

Electricity Industry Participation Code Reconciliation Participant Audit Report

For



Prepared by Ewa Glowacka

Date of Audit: 08/07/2017

Date Audit Report Complete: 31/07/2017

TEG & Associates Ltd

Executive summary

This reconciliation participant audit was performed at the request of Ecosmart (ECOS) to support their application for certification, in accordance with clauses 4 of Schedule 15.1 of The Code.

Ecosmart New Zealand Limited is a company which installs solar panels for residential customers at their request. It also offers them an option, as a trader, to purchase electricity. Before solar panels are installed, the metering installation is evaluated to see if it can provide Import/Export metering data. If not, the current MEP is asked to install a new meter. In the situation where an existing MEP can't provide such a meter, a new MEP is nominated.

The previous audit was conducted in February this year. The company increased the number of traded ICPs from 3 to 9. Ecosmart preference is still to only switch in ICPs where smart meters with the capability of recording Import/Export metering data are installed. If it is not possible Ecosmart, initially acquires a NHH ICP then solar panels are installed and a new meter is installed.

At the time of this audit, Ecosmart was trading 9 ICPs (8 HHR and 1 NHH). The company is supervised by John Candy Consulting, who provides a range of services to Ecosmart as described in the body of this document. The audit report of John Candy Consulting is attached to this report.

The relevant rules audited are as required by the Guidelines for Reconciliation Participants Audits, V 7.0 issued by the Electricity Authority.

4 non-compliances were identified during the audit. Ecosmart trades only few ICPs therefore none of them had an impact on market settlement outcome.

We thank the Ecosmart staff for their full and complete cooperation in this audit.

Non-compliances

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Requirement to provide accurate and complete information	3.1	15.2	HHR volume not reconciled for a day when a meter change (NHH to HHR) occurs	Weak	Low	3	
Traders must use the same reading	4.1.5	6 of Schedule 11.3	The switch event read provided by the losing trader was not used for ICP 0007903355TUE94	Weak	Low	3	
Provision of ICP information to registry	4.3.2	10 of Schedule 11.1	Trader event for 0000381448WEC26 and 0000711125TU959 was backdated by 22 and 13BD	Moderate	Low	2	
Submission information to RM	8.1.2	15.4	HHR volume not reconciled for a day when a meter change (NHH to HHR) occurs	Weak	Low	3	
Future Risk Rating						11	

Based on Table 1 of the Guidelines for Reconciliation Participant audit, the next audit should happen within next 18 months. Our recommendation is to have it within 12 months because Ecosmart is new to the Marke. They are assisted by John Candy Consulting as the agent and consultant, the possible risk of future breaches is smaller.

Recommendations

Subject	Section	Recommendation	Description
Log file of electronic meter readings	6.2.5	Request MEPs to provide log report whether events occur or not.	

Issues

Subject	Section	Issues	Description
		Nil	

Persons involved in this audit

Name	Title	Company	Comment
Daryn Leaity	Founding Director	Ecosmart	
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates	

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1. Audit summary

Non-compliances

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Future Risk Rating							

Recommendations

Subject	Section	Recommendation	Description

Issues

Subject	Section	Recommendation	Description

2. Administrative

2.1 Summary of previous audit

The initial audit for Ecosmart was conducted in February 2017 by Ewa Glowacka of TEG & Associates. No non-compliances were identified.

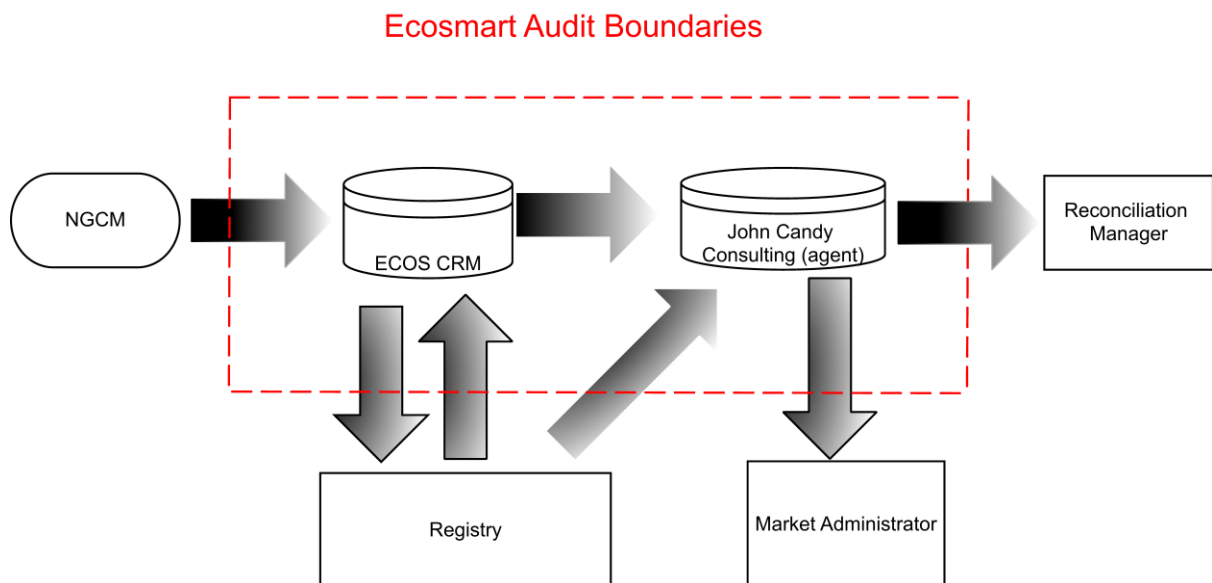
2.2 Scope of audit

This reconciliation participant audit was performed at the request of Ecosmart to encompass the Authority's request for annual audits as required by clause 4, of Schedule 15.1, of the Code to assure compliance with the Electricity Industry Participation Code 2010. The audit was carried out with Daryn Leaity via Skype.

The table below shows the tasks under clause 15.38 of part 15 for which Ecosmart requires certification.

