process has been resourced up and has been vastly improved and will continue to be a strong point of our business.		20/3/2018	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>		<b>Completion date</b>	
Switching staff have been involved in the Audit and will continue to improve where possible.		20/3/2018	

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

##### Code reference

*Clause 10(2) Schedule 11.3*

##### Code related audit information

*If the losing trader determines a different date, the losing trader must also complete the switch by providing to the registry manager as described in subclause (1)(a):*

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

##### Audit observation

Ecotricity's policy is to accept the requested date given by a gaining trader. We analysed the EDA file for the audit period comparing the NT request event date with the AN file date sent by Ecotricity.

##### Audit commentary

We confirm that we have not found any switch for which Ecotricity had a date set earlier than that requested by a gaining trader in the NT file.

##### 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

To assess compliance, we used the EDA file and the Switch Breach Report for the period covered by this audit. CS files are triggered by an operator, through ORION. Occasionally CS files are created directly in the registry via web interface. The last audit identified many problems with the content of CS files.

##### Audit commentary

We randomly chose five 5 CS files and confirm that file format and information in the files was correct.

##### Audit outcome

Compliant

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

##### Code reference

*Clause 12 Schedule 11.3*

##### Code related audit information

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

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

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

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

#### Audit observation

The last audit found Ecotricity non-compliant with this clause. The process for the management of read requests was examined. The EDA file and the Switch Breach Report were analysed to assess compliance.

#### Audit commentary

The methodology used by Ecotricity to make sure that both traders use the same switch event read was described in detail in section 4.4.

We randomly chose five move in switches and checked if a switch event read was used by Ecotricity. For three ICPs RR files were sent to the losing traders and were accepted. For two ICPs 0000007950CE793 and 0000008216CEED7 RR files were not sent. For the first ICP the difference between the switch event read and AMI read from the MEP was 72 kWh, for the second ICP it was -12 kWh. For both ICPs it was a change of reconciliation from NHH to HHR.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.11 With: 12 of Schedule 11.3 From: 01-Jul-17 To: 28-Feb-18	Ecotricity did not use the same read as the gaining trader for two ICPs Potential impact: Low Actual impact: Low Audit history: once previously Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are recorded as strong. It is a manual well managed process, to which additional improvements should give more confidence in accuracy and speed up the process. No impact on settlement outcomes because of the small number of ICPs.		
Actions taken to resolve the issue		Completion date	Remedial action status
The Switching process has been resourced up and has been vastly improved and will continue to be a strong point of our business.		20/3/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

Switching staff have been involved in the Audit and will continue to improve where possible.	20/3/2018	
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#### 4.12. Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3)

##### Code reference

Clause 13 Schedule 11.3

##### Code related audit information

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

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

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

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

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

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

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

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

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

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

##### Audit observation

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

##### Audit commentary

Ecotricity sent four NT files to advise that customers want to switch to them. For all switches the proposed event date is in the same month as the date on which the gaining trader advised the registry manager.

##### Audit outcome

Compliant

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

##### Code reference

*Clause 15 Schedule 11.3*

##### Code related audit information

*Within 3 business days after the losing trader is informed about the switch by the registry manager, the losing trader must:*

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

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

##### Audit observation

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

##### Audit commentary

Ecotricity lost four ICPs via the gaining trader switch process. For all switches AN files were sent the same or following day.

##### Audit outcome

Compliant

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

##### Code reference

*Clause 16 Schedule 11.3*

##### Code related audit information

*The gaining trader must complete the switch no later than 3 business days, after receiving the valid switch response code, by advising the registry manager of the event date.*

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

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

*16(b)- carry out an interrogation and, no later than 5 business days after the metering installation is electrically disconnected or removed, advise the losing trader of the results and metering component numbers for each data channel in the metering installation.*

##### Audit observation

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

##### Audit commentary

We walked through all four HH switches. We identified noncompliance for ICP 1001282351LCDF7 because Ecotricity did not complete the switch within 3 business days. It was completed after 14 BD.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.14 With: 16 of Schedule 11.3 From: 01-Nov-17 To: 30-Nov-17	ICP 1001282351LCDF7 switch was complete later than 3 business days 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. The process is manual. Every day the Switch Breach Report is checked. There is only a small number of this type of switch. No impact on settlement outcomes because it was within the same reconciliation period		
Actions taken to resolve the issue		Completion date	Remedial action status
The Switching process has been resourced up and has been vastly improved since our last audit.		20/3/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Switching staff have been involved in the Audit and will continue to improve where possible.		20/3/2018	

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

### Code reference

*Clauses 17 and 18 Schedule 11.3*

### Code related audit information

*A losing trader or gaining trader may request that a switch request be withdrawn at any time until the expiry of 2 calendar months after the event date of the switch.*

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

- *for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*
  - *the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and*
  - *the withdrawal advisory code published by the Authority. (clause 18(c)(ii))*
- *within 5 business days after receiving notice from the registry manager of a switch, the trader receiving the withdrawal must advise the registry manager that the switch withdrawal request is*

*accepted or rejected. A switch withdrawal request must not become effective until accepted by the trader who received the withdrawal. (clause 18(d))*

- *on receipt of a rejection notice from the registry manager, in accordance with clause 18(d), a trader may re-submit the switch withdrawal request for an ICP in accordance with clause 18(c). All switch withdrawal requests must be resolved within 10 business days after the date of the initial switch withdrawal request. (clause 18(e))*
- *if the trader requests that a switch request be withdrawn, and the resolution of that switch withdrawal request results in the switch proceeding, within 2 business days after receiving notice from the registry manager in accordance with clause 22(b), the losing trader must comply with clauses 3,5,10 and 11 (whichever is appropriate) and the gaining trader must comply with clause 16. (clause 18(f))*

#### **Audit observation**

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

#### **Audit commentary**

Ecotricity sent 285 NW files with various reason codes.

ICP 0196725593LC263 – NW was sent after 10 months. It was discussed with Ecotricity. It was a human error. NWs are created via the web interface and an operator put the event date as 06/01/2017 instead of 06/10/2017.

We randomly chose two ICPs for each reason code CE, MI, DF, UA, WS, and WP and discussed with Ecotricity the reasons for using such code. In all cases it was correctly used.