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents providing services	MEPs providing services
(1)(a) - Maintaining registry information and performing customer and embedded generator switching		
(1)(b) – Gathering and storing raw meter data		NGCM
(1)(c)(iii) - Creation and management of HHR and NHH volume information	John Candy Consulting	
(1)(d) – Calculation of ICP days, monthly kWh information of half hour metered ICPs, and electricity supplied	John Candy Consulting	
(e) – Provision of submission information for reconciliation	John Candy Consulting	

The diagram below shows the audit boundaries



2.3 Structure of Organisation

At the time of this audit, Ecosmart consisted of one person, Daryn Leaity (Founding Director).

2.4 Hardware and Software

Switching is conducted via web interface. The company does not use any specific software to perform tasks covered by this audit. The majority of tasks covered by clause 15.38 of Part 15 are contracted out to the agent, John Candy Consulting.

2.5 Use of agents (clause 15.34 of the Part 15)

(1) A reconciliation participant who has obligations under this Part may discharge those obligations by way of an agent.

(2) A reconciliation participant who utilises an agent to discharge an obligation under this Code remains responsible and liable for, and is not in any way released from, that obligation.

(3) A reconciliation participant must not assert, against anyone, that it is not responsible or liable for its obligations because the reconciliation participant's agent has done or not done something or has failed to meet a relevant standard.

Ecosmart uses John Candy Consulting as its agent for tasks listed in section 2.2

2.6 Exemption from obligation to comply with the Code (section 11 of Electricity Industry Act 2012)

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.

Ecosmart was granted the exemption No. 253. Ecosmart is exempt from complying with the obligation in clause 15.38 of the Code to obtain and maintain certification as a reconciliation participant. The exemption expires on the earlier of:

- a) the close of 30 September 2017;
- b) Ecosmart being responsible for more than 100 ICPs; and
- c) Ecosmart being responsible for an ICP with a metering installation category of 2,3,4 or 5

We confirm that Ecosmart met all conditions of the exemption.

2.7 Breaches or Breach Allegations

Ecosmart has had no breach allegations recorded during the period covered by this audit.

2.8 Authorisation Received

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

2.9 ICP list

Ecosmart provided a list of ICPs as of 8/7/17. The total number of ICPs in the registry was 9.

ICP status	Number of ICPs (July 2017)	Number of ICPs (Feb 2017)
Active (2)	9	3

Highest Metering Category	Number of ICPs (July 2017)	Number of ICPs (Feb 2017)
1	9	3

Type of profile	Number of ICPs (July 2017)	Number of ICPs (Feb 2017)
HHR	8	2
RPS	1	1

3. Operational infrastructure

3.1 Requirement to provide complete and accurate information (clause 15.2 of Part 15 & clause 10.6 of Part 10)

(1) A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under this Part is—

(a) complete and accurate; and

(b) not misleading or deceptive; and

(c) not likely to mislead or deceive.

(2) If a participant becomes aware that in providing information under this Part, the participant has not complied with subclause (1), the participant must, as soon as practicable, provide such further information as is necessary to ensure that the participant complies with subclause (1).

Ecosmart takes all practicable steps to ensure that information provided is complete and accurate. These clauses are interconnected to compliance with other parts of the Code. When it is relevant we will quote this section. Non compliance was found as described in section 8.1.2.

Our assessment of controls is as Weak based on analysis of methodology, which does not deliver accurate results. In this case are talking about very small differences for residential customers. The fix is very easy and the company already decided to change it.

Non-compliance identified.

Non-compliance	Description		
Audit Ref: 3.1 With: 15.2 From: 01-Feb-17 To: 30-Jun-17	HHR volume not reconciled for a day when a meter change (NHH to HHR) occurs Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	Very small number of ICPs effected. No impact on market settlement outcome		
Actions taken to resolve the issue		Completion date	Remedial action status
Industry wide issue, interpretation of appropriate method has been applied retrospectively. We will ensure compliance going forward by splitting meter change and profile change actions			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Change in procedure, implemented already			

3.2 Provision of information (clause 15.35 of Part 15)

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.

This is discussed in a number of sections in this report. We asked Ecotricity if they were requested to provide any information by the Authority or participants. The requests from other participants were mainly related to switching. There were no requests from the Authority

3.3 Data transmission (clause 20 of Schedule 15.2)

Transmissions and transfers of data related to metering 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.

Metering data is provided to Ecosmart by NGCM by FTP server, which passes it to John Candy Consulting for processing via Dropbox. Compliance confirmed.

3.4 Audit trails [clause 21 of Schedule 15.2]

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

(3) Logs of communications and processing activities must form part of the audit trail, including if automated processes are in operation.

(4) Logs must be printed and filed as hard copy or maintained as data files, in a secure form, along with other archived information, and must include (at a minimum) the following:

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

An audit of audit trails is covered in John Candy Consulting's audit report, which was reviewed during this audit. Compliance confirmed.

3.5 Participant obligations (clause 10.4 of Part 10)

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

We sighted the Ecosmart's Terms and Conditions and confirm that it covers any participant for the full term of the arrangement. Compliance confirmed.

3.6 Access to premises in which metering installation located [clause 10.7(4)(5)(6) of Part 10]

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*

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.

Ecosmart will use its best endeavours to provide access to premises. Any Health & Safety requirements imposed by a customer must be taken into consideration. Ecosmart meters are read remotely by MEPs not by meter readers.

3.7 Physical location of metering installations [clause 10.35(1)(2) of Part 10]

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

Ecosmart trader category 1 metering installations only. For this type of installation, the metering installation is always located close to a point of connection. Ecosmart does not have any ICPs, where a compensation factor is required. Compliance confirmed.

3.8 Trader contracts to permit assignment by the Authority [clause 11.15B]

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)).

We checked the Ecosmart's Terms and Conditions and confirm that they contain the appropriate clauses to allow the transfer of ICPs when a "default trader" situation arises.

Compliance confirmed

3.9 Electrical connection of an ICP (clause 10.32 of Part 10)

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

- *accept responsibility for the ICP and the obligations under Parts 10 and 11, and, under Part 15; and*
- *have an arrangement with an MEP to provide metering at the point of connection under Part 15.*

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

- *accept responsibility for the ICP and the obligations under Parts 10 and 11, and, under Part 15; and*
- *have an arrangement with an MEP to provide metering at the point of connection under Part 15.*

Ecosmart hasn't had any new connections since February this year. The company 'strategy is not to trade new connections.

3.10 Metering certification [clause 10.33(2) of Part 10]

A reconciliation participant may energise or authorise the energisation of a connection only if the reconciliation participant has accepted responsibility for the point of connection if 1 or more certified metering installations are in place.

Ecosmart hasn't has any new connections since February this year. The company 'strategy is not to trade new connections.

3.11 Arrangements for metering equipment provider (clause 10.36 of Part 10)

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

Ecosmart has a contract signed with AMS, which is their preferred MEP. Compliance confirmed

4. Maintaining registry information and performing customer switching

4.1 Standard switching process

The Ecosmart business model is to supply energy to both NHH and HHR customers. Since the last audit Ecosmart switched 5 ICPs using the standard switching process.

4.1.1 New retailer to inform registry of switch request for ICPs (clause 1 and 2 of Schedule 11.3)

A trader and a customer or embedded generator may enter 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 subpart 2 of Part 4A of the Fair Trading Act 1986 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.

For each ICP to which a switch relates, the gaining trader must advise the registry of the switch no later than 2 business days after the arrangement with the customer or embedded generator comes into effect.

The gaining trader must include in its advice to the registry—

- that the switch type is TR; and*
- 1 or more profile codes of a profile at the ICP.*

Ecosmart provided the Event Listing file and Switch Breach History details report for the time period of 1/02/2017-30/06/2017. NT files were created within 2 days of the arrangements with customers. The Registry web interface was used to initiate switches.

Compliance confirmed based on a review of NT files, confirming when it was sent, type of switch and a date requested.

4.1.2 Losing trader response to switch request (clause 3 of Schedule 11.3)

Within 3 business days after receipt of notification of a switch from the registry, the losing trader must establish an expected event date or provide the final information to complete a switch.

Ecosmart has not lost any ICPs. The process is documented.

4.1.3 Event days of switch request (clause 4 of Schedule 11.3)

The losing trader must establish event dates under clause 3 that no event date is 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.

We reviewed process documentation. Ecosmart hasn't lost any ICPs.

4.1.4 Losing trader must provide final information (clause 5 of Schedule 11.3)

If the losing trader provides information to the registry in accordance with clause 3(a) and (4), then no later than five business days after the vent date, the losing trader must complete the switch by providing final information to the registry, including:

- (a) the event date; and*
- (b) 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; and*
- (c) if the switch event meter reading is not a validated meter reading, the date of the last meter reading of the meter or data storage device described in paragraph (b).*

The process is documented but since the last audit Ecosmart has not lost any ICPs. CS files, if required, will be created via the registry web interface.

4.1.5 Traders must use same reading (clause 6 & 6A & 7 of Schedule 11.3)

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

- (a)- 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 switch event meter reading;*
 - (b) 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 event meter reading.*
- (2) Despite subclause (1), subclause (3) applies if—*
- (a) the losing trader trades electricity at the ICP through a metering installation with a submission type of non-half hour in the registry; and*

- (b) the gaining trader will trade electricity at the ICP through a metering installation with a submission type of half hour in the registry, as a result of the gaining trader's arrangement with the customer or embedded generator; and*
- (c) a switch event meter reading provided by the losing trader under subclause (1) has not been obtained from an interrogation of a certified metering installation with an AMI flag of Y in the registry.*

(3) No later than 5 business days after receiving final information from the registry under clause 22(d), —

- (a) the gaining trader may provide the losing trader with a switch event meter reading obtained from an interrogation of a certified metering installation with an AMI flag of Y in the registry; and*
- (b) the losing trader must use that switch event meter reading.*

The CS file is processed by John Candy Consulting as he is providing the reconciliation services to Ecosmart. When switching ICPs with the same type of reconciliation of NHH, the CS read is used for reconciliation as a start read, unless it is more than 200 kWh. Such a situation occurred for ICP 0000470583TU384, RR file was sent.

Ecosmart had 2 TR switches when the losing trader traded electricity at the ICP with a submission type of NHH in the registry and Ecosmart traded at the ICP with a submission type of HHR. We discussed it with Ecosmart and their agent and it was identified that for ICP 0007903355TUE94 the switch event read provided by Trustpower was not used. HHR data was used and the start register read was estimated because data from AMS was late. After data was received from AMS it was noted that the difference between two readings was 47 kWh. The register read provided by Trustpower was higher than actual. We discussed it with the company and their comment was

“We did this in the knowledge that we would be submitting, and therefore purchasing, more energy that we (ECOS) would have if we had renegotiated the read. We considered that the value of the energy involved was far less than the cost of processing an RR, and so opted to shoulder the cost of the extra energy.”

Another ICP was 0000134004WE06D, the switch event read was actual AMI read, Ecosmart used it to calculate volume for submission files.

Ecosmart has got a process to compare the switch event read with the read provided by AMS as part of HERM file. The problem is that AMS data is usually late so JC Consulting estimates the switch event read for submission purposes. When AMS data finally arrives the comparison is made between two reads and RR file is sent or not.

Overall, it was calculated that NHH/HHR max tolerance is 8.44 kWh for a 31-day month. It is correct but this clause says “traders must use the same readings”.

We had a discussion with Ecosmart and they will change their process.

Our evaluation of strength of control is weak because it does not deliver the outcome described in the Code.