#### **Audit outcome**

Compliant

### **4.16. Metering information (Clause 21 Schedule 11.3)**

#### **Code reference**

*Clause 21 Schedule 11.3*

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

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

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

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

#### **Audit observation**

Meter readings are received from MEPs. Ecotricity relies on MEPs and WELLS to provide accurate readings but, as is described in relevant sections, extensive validation is conducted upon uploading readings to the system.

#### **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 meter readings providers

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 11.15AA to 11.15AB*

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

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

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

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

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

#### **Audit observation**

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

#### **Audit commentary**

Compliance confirmed based on a review of the process and copy of email (template) sent to a customer. No special deal is offered to customers who intend to switch away.

#### **Audit outcome**

Compliant

## 5. MAINTENANCE OF UNMETERED LOAD

### 5.1. Maintaining shared unmetered load (Clause 11.14)

#### Code reference

Clause 11.14

#### Code related audit information

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

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

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

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

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

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

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

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

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

#### Audit observation

The analysis of the LIS file dated 8<sup>th</sup> March 2018, showed that 0000036648CP82E has shared unmetered load attached of an 8<sup>th</sup> share of 154 W, which is 19W over 12.0 hours.

#### Audit commentary

The company gained this ICP on 1/11/2017. Ecotricity was not aware that shared unmetered load needs to be reconciled, which mean that volumes were not submitted to the reconciliation manager. Daily Unmetered kWh are not recorded in the registry.

#### Audit outcome

Non-compliant



Non-compliance	Description		
Audit Ref: 5.1 With: 11.14(6)(7)  From: 01-Nov-17 To: 28-Feb-18	Daily Unmetered kWh are not recorded for shared unmetered load for one ICP  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: None  Breach risk rating: 5		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	There are no controls to identify shared unmetered load as a part of a newly gained ICP. In this case, it is only 19W over 12 hours. No impact on settlement outcomes. Audit risk rating recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
This was functionally we understood was working in Orion (Agility) however during the audit it was discovered it was not.		tba	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Agility has been briefed on the functionality not working.		tba	

## 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

Ecotricity trades only one UML ICP 0000181384HB943. Its daily usage is 3 kWh.

### Audit commentary

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

### Audit outcome

Compliant

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

### Code reference

Clause 10.14 (5)

### Code related audit information

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

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

### Audit observation

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

### Audit commentary

Compliance confirmed based on information recorded in the registry.

### Audit outcome

Compliant

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

### Code reference

Clause 11 Schedule 15.3, Clause 15.37B

### Code related audit information

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

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

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

### Audit observation

Ecotricity does not trade distributed unmetered load.

### Audit commentary

This clause is not applicable. Compliance was not assessed.

### Audit outcome

Not applicable

## 6. GATHERING RAW METER DATA

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

#### Code reference

*Clause 10.13, Clause 10.24 and Clause 15.13*

#### Code related audit information

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

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

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

- *there are 1 or more metering installations*
- *all electricity conveyed is quantified in accordance with the Code*
- *it does not use subtraction to determine submission information for the purposes of Part 15.*

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

#### Audit observation

All installations traded by Ecotricity are metered as per the LIS file. No subtraction is used to calculate submission information.

#### Audit commentary

Ecotricity uses the quantity of electricity measured by HHR and NHH metering installations, which is provided by MEPs and WELLS.

#### 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**

Ecotricity does not trade such installations.

#### **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**

Ecotricity does not use any engineered profiles. The only profiles recorded in the registry are HHR, RPS and HHA. Only HHR and RPS profiles are used for submitting volumes. The HHA profile is recorded in the registry to identify ICPs for which Metrix and Counties Power provides metering data. The terms of HHA profile require additional validation to be conducted by Ecotricity. Compliance of HHA is audited separately.

#### **Audit commentary**

This clause is not applicable. Compliance was not assessed.

#### **Audit outcome**

Not applicable

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

#### **Code reference**

*Clause 10.43(2) and (3)*

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

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

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

#### **Audit observation**

HHR reads are uploaded automatically. During the upload meter reads are validated. WELLS reads are uploaded every second day, each of them is checked individually. If, during any of the processes, Ecotricity becomes aware that a meter is defective, the responsible MEP is notified and asked to investigate.

#### Audit commentary

Ecotricity showed a few examples of correspondence with MEPs in relation to non-communicating meters.

#### 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

Metering data for all Ecotricity ICPs is collected by three MEPs, AMS, MTRX, ARCS, and AMCI. The company does not collect data themselves.

#### Audit commentary

Compliance with this clause is assessed as a part of the MEPs audit. AMCI report was reviewed and compliance 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**

We confirm that all HHR meter readings are derived from raw meter data provided by MTRX, NGCM, SMCO AMCI, FCLM, and ARCS. Data is provided daily except AMCI (monthly).

Ecotricity does not accept customer reads as a part of BAU (Business as Usual). All readings received from MEPs, WELLS and customers are validated as they are imported into ORION.

#### **Audit commentary**

As a part of this audit we reviewed the WELLS audit report dated 31/05/2017. In the 2016 audit, non-compliance was raised relating to field service operators not checking for phase failure and missing or broken seals. The most recent audit has cleared this non-compliance.

#### **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 NHH readings are used by Ecotricity for installations which switch in as NHH. The switch read from the CS file is used as a start read. Consecutive readings from WELLS apply from 0000hrs on the day after the last meter interrogation up to and including 2400hrs on the day of the meter interrogation. The compliance with this clause was examined during checking of correctness of historical estimates. The testing of Historic Estimates was not conclusive. From working with other participants using ORION we know that their software is compliant with this clause.

#### **Audit commentary**

Compliance confirmed based on knowledge working with other participants.

#### **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**

When an ICP switches in, a switch event read is always received. It is actual or estimates. Later on the company receives readings from WELLS. Ecotricity have an agreement with WELLS to read meters every 2 months, but it is not always achieved due to problems achieving access to some premises.

#### **Audit commentary**

Ecotricity used to have a process in place to monitor missing NHH reads. Our observation is that no such process is in place any more. We enquired with Ecotricity if such a process has been documented, knowing that the person responsible for this part of the operation has left the company. The answer was that no such documentation exists. Ecotricity bills all customers at the beginning of each month. If ORION comes across an ICP, for which there is no NHH, an estimated read is created.