Non-compliance identified

Non-compliance	Description		
Audit Ref: 4.1.5 With: 6 of Schedule 11.3 From: 06-Mar-17 To: 01-Jul-17	The switch event read provided by the losing trader was not used for ICP 0007903355TUE94 Potential impact: None Actual impact: None Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	It was 1 residential ICP. 47 kWh difference between readings. Ecosmart over submitted volume because the switch event red provided by Trustpower was overestimated. No impact on market settlement outcome		
Actions taken to resolve the issue		Completion date	Remedial action status
Will ensure volume differences however small will be dealt with Via RR			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Change in procedure, implemented already			

4.2 Switch Move process

4.2.1 Switch move process for ICPs (clause 8 of Schedule 11.3)

If 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, the following provisions apply:

If subpart 2 of Part 4A of the Fair Trading Act 1986 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. The arrangement is deemed to come into effect on the day after the expiry of that period.

At the time of the audit there were 1 Move In switch (ICP 0000134004WE06D).

4.2.2 Gaining trader informs registry of switch request (clause 9 of Schedule 11.3)

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

- (2) *The gaining trader must include in its advice to the registry—*
- (a) *a proposed event date; and*
 - (b) *that the switch type is MI; and*
 - (c) *1 or more profile codes of a profile at the ICP.*

NT file for ICP 0000134004WE06D was created using registry web interface within 2 BD after the arrangement with a customer. NT file was created on 8/3/17, a requested date of switch was 14/3/17.

Compliance confirmed.

4.2.3 Losing trader response to switch move request (clause 10 of Schedule 11.3)

(1) *After receiving notification of a switch request from the registry under clause 22(a), the trader that is recorded on the registry as being responsible for the ICP (the “losing trader”) must, no later than 5 business days after receiving the notification, —*

(a) *if the losing trader accepts the event date proposed by the gaining trader, complete the switch by providing to the registry—*

- (i) *[Revoked]*
- (ia) *confirmation of the event date; and*
- (ib) *a valid switch response code approved by the Authority; and*
- (ii) *final information in accordance with clause 11; or*

(b) *if the losing trader does not accept the event date proposed by the gaining trader, acknowledge the switch request to the registry and determine a different event date that—*

- (i) *is not earlier than the gaining trader’s proposed event date; and*
- (ii) *is no later than 10 business days after the date of the notification; or*
- (c) *request that the switch be withdrawn in accordance with clause 17*

At the time of the audit Ecosmart had not lost any ICPs as Move In. The process is documented.

4.2.4 Losing trader must provide final information (clause 11 of Schedule 11.3)

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

(a) the event date; and

(b) 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; and

(c) if the switch event meter reading is not a validated meter reading, the date of the last meter reading of the meter or data storage device described in paragraph (b).

At the time of the audit Ecosmart had not lost any ICP as Move In. The CS file will be created using the registry web interface. The process is documented.

4.2.5 Gaining trader may change switch event meter readings (clause 12 of Schedule 11.3)

The gaining trader may use the switch 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 the new switch event meter reading, the gaining trader must notify the losing trader of the new switch event meter reading and the event date to which it refers as follows:

- 12(2)(a) - if the switch event 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; or*

(2A) Despite subclauses (1) and (2), subclause (2B) applies if—

(a) the losing trader trades electricity at the ICP through a metering installation with a submission type of non-half hour in the registry; and

(b) the gaining trader will trade electricity at the ICP through a metering installation with a submission type of half hour in the registry, as a result of the gaining trader's arrangement with the customer or embedded generator; and

(c) a switch event meter reading provided by the losing trader under subclause (1) has not been obtained from an interrogation of a certified metering installation with an AMI flag of Y in the registry.

(2B) No later than 5 business days after receiving final information from the registry under clause 22(d), —

(a) the gaining trader may provide the losing trader with a switch event meter reading obtained from an interrogation of a certified metering installation with an AMI flag of Y in the registry; and

the losing trader must use that switch event meter reading

Ecosmart gained one ICP 0000134004WE06D. The read provided in the CS file was used for reconciliation purposes. John Candy Consulting assists Ecosmart to make sure that compliance with the above clause is met.

4.2.6 Gaining trader switch process (clause 13 and 14 of Schedule 11.3)

A gaining trader must advise the registry of the switch and expected event date no later than 3 business days after the arrangement with the customer.

Ecosmart had no HH switches. Only category 1 ICPs were switched.

4.2.7 Losing trader provides information (clause 15 of Schedule 11.3)

Within 3 business days after the losing trader is informed about the switch by the registry, and if relevant for that ICP, the losing trader must:

- 15(a)- provide to the registry 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.*

No HHR customers switched away from Ecosmart.

4.2.8 Gaining trader obligations (clause 16 of Schedule 11.3)

The gaining trader must notify the registry of the actual event date no later than 3 business days after the actual event date.

There were no switches of this type in the period covered by this audit.

4.2.9 Withdrawal of switch request (clause 17 and 18 of Schedule 11.3)

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.

No later than 5 business days after receiving a notification from the registry of a switch, the trader receiving the withdrawal must notify the registry 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.

There were no withdrawal switches in the period covered by this audit.

4.2.10 Trader may elect to have switch saving protection (clause 15AA to 15AD of Part 11)

- (1) This clause applies if a trader (the "protected trader") has switch saving protection.*
- (2) If the protected trader enters into an arrangement with a customer of another trader (the "losing trader") to commence trading electricity with the customer, the losing trader must comply with subclause (4).*
- (3) If a trader enters into an arrangement with a customer of a protected trader to commence trading electricity with the customer, the protected trader must comply with subclause (4).*
- (4) A losing trader referred to in subclause (2) or a protected trader referred to in subclause (3) must not, by any means, initiate contact with the customer to attempt to persuade the customer to terminate the arrangement referred to in subclause (2) or subclause (3) (as the case may be) during the period specified in subclause (5), including by—*
 - (a) making a counter-offer to the customer; or*
 - (b) offering an enticement to the customer.*
- (5) The period starts on the day on which the trader receives notice of the switch request under clause 22(a) of Schedule 11.3, and ends on the event date for the switch*

Ecosmart is planning to be part of the Switch saving protection scheme but understands its obligations and will adhere to them. The company business policy is to let a customer to go when a request of switch received.