The company was not able to present a list of ICPs which were not read since the last audit. It appears that ORION does not provide such a report, which makes it very difficult for Ecotricity to be compliant unless a manual work around is introduced. Ecotricity trades 258 NHH ICPs, 234 ICPs are read by WELLS, therefore a manual work around would require an additional resource. During analysis of non-

compliance identified in section 13.3 we came across ICP 0000313353AAFAB, for which no actual read has been recorded since the switch date of 23/06/17. After closer investigation it was found that WELLS had never been requested to install a meter at this premise. Similar issue we found with ICP 0000501070TED86 for which data has been estimated since June'17, not scheduled to read by WELLS.

If, during a manual validation of WELLS reads on upload it is noted that there is lack of reads for a number of months, no robust process is in place to follow up with WELLS or to contact a customer and request a read. There is no process parameter in place to say how many estimated reads are permitted.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.8 With: 7(1)(2) of Schedule 15.2  From: 01-Jul-17 To: 28-Feb-18	The requirements to use best endeavours to obtain a read for all ICPs not read during the period of supply was not met  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Weak  Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as weak because there is no structured process in place to assure compliance is met. Impact on settlement outcomes is minor because ORION estimates data at the end of each month.		
Actions taken to resolve the issue		Completion date	Remedial action status
It is noted this is an area for improvement. This functionality is not currently available in Orion. Agility have been briefed on this shortcoming.  Metering staff have been briefed and processes have been put in place in the meantime.		4/4/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Metering staff have been briefed and processes have been put in place in the meantime.		tba	

Description	Recommendation	Audited party comment	Remedial action
Interrogate NHH meters	Review management of NHH reads provided by WELLS		



## 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. This report must be submitted no later than 20 BD 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 8(1).*

### Audit observation

ORION creates a Meter Reading Frequency Report which has to be submitted to the Authority every month. Last time such a report was sent by Ecotricity was for Nov'17. The company does not provide this report regularly to the Authority.

Due	28/03/17	3/05/17	26/05/17	28/06/17	28/07/17	28/08/17	28/09/17	30/10/17	28/11/17	3/01/18	31/01/18	1/03/18
	7		7	7	7	7	7	7	7		8	8
Period	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18
Received	3/04/17	18/05/17	18/05/17	23/06/17	16/08/17	12/09/17	26/09/17	19/10/17	4/12/17	27/12/17		

### Audit commentary

Meter Frequency Report for Feb'18, not submitted to the Authority, shows the following level of non-compliance. On 36 NSPs Ecotricity continuously traded ICPs for 12 months, for 12 NSPs readings were not obtained for all ICPs.

Ecotricity does not have a list of ICPs for which exceptional circumstances prevent them from obtaining the validated meter reading.

### Audit outcome

Non-compliant

Non-compliance	Description
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Audit Ref: 6.9 With: 8(1)(a)(2) of Schedule 15.2  From: 01-Jul-17 To: 28-Feb-18	The requirements to use best endeavours to obtain a read for all ICPs annually was not met. The last time a Reading Frequency Report was submitted for Nov'17  Potential impact: Low  Actual impact: None  Audit history: Once before  Controls: Weak  Breach risk rating: 3		
<b>Audit risk rating</b>	<b>Rationale for audit risk rating</b>		
<b>Low</b>	The controls are recorded as weak because there is no structured process in place to assure compliance is met. Impact on settlement outcomes is minor because 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>
The frequency read report in Agility is deficient and therefore ICPS requiring reads were missed.		4/4/2018	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>		<b>Completion date</b>	
Agility have been briefed on the deficient report.		tba	

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

##### Code reference

Clause 9(1) and (2) Schedule 15.2

##### Code related audit information

*In relation to each NSP, each reconciliation participant must ensure that for each NHH ICP at which the reconciliation participant trades continuously for each 4 month, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every 4 months for 90% of the non-half hour metered ICPs.*

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

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

##### Audit observation

ORION creates a Meter Reading Frequency Report which has to be submitted to the Authority every month. The last time such a report was sent by Ecotricity was for Nov'17. The company does not provide this report regularly to the Authority, as was described in the previous section.

##### Audit commentary

Ecotricity did not meet their obligations, set out in this clause, for 8 NSPs out of 69. It is particularly difficult to manage NHH readings when only one or two ICPs are traded on a particular NSP. In comparison with the previous audit the compliance level is not as good.

Ecotricity does not have a list of ICPs for which exceptional circumstances prevent them from obtaining the validated meter reading.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.10 With: 9(1)(3) of Schedule 15.2  From: 01-Jul-17 To: 28-Feb-18	The requirements to use best endeavours to obtain a read for all ICPs annually was not met. The last time a Reading Frequency Report was submitted for Nov'17  Potential impact: Low  Actual impact: Low  Audit history: Once before  Controls: Weak  Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as weak because there is no structured process in place to assure compliance is met. Impact on settlement outcomes is minor because ORION estimates data at the end of each month.		
Actions taken to resolve the issue		Completion date	Remedial action status
The frequency read report in Agility is deficient and therefore ICPS requiring reads were missed.		4/4/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Agility have been briefed on the deficient report.		tba	

#### 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 readings are received from WELLS. Five readings were chosen, and we traced them from the readings file to ORION.

#### **Audit commentary**

Compliance with this clause confirmed by e review of the WELLS Audit report dated 31/05/2017.

#### **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**

All HHR Ecotricity installations are electronically interrogated by the MEPs or AMCI, which is an agent, via the appropriate service access interface.

#### **Audit commentary**

Compliance with this clause is assessed as a part of the MEPs audit. As a part of this audit we reviewed the HHR collection audit for AMCI.

#### **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**

Metering data for all ICPs traded by Ecotricity is collected remotely by the MEPs and AMCI as an agent.

#### **Audit commentary**

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

#### **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**

Metering data for all ICPs traded by Ecotricity is collected remotely by the MEPs. Metrix provides a report which lists meters for which time had to be adjusted and AMS sends a weekly report showing non-communicating meters.

#### **Audit commentary**

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

#### **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, and ARCS.

#### Audit commentary

MEPs are responsible for meeting compliance with this clause. It is reviewed during their audits. We reviewed data provided by AMS and ARCS 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

HHR data is received from the MEPs, who archive raw meter data. Ecotricity keeps a copy of all HHR data. MEPs are responsible for archiving raw meter data.

#### Audit commentary

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

#### 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 and RPS profiles for reconciliation submissions. No external control equipment is used.

**Audit commentary**

Compliance was not assessed because this clause is not applicable to the Ecotricity operation.

**Audit outcome**

Not applicable

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

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

#### Code reference

Clause 19(1) Schedule 15.2

#### Code related audit information

*If errors are detected during validation of non-half hour meter readings, one of the following must be undertaken:*

*19(1)(a) - confirmation of the original meter reading by carrying out another meter reading*

*19(1)(b) - replacement of the original meter reading by another meter reading (even if the replacement meter reading may be at a different date)*

*19(1)(c) - if the original meter reading cannot be confirmed or replaced by a meter reading from another interrogation, then an estimated reading is substituted, and the estimated reading is marked as an estimate and it is subsequently replaced in accordance with clause 4(2).*

#### Audit observation

WELLS read NHH meters on behalf of Ecotricity. If a meter reading is considered inaccurate during validation, WELLS is advised and asked to read it again.

#### Audit commentary

Compliance confirmed based on the process.

#### Audit outcome

Compliant

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

#### Code reference

Clause 19(2) Schedule 15.2

#### Code related audit information

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

*19(2)(a) - if a check meter or data storage device is installed at the metering installation, data from this source may be substituted*

*19(2)(b) - in the absence of any check meter or data storage device, data may be substituted from another period if the total of all substituted intervals matches the total consumption recorded on the meter, if available, and the pattern of consumption is considered materially similar to the period in error.*

#### Audit observation

All MEPs providing HHR reads validate them in their system and it is also validated by ORION. HHR data provided by Metrix goes through an additional validation process within ORION as part of the HHA profile. The HHA profile is audited by a separate audit. If data needs to be substituted, register reads will be used to ensure that substituted intervals match the total consumption recorded on the meter.



### Audit commentary

It was discussed with Ecotricity and their comment was that they did not receive any incorrect HHR data from MEPs since the last audit. If such a situation occurs, MEPs will be asked to explain and asked to read a meter again.

### Audit outcome

Compliant

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

### Code reference

*Clause 19(3) Schedule 15.2*

### Code related audit information

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

### Audit observation

Ecotricity does not have any installations where error or loss compensation occurs. Any multipliers recorded in the registry are uploaded to ORION through CS.eda file and applied to data.

### Audit commentary

We checked three ICPs and confirm that ORION has a multiplier recorded which is applied to raw metering data.

### Audit outcome

Compliant

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

### Code reference

*Clause 22(1) and (2) Schedule 15.2*

### Code related audit information

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

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

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

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

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

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

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

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

### **Audit observation**

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

If a NHH read from WELLS is required to be corrected or altered, a flag against a read is changed to “misread” and the details of an operator are recorded plus date and time of a change. A new reading is entered with appropriate flag e.g. customer read, RR read etc.

### **Audit commentary**

The company stated that, since the last audit, there were no instances of HHR data which required correction/alteration. HHR raw data is never overwritten because raw data is always stored by the MEPs.

NHH data which was considered is not overwritten, a flag against the read is changed.

### **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 confirm compliance based on a review of readings for NHH ICPs as a part of a review of RR and CS files. Ecotricity also provided examples of ICPs for which actual and estimated readings were present.

#### 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

Volume information is derived from validated meter readings. Readings are received from MEPs, AMCI, and WELLS. If actual data is not available, Orion estimates using its own algorithm for NHH ICPs using estimated daily consumption (EDC), which are updated after each read. For HHR ICPs it profiles data using in the daily shape of the same time last week or the default daily profile.

#### Audit commentary

ORION uses both validated and estimated readings to create submission files. It was reviewed as a part of a validation of reconciliation files.

#### 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 two raw meter data examples from each MEP, FCLM, AMCI, and ARCS.

#### **Audit commentary**

We compared readings received from MEPs with readings stored by ORION and confirm that volume information was not rounded or truncated.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 15 Schedule 15.2*

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

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

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

#### **Audit observation**

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. One scenario was for a situation where data for a few intervals was missing within a day, the second scenario was for a situation where an entire day was missing, and the third, manual insertion of HHR reads for non-communicating meters.

#### **Audit commentary**

There are following situations when Orion automatically generates estimates for HHR data.

The first situation is when there is an entire month's worth of data missing, or when the missing data date range isn't encapsulated within present midnight reads in the read files. In this situation Orion will generate half-hourly usage based on it's calculated 'Estimated Daily Consumption', (EDC is calculated based on the average daily usage in the last 90 days) and the daily profile shape is based on the same shape of the meter of the same time last week, and if that's not available it will default to a fixed profile shape that is set. This methodology is not often used for communicating meters as the quality of data received from MEPs has improved significantly since the last audit.

There is another situation for non-communicating meters (20 ICPs) when a meter is upgraded but the area has poor cell phone reception. In this situation Ecotricity would still treat this customer as an HHR profile but will have the ICP on a manual WELLS cycle. ORION does not "allow" ORION to change a type of customer from NHH to HHR and back. As a work around, ORION would take the given volume based on the actual reads from WELLS and distribute that across the number of periods between the two actual reads. This type of estimation is not automatic. Actual reads are provided to Agility, which applies the HHR profile and uploads data to ORION. It is not an ideal way of estimating intervals based on

manually reads registers received from WELLS every two months, but it is the best solution that Agility can offer at the present time.

The second situation, is when there is missing data encapsulated between two midnight reads, in this situation the data is calculated from the difference of these reads. The estimated reads between two midnight reads are in the daily shape of the same time last week or the default daily profile.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 16 Schedule 15.2*

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

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

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

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

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

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

#### **Audit observation**

NHH readings from WELLS are uploaded to ORION manually. The files are uploaded to the system, which creates a report, which is analysed by an operator. Orion performs a preliminary validation by checking for invalid dates and times, confirming that the meter reading relates to the correct ICP, meter, and register.

Once it is done a report is displayed on the screen and each read is validated individually by checking that the meter reading lies within an acceptable range compared with the expected pattern, previous pattern, or trend.

#### **Audit commentary**

The way in which Ecotricity validates NHH reads is laborious and time consuming. It provides a good result but if Ecotricity decides to increase the number of manually read NHH ICPs, the process will be changed.

#### **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 daily to ORION. Upon data upload, ORION conducts certain validation which happens in the background.