4.2.11 Metering information (clause 21 of Schedule 11.3)

For an interrogation or switch event meter reading carried out in accordance with Schedule 11.3:

- 21(a)- the trader who carries out the interrogation, or validated meter reading, or permanent estimate must ensure that the interrogation is as accurate as possible, or that the switch event meter reading is fair and reasonable (as the case maybe)*
- 21(b) and (c) - the cost of every interrogation or switch event meter reading carried out in accordance with clauses 5(b) or 10(b)(ii) must be met by the losing trader. The costs of every other interrogation must be met by the gaining trader.*

Ecosmart understands its obligations under this clause and will adhere to it. The company already provided a photo to the losing trader when it was in dispute. The cost was met by Ecosmart.

Compliance confirmed.

4.3 Maintaining registry information

4.3.1 Certain point of connection must have ICP identifiers (clause 11.3 of Part 11)

The following participants must obtain an ICP identifier as defined in clause 11.3(3) of part 11

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

It was examined that all Ecosmart customers have unique ICPs assigned. Compliance confirmed.

4.3.2 Provision of ICP information to registry (clause 11.7 of Part 11 and 9 of Schedule 11.1)

- (1) *Each trader must provide the following information to the registry for each ICP is it recorded as having responsibility for:*
- (a) *The participant identifier of the trader*
 - (b) *The profile code of each profile at that ICP*
 - (c) *The participant identifier of the MEP at that ICP*
 - (ea) *The type of submission information the trader will provide to the reconciliation manager*
 - (f) *If settlement type= UNM:*
 - *The code ENG if the ICP profiled through an engineering profile*
 - *The daily unmetered load in kWh*
 - *The type and capacity of any unmetered load at the ICP*
 - (j) *The status of the ICP*
 - (k) *Business classification code applicable (ANZSIC) to the customer at the ICP*

This information must be provided no later than 5 business days after the trader commences trading at the ICP.

Ecosmart provided the LIS file dated 8/7/17. We analysed entries in the file and confirm the information is correct. All ANZSIC codes are correct, all of them were checked.

Ecosmart still works with John Candy Consulting as a consultant, who supervises his work in the registry.

Compliance confirmed.

4.3.3 Traders to change to ICP information provided to registry (clause 10 of Schedule 11.1)

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

The EDA file for the period 01/02/17 to 30/06/17 was provided by Ecosmart. The file was analysed. We identified that for both ICPs, 0000381448WEC26 and 0000711125TU959, profile and type of reconciliation was backdated by 22 and 13 BD. It was caused by a confusion of whether metering data was available and what type of reconciliation to use. It was more like human error than lack of knowledge.

Overall quality of information in registry is good. There were only two instances of backdating. Our assessment of Ecosmart strength of controls (processes) is Moderate.

Non-compliance identified.

Non-compliance	Description		
Audit Ref: 4.3.3 With: 10 of Schedule 11.1 From: 13-Feb-17 To: 03-Apr-17	Trader event for 0000381448WEC26 and 0000711125TU959 was backdated by 22 and 13BD Potential impact: None Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	For only 2 ICPs profile and type of reconciliation was backdated. No impact on market settlement outcome		
Actions taken to resolve the issue		Completion date	Remedial action status
These were backdated changes due to availability of HHR data not being initially available.			Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	
Actions were necessary to ensure accuracy of reconciliation info, will do so again if necessary			

4.3.4 Parties to ensure arrangements for line function services and metering (clause 11.16 of Part 11)

Before notifying the registry of any information in accordance with clause 11.7(2) or 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*
- have entered into an arrangement with an MEP for each metering installation at the ICP.*

Ecosmart has arrangements with the networks on which they trade ICPs. Network charges are part of a monthly invoice sent to the customer. Ecosmart have arrangements with AMS and Trustpower as the MEP. Compliance confirmed.

4.3.5 Participant must ensure to have an arrangement with the relevant MEP (clause 10.36 of Part 10)

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

Ecosmart has contracts signed with AMS and an arrangement with Trustpower. Compliance confirmed.

4.3.6 Trader responsibility for an ICP [clause 11.18(1)(2)(3) of Part 11]

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:

- 11.18(2)(a)- another trader is recorded in the registry as accepting responsibility for the ICP; or*
- 11.18(2)(b)- the ICP is decommissioned in accordance with clause 20 of Schedule 11.1.*

11.18(3)- If an ICP is to be decommissioned, the trader who is responsible for the ICP must:

- arrange for a final interrogation to take place prior to or upon meter removal*

- *advise the MEP of the decommissioning.*

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

11.18(5) Must not trade at an ICP (excluding UML) unless an MEP is recorded in the registry.

Ecosmart does not trade UML but the system used for reconciliation would not have problems in reconciling it correctly. The company fully understands when their responsibility for an ICP ceases. Compliance confirmed.

4.3.7 Trader responsibility to nominate and record MEP in the registry [clause 11.18(4)(5) of Part 11]

A trader who is responsible for an ICP, other than an ICP at which there is only unmetered load, must ensure that a metering equipment provider is recorded in the registry as being responsible for each metering installation for the ICP.

The trader must not trade at an ICP if a metering equipment provider is not recorded in the registry as being responsible for each metering installation for the ICP, unless the trader trades only unmetered load at that ICP

The LIS file dated 8/7/17 was analysed and we confirm that MEPs are recorded for all ICPs traded. Compliance confirmed.

4.3.8 “Active” status [clause 17(1) and (2) of Schedule 11.1]

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

- *17(1)(a) the associated electrical installations are energised*
- *17(1)(b)- The trader must provide information related to the ICP in accordance with Part 15, to the reconciliation manager*

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

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

Ecosmart trades 9 ICPs. All of them had the status of “Active”. All ICPs had a MEP assigned and are certified metering installations. Volume information is provided to the reconciliation manager by John Candy Consulting. It is the same process as described in the previous audit.

Compliance confirmed.

4.3.9 “Inactive” status (clause 12 & 19 of Schedule 11.1)

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

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

Ecosmart did not have ICPs with the status of “Inactive”. Once the company acquires more customers it could consider using this status when appropriate.

4.3.10 Change of metering service provider [clause 10.22(1)(a)(b) of Part 10]

If the MEP for an ICP, which is not also an NSP changes, the trader must notify the registry of the gaining MEP in accordance with part 11.

The company policy is not to change a MEP which already provides services at the time of switch except when it comes across a NHH ICP for which legacy meters are installed or when Metrix is the MEP. In such a situation, Ecosmart will nominate AMS as the MEP because Metrix does not install Import/Export meters. Compliance confirmed.

4.3.11 Reconciliation participant requesting electrical connection of point of connection [clause 10.32 & 10.33(2) of Part 10]

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

- *accept responsibility for the ICP and the obligations under parts 10, 11 and part 15*
- *have an arrangement with an MEP to provide metering at the point of connection.*

A reconciliation participant may energise a point of connection, or authorise a point of connection to be energised, if—

- (a) *the reconciliation participant is recorded in the registry as being responsible*

- for the ICP; and*
- (b) *1 or more certified metering installations are in place in accordance with this Part*

Ecosmart is not planning to become a trader for new connections.

4.4 Maintenance of unmetered load

4.4.1 Process of maintaining shared unmetered load (clause 11.14 of Part 11)

Ecosmart does not trade ICPs with shared unmetered load but if such an ICP is switched in the future, Ecosmart's agent won't have any challenges in providing information to the reconciliation manager.

4.4.2 Unmetered load does not exceed 3,000 kWh per annum [clause 10.14(2)(b) of Part 10]

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.

Ecosmart does not have any unmetered load ICPs that exceed 3,000 kWh per annum.

5. Gathering and storing raw meter data [clause 15.38(1)(b)]

5.1 Gathering raw meter data

5.1.1 Electricity conveyed [clause 10.13 of Part 10]

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

Ecosmart uses the quantity of electricity measured by a metering installation, which is provided by AMS. 1 ICP is read manually by taking a photo. Compliance confirmed.

5.1.2 Responsibly for ensuring there is metering installation for ICP that is not also NSP [clause 10.24 of Part 10]

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

(a) there is 1 or more metering installations

(b) all electricity conveyed is quantified in accordance with the Code

(c) it does not use subtraction to determine submission information for the purposes of Part 15.

Each installation traded by Ecosmart is metered. A MEP is nominated for each installation. No subtraction is used to determine submission information.

5.1.3 Requirement for metering installation incorporating control device [clause 33 of Schedule 10.7 & clause 2(2) of Schedule 15.3]

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.

Ecosmart does not have such installations. Only the HHR and RPS profiles are used.

5.1.4 Metering installations that are inaccurate, defective, or not fit for purpose to be investigated [clause 10.43(2)(3) of Part 10]

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 metering equipment provide*
- *include in the advice all relevant details.*

Ecosmart is aware of this obligation and it will advise the appropriate MEP if it becomes aware that a metering installation could be inaccurate. The company confirmed that it has not had any faulty or stopped meters. Compliance confirmed.

5.1.5 Collection of information by certified reconciliation participant (clause 2 of Schedule 15.2)

(1) This clause applies to each metering installation for which a metering equipment provider is responsible, except for a metering installation—

- (a) that only the metering equipment provider can electronically interrogate; or*
- (b) for which the metering equipment provider has an arrangement with the reconciliation participant, which prevents the reconciliation participant from electronically interrogating the metering installation.*

(2) A reconciliation participant must obtain raw meter data used to determine volume information—

- (a) from the services access interface of the metering installation; or*
- (b) if the raw meter data can only be obtained from the metering equipment provider's back office, from the metering equipment provider.*

8 Ecosmart installations are interrogated by AMS and 1 is read manually by Ecosmart. Compliance confirmed.

5.1.6 Source of volume information [clause 3(1) and 3(2) of Schedule 15.2]

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.

We confirm that HHR meter readings data is provided by AMS. A meter register of a NHH ICP is read manually by Ecosmart (photo) or a customer.

5.1.7 Non half-hour metering information (clause 5 of Schedule 15.2)

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

A NHH ICP is read by Ecosmart by taking a photo. The person, Daryn Leaity, who takes the photo of registers, is a registered electrical inspector and is well qualified to check all the above. Compliance confirmed.

5.1.8 Non half-hour meter readings apply from end of day (clause 6 of Schedule 15.2)

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.

According to the process the switch read from the CS file will be used as a start read. Consecutive NHH readings will be applied from 0000hrs on the day after the last meter interrogation up to and including 2400hrs on the day of the meter interrogation. It is covered in John Candy Consulting's audit report. Compliance confirmed.

5.1.9 Non half hour meter reading during period of supply [clause 7 of Schedule 15.2]

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).

Ecosmart has not lost any NHH ICP. There was 1 NHH ICP at the time of this audit. Ecosmart is committed to meeting their obligation described by the above clause by closely monitoring register reads. A meter is read by a customer or Ecosmart. Compliance confirmed.

5.1.10 Non half-hour meter readings on 12 monthly basis (clause 8 of Schedule 15.2)

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).

No NHH ICPs have been traded for 12-months yet. Reports will be created by John Candy Consulting.

5.1.11 Non half hour meter reading every 4 months (clause 9 of Schedule 15.2)

In relation to each NSP, each reconciliation participant must ensure that for each NHH ICP at which the reconciliation participant trades continuously for each 4 months, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every 4 months for 90% of the non-half hour metered ICPs. This report must be submitted no later than 20 BD after the end of each month.

Reports are created and submitted to the market Administrator by John Candy Consulting. The report for June'17 was sighted. Compliance confirmed.