#### **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.

#### **Audit outcome**

Compliant

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

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

#### Code reference

Clause 13.136

#### Code related audit information

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

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

#### Audit observation

This clause is not applicable to Ecotricity.

#### Audit commentary

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

#### Audit outcome

Not applicable

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

#### Code reference

Clause 13.137

#### Code related audit information

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

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

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

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

#### Audit observation

This clause is not applicable to Ecotricity.

#### Audit commentary

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

#### Audit outcome

Not applicable

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

#### Code reference

*Clause 13.138*

#### Code related audit information

*The generator must provide the information required by clauses 13.136 and 13.137,*

*13.138(1)(a)- adjusted for losses (if any) relative to the grid injection point or, for embedded generators the grid exit point, at which it offered the electricity*

*13.138(1)(b)- in the manner and form that the pricing manager stipulates*

*13.138(1)(c)- by 0500 hours on a trading day for each trading period of the previous trading day.*

*The generator must provide the half-hour metering information required under this clause in accordance with the requirements of Part 15 for the collection of the generator's volume information.*

#### Audit observation

This clause is not applicable to Ecotricity.

#### Audit commentary

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

#### Audit outcome

Not applicable

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

#### Code reference

*Clause 13.140*

#### Code related audit information

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

#### Audit observation

This clause is not applicable to Ecotricity.

#### Audit commentary

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

#### Audit outcome

Not applicable



## 11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

### 11.1. Buying and selling notifications (Clause 15.3)

#### Code reference

Clause 15.3

#### Code related audit information

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

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

#### Audit observation

Ecotricity only uses HHR, EG1 and RPS profiles for reconciliation submissions.

#### 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 Jan'18 to March'18.

#### Audit outcome

Compliant

### 11.2. Calculation of ICP days (Clause 15.6)

#### Code reference

Clause 15.6

#### Code related audit information

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

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

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

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

#### Audit observation

We reviewed the ICP days file (AV-110) submitted to the reconciliation manager and GR-100 provided by the reconciliation manager. The results are shown below:

Month	R0	R1	R3	R7	R14
May-16	0.44%	0.28%	0.17%	-0.23%	-0.16%
Jun-16	0.66%	-1.32%	-0.01%	-0.17%	0.01%
Jul-16	0.73%	0.83%	-0.44%	-0.49%	0.20%
Aug-16	0.02%	-0.27%	-0.39%	0.06%	0.43%

Sep-16	-0.23%	-0.59%	-0.47%	0.06%	0.57%
Oct-16	-0.25%	-0.16%	-0.05%	0.43%	0.87%
Nov-16	-0.35%	-0.11%	-0.15%	-0.12%	0.81%
Dec-16	0.52%	-0.15%	0.22%	-0.02%	0.77%
Jan-17	-0.19%	-0.26%	-0.13%	0.03%	
Feb-17	-0.66%	-0.77%	-0.74%	-0.71%	
Mar-17	-1.19%	-1.43%	-1.55%	-1.40%	
Apr-17	-1.67%	-1.54%	-2.14%	-1.69%	
May-17	-1.82%	-2.01%	-2.01%	-1.58%	
Jun-17	-2.40%	-2.48%	-2.07%	-1.58%	
Jul-17	-2.97%	-2.77%	-2.66%	-2.28%	
Aug-17	-3.06%	-2.95%	-2.97%		
Sep-17	-2.99%	-3.06%	-2.92%		
Oct-17	-2.95%	-2.95%	-2.71%		
Nov-17	-3.26%	-3.27%	-2.99%		
Dec-17	-3.30%	-3.24%			
Jan-18	-3.14%	-3.08%			
Feb-18	-3.15%				

#### Audit commentary

We confirm that AV-110 files were submitted for all revisions. The table above shows Ecotricity volumes for more ICPs than expected every month, based on the ICPs status in the registry.

It was discussed with the company and the comment was that reconciliation volumes are calculated for ICPs for which metering data is available. The status recorded in the registry or in ORION is not taken into account.

We understand that Agility created a report to allow for a comparison between the registry and ORION, but it does not work very well.

#### 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:*

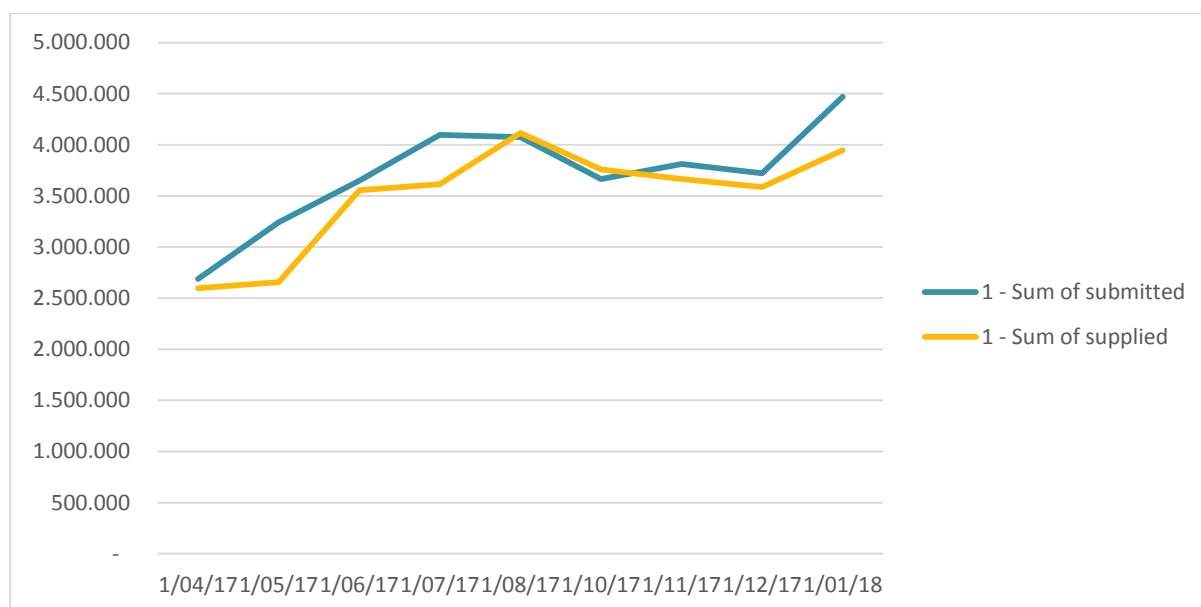
*15.7(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*

*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 monthly. We confirm it submits for all revisions except it did not submit for day 4 for one month as described in section 1.6. The file was submitted for day 13. In recent months Ecotricity has had a major problem with their billing engine, which put additional pressure on the team. The table below shows a comparison between volumes submitted and supplied (billed).