5.1.12 Non half-hour metering interrogation log (clause 10 of Schedule 15.2)

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

- the means to establish the identity of the individual meter reader*
- the ICP identifier of the ICP, and the meter and register identification*

- *the method being used for the interrogation and the device ID of equipment being used for interrogation of the meter*
- *the date and time of the meter interrogation.*

1 NHH ICP is read by Ecosmart and register reads are recorded by taking a photo. Before the photo is taken the ICP number and meter serial numbers are checked. The camera records the date and time of photo taken. Photo is taken by a customer or Ecosmart on alternative months. Compliance confirmed

5.1.13 Metering installation that it is electronically interrogated [clause 11(1) of Schedule 15.2]

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

8 HHR ICPs are electronically interrogated by NGCM via the appropriate service access interface. Compliance confirmed

5.1.14 Raw data requirements obtained by the electronic interrogation of a metering installation [clause 11(2)(3) of Schedule 15.2]

The following information is collected during each interrogation:

- *the unique identifier of the data storage device*
- *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*
- *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*
- *the event log, which may be limited to the events information accumulated since the last interrogation*
- *an interrogation log generated by the interrogation software to record details of all interrogations.*

The interrogation log forms part of the interrogation audit trail and, as a minimum, must contain the information such as the date of interrogation, the time of commencement of interrogation, the operator identifier, the unique identifier of the meter or data storage device, the clock errors

outside of the range specified in Table 1 of clause 2, the method of interrogation, the identifier of the reading device used for interrogation (if applicable)

HHR Ecosmart installations are electronically interrogated by NGCM as the MEP and the data provided is used for the purposes of reconciliation. Compliance confirmed.

5.2 Storing raw metering data

5.2.1 Archiving and storage of raw meter data [clause 18(1)(2) of Schedule 15.2 & clause 10.7 of Part 10]

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.

Raw meter data is stored by Ecosmart (dedicated server) or NGCM. Ecosmart will store data indefinitely. Compliance confirmed.

5.2.2 Meter reading cannot be modified without an audit trail [clause 18(3) Schedule 15.2]

Each reconciliation participant must ensure that meter readings cannot be modified without an audit trail being created.

HHR data is provided directly to John Candy Consulting's system via Dropbox, where it cannot be modified without an audit trail as per their audit report.

Before a meter is changed, NHH register reads are recorded as a photo, which cannot be changed. The readings are passed to John Candy Consulting and then imported to his system. Compliance confirmed.

6. Creation and management (including validating, estimating, storing, correcting and archiving) of volume information [clause 15.38(1)(c)]

6.1 Error handling of volume information

6.1.1 Correction of non half-hour meter readings [clause 19(1) of Schedule 15.2]

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).*

Correction of NHH meter readings are done by John Candy Consulting. If it is noted during validation that data could be incorrect, it is discussed with Ecosmart. Based on information available, the most appropriate way of estimation will be used to provide most accurate information for submissions.

6.1.2 Correction of half-hour metering readings [clause 19(2) of Schedule 15.2]

(2) If errors are detected during the validation of half-hour meter readings, the meter readings must be corrected as follows:

(a) if a check meter or data storage device is installed at the metering installation, data from the check meter or data storage device may be substituted:

(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 a meter, if available, and the pattern of consumption is considered to be materially similar to the period in error.

Correction of half-hour meter readings will be performed by John Candy when the need arises. Ecosmart will be notified when this occurs. Compliance confirmed based on John Candy Consulting's' audit report.

6.1.3 Error and loss compensation [clause 19(3) of Schedule 15.2]

(3) Error compensation and loss compensation may be carried out as part of the process of determining accurate data. Whatever methodology is used, the compensation process must be documented and must comply with audit trail requirements.

Ecosmart does not have any installation where error or loss compensation need to be applied. If in the future, such an ICP switches to Ecosmart, John Candy Consulting's system allows to apply correction factor based on registry information. Compliance confirmed.

6.2 Estimate and validation of volume information

6.2.1 Identification of metering data [clause 3(3) of Schedule 15.2]

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.

Meter readings are clearly identified. Compliance confirmed based on review of the agents' audit report.

6.2.2 Derivation of volume information [clause 3(4) of Schedule 15.2]

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.*

This task is done by the Ecosmart's agent. Compliance confirmed based on review of the agents' audit report.

6.2.3 Half hour estimates (clause 15 of Schedule 15.2)

(1) If a reconciliation participant is unable to interrogate an electronically interrogated metering installation before the deadline for providing submission information or dispatchable load information, the reconciliation participant must submit to the reconciliation manager its 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.

(2) The reconciliation participant must use HHR data comes ensure that estimated submission information is within the percentage specified by the Authority.

Half hour estimation, if required, is done by Ecosmart's agent. Compliance confirmed based on review of the agents' audit report

6.2.4 Non half hour meter readings and estimated readings (clause 16 of Schedule 15.2)

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.*

Non half-hour meter readings and estimated readings are validated by John Candy Consulting. Compliance confirmed based on review of its audit report.

6.2.5 Electronic meter readings and estimated readings (clause 17 of Schedule 15.2)

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.*

Meters are electronically interrogated by NGCM. NGCM does provide a log report. They never have any info in them, even when AMS can't read the meters.

Compliance confirmed, readings are provided by the MEP.

6.3 Storage, archiving and the audit trail of volume information

6.3.1 Correction of meter readings [clause 22(1) and 22(2) of Schedule 15.2]

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.*

There is a full audit trail and any changes are recorded in John Candy Consulting's system. Compliance confirmed based on review of its audit report.

7. Calculation of supporting information [clause 15.38(d)]

7.1 Calculation of supporting information

7.1.1 Provision of trading information at point of connection to network (clause 15.3 of Part 15)

Unless an embedded generator has given a notification in respect of the point of connection under clause 15.3, a trader must notify 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.

Ecosmart only trades customers with a profile code of HHR and RPS. Compliance confirmed on review of the LIS file dated 8/7/2017.

7.1.2 Retailer and direct purchaser ICP days information (clause 15.6 of Part 15)

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.

Reconciliation data is provided by the agent, John Candy Consulting. Compliance was confirmed based on review of its audit report and review of April and June'17 ICP days files.

7.1.3 Retailer electricity supplied information (clause 15.7 of Part 15)

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.

Reconciliation data is provided by the agent, John Candy Consulting. Information for AV-120 will be provided to the agent from their billing system. Compliance was confirmed based on review of its audit report and review of April and June'17 submission files.

7.1.4 Retailer and direct purchaser half-hour metered ICPs monthly kWh information (clause 15.8 of Part 15)

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.

Reconciliation data is provided by the agent, John Candy Consulting. Compliance was confirmed based on review of its audit report and review of April and June'17 submission files (HHRAGGR).

8. Provision of submission information for reconciliation [clause 15.38(1)(e)]

8.1 Submission computation

8.1.1 New Zealand Daylight Time adjustment techniques (clause 15.36 of Part 15)

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.

Reconciliation data is provided by the agent, John Candy Consulting. Compliance was confirmed based on review of its audit report.

8.1.2 Submission information to be delivered for reconciliation (clause 15.4 & 15.5 of Part 15 & clause 2 of Schedule 15.3)

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.

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,

In preparing and submitting submission information, the reconciliation participant must allocate volume information for each ICP to the NSP indicated by the data held by the registry for the relevant consumption period at the time the reconciliation participant assembles the submission information.

Reconciliation data is provided by the agent, John Candy Consulting. Data is provided by Ecosmart via Dropbox and imported into RM Tool, where all processing occurs.

Ecosmart's business process is to replace NHH meters with HHR Import/Export meters, which record solar energy. We walked through the process and we found it clear and robust with one exception. The type of reconciliation is changed from NHH to HHR the same day when meter is changed.

The process used by Ecosmart to reconcile volume for the day of change is:

“NHH consumption was calculated for the day as at meter removal reading, HHR data was not available for a while afterwards, so I used the HHR meter start reads as at the day of meter install (same as meter removal) and applied it from midnight that day (in both cases data had to be estimated for the first few days anyhow)”.

Ecosmart does not reconcile small number of kWh, for a residential customer, recorded by HHR meter. It was discussed with Ecosmart and the agent. A new process is in place to address it. They delay change of profile to HHR and type of reconciliation by at least one day.

Our assessment of controls is as Weak based on analysis of methodology, which does not deliver accurate results. In this case are talking about very small differences for residential customers. The fix is very easy and the company already decided to change it.

Non-compliance identified.

Non-compliance	Description		
Audit Ref: 8.1.2 With: 15.4 From: 01-Feb-17 To: 30-Jun-17	HHR volume not reconciled for a day when a meter change (NHH to HHR) occurs Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	Very small number of ICPs effected. No impact on market settlement outcome		
Actions taken to resolve the issue		Completion date	Remedial action status
Industry wide issue, will ensure compliance going forward by splitting meter change and profile change actions			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Change in procedure, implemented already			

8.1.3 Grid owner volume information (clause 15.9 of Part 15)

This matter is noted as not relevant to this audit.

8.1.4 Local network and embedded network submission information (clause 15.10 of Part 15)

This matter is noted as not relevant to this audit.

8.1.5 Grid connected generator (clause 15.11 of Part 15)

This matter is noted as not relevant to this audit.

8.1.6 Accuracy of submitted information (clause 15.12 of Part 15)

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

Reconciliation data is provided by the agent, John Candy Consulting. Compliance was confirmed based on review of its audit report.

8.1.7 Permanence of volume information for the purpose of reconciliation (clause 4 of Schedule 15.2)

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.

Reconciliation data is provided by the agent, John Candy Consulting. Compliance was confirmed based on review of its audit report.

8.1.8 Historical estimate and forwards estimates and historical estimates with seasonal adjustment (clause 3 and 4 of Schedule 15.3)

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. Each estimate that is a forward estimate or a historical estimate must clearly be identified as such. 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.

Reconciliation data is provided by the agent, John Candy Consulting. Compliance was confirmed based on review of its audit report.

8.1.9 Forward estimates (clause 6 of Schedule 15.3)

(1) A forward estimate is an estimation of the total quantity of electricity that flowed through an ICP during all or part of a consumption period.

(2) A forward estimate may be used only for a period for which an historical estimate cannot be calculated.

(3) The methodology used for calculating a forward estimate may be determined at the discretion of the reconciliation participant, and only if the reconciliation participant ensures that the accuracy of its initial submission information against each subsequent revision cycle submission information for each balancing area is within the percentage of error specified and published, from time to time, by the Authority

At the time of this audit Ecosmart traded 1 NHH ICP. Reconciliation data is provided by the agent, John Candy Consulting. Compliance was confirmed based on review of April and June'17 HHR VOL files and agent audit report.

8.1.10 Compulsory meter reading after profile change (clause 7 of Schedule 15.3)

(1) If a 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.

(2) The reconciliation participant must use the volume information from that validated meter reading or permanent estimate to calculate the relevant historical estimates of each profile for that meter.

Ecosmart understands the Code requirements. At the time this audit HHR and RPS profiles were used. When NHH meter is replaced by Export/Import meter a final read is taken and used for calculation of NHH submission volume.

8.2 Submission format and timing

8.2.1 Provision of submission information to reconciliation manager (clause 8 of Schedule 15.3)

Each reconciliation participant must provide submission information to the reconciliation manager aggregated to the following level:

(a) NSP code:

(b) reconciliation type:

(c) profile:

(d) loss category code:

(e) flow direction:

(f) dedicated NSP:

(g) trading period for half hour metered ICPs and consumption period or day for all other ICPs.

Reconciliation data is provided by the agent, John Candy Consulting. Compliance was confirmed based on review of files and the agent audit report.

8.2.2 Rounding of submission information (clause 9 of Schedule 15.3)

When reporting submission information, the number of decimal places must be rounded to not more than 2 decimal places. If the un-rounded 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.

Reconciliation data is provided by the agent, John Candy Consulting. Compliance was confirmed based on review of the agent audit report.

8.2.3 Reporting requirements of historical estimates (clause 10 of Schedule 15.3)

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:

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

At the time of audit 1 NHH ICP was traded for a month. Compliance with this clause was assessed by review of NHHVOL and GR170NHH. We confirm that Ecosmart met compliance with clause 10 of Schedule 15.3. Revision 3 for month Jan to March'17 contained 100% historic estimates.

9. Conclusion

Participant respons