Row Labels	Sum of submitted	Sum of supplied
1/04/17	2,687,249	2,597,846
1/05/17	3,241,012	2,656,113
1/06/17	3,648,742	3,555,748
1/07/17	4,096,838	3,616,235
1/08/17	4,073,907	4,114,973
1/10/17	3,666,412	3,759,327
1/11/17	3,810,763	3,663,397
1/12/17	3,722,689	3,588,018
1/01/18	4,468,536	3,946,332
Total	33,416,149	31,497,989



The difference between submitted and supplied volumes is 6.09%.

#### Audit commentary

Non-compliance was identified because AV-120 file for the month of January'18 was not submitted by 1600 hour on day. It is reported as self-breach as per section 1.6.

#### Audit outcome

## Non-compliant

Non-compliance	Description		
Au dit Ref: 11.3 With: 15.7 From: 06-Feb-18 To: 13-Apr-18	AV-120 file for the month of January'18 was not submitted by 1600 hour on day 4. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating:1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as strong. It is the first time that Ecotricity not submitted AV-120 file.		
Actions taken to resolve the issue		Completion date	Remedial action status
We self-breached as noted, again because human resource was being swamped because of having to deal with billing Agility issues. Reconciliation Dashboard Reports will be developed for monthly internal reviews. However, we would also like to note our own disappointment in the difference in as billed volumes compared to submitted volumes. This was primarily due to an issue with Agility not reporting (minor) volumes on some new GXP's, hence default volumes were charged on these GXP's which will be washed out in May 2018.		4/4/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Extra staff have been appointed specifically to reporting to assist current staff.		4/4/2018	

## 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 July'17 to Feb'18. We compared the volumes in HHRVOLS and HHRAGGR for the months Jan'18 to March'18. Volumes in both files were within a few kWh. We also checked GR-090 (ICP missing) file for Jan'18 and Feb'18.

#### Audit commentary

The table below shows results of the analysis of GR-090 for Jan'18 and Feb'18

Month	Count of Discrepancy type
<b>01/2018</b>	
A	43
R	9
<b>02/2018</b>	
A	78
R	17

We checked in detail GR-090 for Feb'18. For ICPs for which volumes were not included in HHRAGGR, there were valid reasons for them not being included e.g. late switch notification etc. The analysis showed that volumes submitted in HHRVOLS for 45 ICPs were assigned to incorrect NSPs on the Orion network.

This is the result of the mismatch between ORION and the registry. Ecotricity did not update the allocation of ICPs on the ORION network in time for file submissions. Ecotricity are actively working towards solving it.

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

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

#### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.4 With: 15.8 From: 01-Jul-17 To: 28-Feb-18	HHRAGGR files do not contain electricity supplied information Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	Rationale for audit risk rating
<b>Low</b>	Ecotricity submits submissions volumes as per the reconciliation manager specification.

Actions taken to resolve the issue	Completion date	Remedial action status
As noted, we have the controls necessary to avoid this error.	20/3/2018	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Additional staff have been appointed to fulfil these tasks in a timely manner.	20/3/2018	

## 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

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

#### Audit commentary

Compliance confirmed based on observation.

#### 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 the last 3 months. We confirmed that Ecotricity submits volume information on day 4 and day 13 (all relevant revisions).

#### Audit commentary

We checked GR-170NHH and GR-170HHR and confirm that submission volumes were submitted by Ecotricity in a timely manner.

#### 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 to compare data recorded in the registry and data stored in ORION twice per month.

Analysis of GR-090 for Feb'18 showed that for 78 HHR ICPs volumes were not included in HHRAGGR and for 17 ICPs data was included in HHRAGGR but not expected.

### Audit commentary

Analysis of GR-090 for Feb'18 showed that for 78 HHR ICPs volumes were not included in HHRAGGR and for 17 ICPs data was included in HHRAGGR but not expected. We identified 15 ICPs on the ORION network for which the NSP assigned in HHRAGGR was different to information in the registry e.g. BRY0661 instead ISL 0661 and vice versa. It appears that ORION is not compliant in the area of retaining information on changes to NSPs.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.3 With: 15.5  From: 01-Jul-17 To: 28-Feb-18	Allocation of volumes information for some ICPs to another NSP than indicated by the data held in the registry for the relevant consumption period  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because there are some improvements that can be made to them. Synchronising data between ORION and the registry is still not satisfactory.		
Actions taken to resolve the issue		Completion date	Remedial action status



We have the controls necessary to avoid this breach. We have been under resourced in this area from a number of staffing perspective.	5/4/2018	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
Additional staff have been appointed to fulfil these tasks in a timely manner.	5/4/2018	

#### 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 GXP's, 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

This clause is not applicable.

##### Audit commentary

This clause is not applicable. Compliance was not assessed.

##### Audit outcome

Not applicable

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

##### Code reference

Clause 15.10

##### Code related audit information

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

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

##### Audit observation

This clause is not applicable.

##### Audit commentary

This clause is not applicable. Compliance was not assessed.

#### Audit outcome

Not applicable

### 12.6. Grid connected generation (Clause 15.11)

#### Code reference

Clause 15.11

#### Code related audit information

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

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

#### Audit observation

This clause is not applicable.

#### Audit commentary

This clause is not applicable. Compliance was not assessed.

#### Audit outcome

Not applicable

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

#### Code reference

Clause 15.12

#### Code related audit information

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

#### Audit observation

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

#### Audit commentary

The revisions files will be submitted to the RM as per the revision schedule which is listed in the "Daily check list". Ecotricity provided a set of submission files including revisions. We reviewed dates and times of submissions on the RM portal to confirm that revised submissions were provided at the next available opportunity. ORION has a built-in functionality that as soon as meter readings are corrected for example RR files, it flows through to submission volumes.

## Audit outcome

Compliant

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

#### Code reference

Clause 4 Schedule 15.2

#### Code related audit information

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

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

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

#### Audit observation

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

<b>May-16</b>	
GFD0331	0.18
MPE1101	99.05
<b>Jun-16</b>	
GFD0331	0
MPE1101	98.91
STK0331 (TASM)	99.6
<b>Jul-16</b>	
MPE1101	97.77
STK0331 (TASM)	99.76
STK0331 (NELS)	90.15
TAK0331	97.18
<b>Sep-16</b>	
BRY0661	92.83
CML0331	88.32
FKN0331	95.09
INV0331	0
MPE1101	99.83
STU0111	0
TGA0111	0
WEL0331	62.07
<b>Oct-16</b>	
ISL0661	93.62
KWA0111	81.79
STK0331 (TASM)	99.66
STU0111	0

<b>Nov-16</b>	
MHO0331	0
MTM0331	98.43
MTO0331	97.91
STK0331 (TASM)	99.62
STU0111	0
<b>Dec-16</b>	
BLN0331	82.16
BOB1101	2.39
ISL0661	0
MPE1101	98.85
MTM0331	97.38
STK0331 (TASM)	94.87
STU0111	0

GFD for May'16 – no reading in ORION

#### Audit commentary

All switch in reads are treated as a permanent estimate and switch out readings are treated the same way unless ECOT receives a RR file from the gaining trader challenging this read. If the gaining trader proves that their reading is correct Ecotricity's process is to import the reading into their system.

We chose GFD0331 for May'16 for analysis to check if there is a problem with how Orion calculated Historic Estimates, or if there is a problem with meter readings. There was only one ICP on GFD0331 and there were no actual reads for this ICP for the time of supply.

Non-compliance with this clause is the result of a not very well managed process for dealing with NHH reads received from WELLS and possibly non-compliance of calculations performed by ORION. More analysis needs to be done to identify the problem. The same non-compliance was identified during the last audit and it is not resolved.

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 12.8</p> <p>With: 4 of Schedule 15.2</p> <p>From: 01-Jul-17</p> <p>To: 28-Feb-18</p>	<p>Permanence of meter reading for the period May'16 to Dec'16 not achieved.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: once previously</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>
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
We have the controls necessary to avoid this breach. We have been under resourced in this area from a number of staffing perspective.	5/4/2018	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
Additional staff have been appointed to fulfil these tasks in a timely manner.	5/4/2018	

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

### Code reference

Clause 2 Schedule 15.3

### Code related audit information

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

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

### Audit observation

All metering installations category 3, and higher, ICPs are reconciled as HHR. Volumes for SUML and UML was not submitted. Ecotricity's comment was that there is no functionality in ORION to deal with UML volumes.

There are about 20 ICPs, which are non-communicating meters, which can't be read remotely due to a reception problem. We described in detail, in section 9.4 (HHR estimates), how submission volumes are calculated.

Ecotricity has a program to replace NHH meters with smart meters after a switch is complete. We walked through three ICPs (0001730990TG8C9, 0001800054TG873 and 0001670037TGBEC) to validate if all volumes for the day of meter change were submitted to the reconciliation manager. Total submitted volumes were correct but their allocation to NHHVOLS and HHRVOLS was incorrect.

#### Audit commentary

Number of non-compliances were identified. It was discussed with Ecotricity. Some non-compliances are results of non-compliance of ORION.

We crossed checked NHHVOLS (Jan'18) against the detailed report for the same month to see if they match. We confirm that volumes matched. We would like to note that 86.9% of volumes were estimated but it can be caused by incorrect calculation by ORION.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.9 With: 2(c) of Schedule 15.3  From: 01-Jul-17 To: 28-Feb-18	Shared unmetered and unmetered load ICPs not reconciled. Reconciliation volumes for 20 ICPs are submitted as HHR. Volumes are profiled using NHH reads  Potential impact: Low  Actual impact: Low  Audit history: once before  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low			
Actions taken to resolve the issue		Completion date	Remedial action status
We have the controls necessary to avoid this breach. We have been under resourced in this area from a number of staffing perspective.		5/4/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Additional staff have been appointed to fulfil these tasks in a timely manner.		5/4/2018	

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

#### Code reference

Clause 3 Schedule 15.3

#### Code related audit information

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

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

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

#### **Audit observation**

For the assessment of compliance with this clause we provided energyclubnz with a set of scenarios to validate the accuracy of the calculation of historical and forward estimation for NHH ICP days. Only six scenarios were tested and for all of the calculations were incorrect. After discussion with Ecotricity it was decided not to continue testing of calculations for all scenarios

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	Calculations not correct
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	Calculations not correct
3	Switch out on estimate during the month	Confirm that HE is calculated even though the reading is an estimate Confirm that HE calculation ends on the correct day.	Calculations not correct
4	Switch out on actual during the month	Confirm that HE is calculated for the relevant part of the month, and calculation ends on correct day	Calculations not correct
5	Complete month without a read in the month	Read in the previous month and the month after, confirm correct HE for the month	Calculations not correct
6	Complete month with a read during the month	Confirm the two calculations for the month are correct	Not tested
7	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	Not tested
8	Proportion of HE	Confirm the proportion of HE in the AV080 is correct	Calculations not correct
9	Switch in 2 months ago, first actual read gained in current	Confirm estimation is shown as forward, not historical	Not tested

	month, profile data not available for current month		
10	Meter change during month	Confirm estimation is calculated for both meters, and summed correctly	Not tested
11	Half-hour meter installed during month	If NHH read is added to meter, and site class is 'DEEMED', then estimation should be calculated for HH meter according to the same rules as NHH meter	Calculations not correct
12	Two reads in the same month	Confirm usage between two reads is 'Historic' even if no profile data is available	Calculations not correct
13	ICP days for all HE scenarios above	Confirm ICP days calculations are correct	Compliant
14	GXP change backdated	Confirm usage is shown against correct GXP for the time of usage	Not tested
15	Unmetered load submission	Check that this works the same as a normal meter and is considered HE	Not submitted

#### Audit commentary

Non-compliance was identified of incorrect calculation of historical estimates. The same problem was identified in the previous audit. It was discussed with Ecotricity, who will address it with Agility.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.10 With: 4 of §schedule 15.3  From: 01-Jul-17 To: 28-Feb-18	Incorrect calculation of historical estimates conducted by ORION  Potential impact: Low  Actual impact: Low  Audit history: Twice previously  Controls: Weak  Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are recorded as weak. ORION calculations are not correct by applying GR-030		
Actions taken to resolve the issue		Completion date	Remedial action status



<p>This has been an ongoing issue which we understood to have been resolved after one previous audit.</p> <p>Other Orion retailers appear to have this issue resolved which Agility have set up a special working group to check and then deploy with Ecotricity.</p> <p>Ecotricity also is better equipped to test the NHH historic estimate functionality.</p>	tba	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
Agility have set up a special working group to check and then deploy with Ecotricity.	tba	

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

##### Code reference

Clause 4 and 5 Schedule 15.3

##### Code related audit information

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

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

##### Audit observation

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

##### Audit commentary

The methodology of historical estimate process was tested in section 12.10 using scenarios.

##### Audit outcome

Compliant

#### 12.12. Forward estimate process (Clause 6 Schedule 15.3)

##### Code reference

Clause 6 Schedule 15.3

##### Code related audit information

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

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

#### **Audit observation**

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. 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.

#### **Audit commentary**

The volumes traded as NHH for any balancing area were below 100,000 kWh in January'18. AUCKLNDVECTG is the biggest balancing area. In Jan'18 volumes submitted were around 83,000 kWh, therefore we did not tested percentage of error in relation to forward estimates.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 7 Schedule 15.3*

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

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

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

#### **Audit observation**

At the time of this audit HHR, RPS, and HHA profiles were used. The profile change from RPS to HHR or HHA occurs only when a meter is replaced by a smart meter. At the time of meter replacement, a final read is taken by an MEP and passed to Ecotricity. We checked three randomly chosen examples of meter replacements, documentation showing a final read and corresponding read in ORION.

#### **Audit commentary**

Compliance confirmed based on a walk-through of three examples of meter changes.

#### **Audit outcome**

Compliant

## 13. SUBMISSION FORMAT AND TIMING

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

#### Code reference

*Clause 8 Schedule 15.3*

#### Code related audit information

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

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

#### Audit observation

We reviewed the submission files for Jan'18 to March'18 and confirm that volumes are aggregated correctly.

#### Audit commentary

Compliance confirmed based on a review of reconciliation files.

#### 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 (HHRVOLS and HHRAGGR) files for Jan'18 to March'18.

#### Audit commentary

Both the HHRVOLS and HHRAGGR submission information is rounded to two decimal places. It was discussed with the company as to how submission information was calculated, and Ecotricity confirm that both the HHRVOLS and HHRAGGR reports are rounded at the end of calculations.

#### Audit outcome

Compliant

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

#### Code reference

Clause 10 Schedule 15.3

#### Code related audit information

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

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

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

#### Audit observation

Period covered is from May'16 to Nov'17

Month	R3	R7	R14
May'16	7/38	2/38	2/38
June'16	7/42	1/42	3/42
Juy'16	7/41	1/41	3/41
Aug'16	3/41	3/41	7/41
Sept'16	7/43	5/43	4/43
Oct'16	4/47	2/47	1/47
Nov'16	11/52	4/52	5/52
Dec'16	6/54	2/54	7/54
Jan'17	5/57	2/57	
Feb'17	7/60	2/60	
Mar'17	19/65	21/65	
Apr'17	8/66	5/66	
May'17	10/70	4/70	
June'17	58/76	14/76	
July'17	21/79	22/79	
Aug'17	22/71		
Sept'17	28/70		
Oct'17	12/75		
Nov'17	14/81		

Legend: Revisions covered in the last audit

Note: 14/81 – means 14 NSPs out of 81 did meet a target of 80% HE

#### Audit commentary

The level of compliance in this area has not improved since the last audit. There is no process in place to evaluate ICPs for which there are no validated reads after 14 months.

#### Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 13.3</p> <p>With: 10 of Schedule 15.3</p> <p>From: 01-Jul-17</p> <p>To: 28-Feb-18</p>	<p>Historically HE targets not met for revision 3, 7, and 14.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once previously</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low			
Actions taken to resolve the issue		Completion date	Remedial action status
<p>This has been an ongoing issue which we understood to have been resolved after one previous audit.</p> <p>Other Orion retailers appear to have this issue resolved which Agility have set up a special working group to check and then deploy with Ecotricity.</p> <p>Ecotricity also is better equipped to test the NHH historic estimate functionality.</p>		tba	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Agility have set up a special working group to check and then deploy with Ecotricity.		tba	

## CONCLUSION

### PARTICIPANT RESPONSE

Ecotricity appreciates the recognition that a large number of previous issues have been addressed, in particular with regards to Switching and RR files. This has been possible through the employment of additional staff to address these issues successfully.

Going forward, a large number of current issues will be simply addressed, as it was with Switching, through the appointment of an extra staff member to assist with, and provide backup to, existing Reconciliation and Reporting staff.

That new staff member starts on the 5<sup>th</sup> of April 2018 and will also be involved in future audits to provide quicker response times but also provide a further resource for making improvements.

The main recurring Orion issues, namely NHH Historic Estimates and Meter frequency reports are being actively addressed in the coming weeks.

While Ecotricity appreciates there is a risk rating of 49, we request an extension of 3 months to the period of 6 months for the following reasons;

- The bulk of issues are simply a human resourcing issue which originally stemmed from issues being dealt with due to the Orion platform. We are confident those issues are now behind us.
- Further, a new staff member starts on the 4<sup>th</sup> of April to support Reconciliation and Reporting and will very quickly alleviate the bulk of issues.
- While we take full responsibility of the use of the Orion Reporting Billing platform, these issues are out largely out of our hands. That said, in February 2018, Ecotricity has entered into a financial KPI system with Agility that requires far greater accuracy than previously experienced and underpins the confidence they have in the first point above.
- None of the issues raised, nor the combined effect of all issues raised, has a significant impact on the volumes reported, nor how customers interact with Ecotricity as an electricity provider.
- Finally, while we appreciate the need for all reports to be accurate, some processes can be very onerous on new entrant retailers. In particular when you consider the workload for AV reporting is not a linear function between the number of ICPs and the number of reports. For this reason alone we think there is a distinct disadvantage to smaller retailers. Increasing the number of audits required for smaller retailers, when the larger retailers actually have bigger market impacts also has a negative cumulative effect on smaller retailers.

Ecotricity therefore request the next audit is required in 9 months.