

# ELECTRICITY INDUSTRY PARTICIPATION CODE RECONCILIATION PARTICIPANT AUDIT REPORT

For

## ELECTRICA

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Date audit commenced: 8 January 2018  
Date audit report completed: 1 February 2018  
Audit report due date: 02-Feb-18

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## EXECUTIVE SUMMARY

This reconciliation participant audit was performed at the request of Electrica (ENEL) 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 7.0 issued by the Electricity Authority.

There were 24 ICPs at the time of this audit. This is an increase of 17 ICPs since the last audit. There are not many new customers, most of them gained through friends and word of mouth. The company has dedicated their time to the development of the website.

Electrica reconciles both NHH and HHR ICPs. The company adopted the process to firstly reconcile ICPs as NHH. When Electrica is confident that a meter communicates reliably, and the data delivered does not have gaps, then the registry type of reconciliation is changed to HHR. During the audit, we reviewed the documented processes and confirm them compliant and easy to follow.

Based on Table 1 of the Guidelines for Reconciliation Participant audit, the next audit should happen within next 24 months. Our recommendation is to conduct the audit within 12 months because Electrica is new to the market.

We thanked Electrica' staff for their full and complete cooperation in this audit.

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Provision of information	2.2	15.35	Reconciliation files were late for consumption period of June'17. The files were delivered by the end of day 4	Strong	Low	1	Cleared
Trader contracts to permits assignment by the Authority	2.8	11.15B	The wording on the Terms & Conditions was not compliant with clause 11.15B	Weak	Low	3	
Changes to registry information	3.3	10 of Schedule 11.1	Two updates (trader transaction) to the registry were backdated	Moderate	Low	2	
Future Risk Rating						5	

Future risk rating	1-2	3-6	7-9	10-19	20-24	25+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

Based on Table 1 of the Guidelines for Reconciliation Participant audit, the next audit should happen within next 24 months. Our recommendation is to conduct the next audit in 12 months.

### RECOMMENDATIONS

Subject	Section	Description	Recommendation

### ISSUES

Subject	Section	Description	Issue

Future risk rating	1-2	3-6	7-9	10-19	20-24	25+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

## 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

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

#### Audit commentary

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

### 1.2. Structure of Organisation

The company consists of two directors.

### 1.3. 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

AMCI provides data for one ICP 1001141585LCD5D. AMCI acts as an agent for Electrica.

#### Audit commentary

The AMS audit report was reviewed as a part of this audit.

### 1.4. Hardware and Software

Electrica uses their own system, EnelSoft, written by one of the directors, who is a professional programmer.

### 1.5. Breaches or Breach Allegations

Electrica lodged a self-breach on 7<sup>th</sup> July 2017. The company breached clause 6 of Part15. Reconciliation files for the period of June 2017 were submitted late to the reconciliation manager. Files were submitted on the 4<sup>th</sup> day at around 7pm. On 31<sup>st</sup> August 2017 the Electricity Authority decided to take no further action on the breach under regulation 11(1)(c) of the Electricity Industry (Enforcement) Regulation 2010 (Regulations).



## 1.6. ICP Data

Electrica provided the LIS file dated 04/01/2018. The total number of ICPs was 24.

Metering Category	(04/01/2018)	(05/05/2017)	
1	23	7	
2	1	0	
3	0	0	
4	0	0	
5	0	0	
9	0	0	

Status	Number of ICPs (04/12/2018)	Number of ICPs (05/05/2017)	Number of ICPs (date)
Active (2,0)	24	7	
Inactive – new connection in progress (1,12)	0	0	
Inactive – electrically disconnected vacant property (1,4)	0	0	
Inactive – electrically disconnected remotely by AMI meter (1,7)	0	0	
Inactive – electrically disconnected at pole fuse (1,8)	0	0	
Inactive – electrically disconnected due to meter disconnected (1,9)	0	0	
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	
Inactive – electrically disconnected at meter box switch (1,11)	0	0	
Inactive – electrically disconnected ready for decommissioning (1,6)	0	0	
Inactive – reconciled elsewhere (1,5)	0	0	
Decommissioned (3)	0	0	

## 1.7. Authorisation Received

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

## 1.8. Scope of Audit

This reconciliation participant audit was performed at the request of Electrica 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 on the Electrica premises at 153 Vipond Rd, Stanmore Bay, Auckland, on the 8<sup>th</sup> January 2018.

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

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	✓	AMCI
(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	✗	

#### 1.9. Summary of previous audit

The previous audit was conducted on 17<sup>th</sup> June 2017. Three non-compliances were identified. All of them were cleared.

Non-compliance	Description
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<b>Audit Ref: 2.1</b> <b>With:</b> clause 15.2 of Part 15  <b>From/to:</b> 1/9/16 – 30/04/17	HE estimates incorrectly displayed in AV080 as “0”, which was incorrect, due to programming error. <b>Potential impact:</b> None <b>Actual impact:</b> None <b>Audit history:</b> None <b>Controls:</b> Weak <b>Breach risk rating:</b> 3
<b>Audit Risk Rating</b>	<b>Rationale for audit risk rating</b>
Low	No impact on settlement market; revision files were submitted. Electrica’s customer base is very small.

Non-compliance	Description
<b>Audit Ref: 3.3</b> <b>With:</b> clause 10 of Schedule 11.1  <b>From/to:</b> 1/10/16 – 26/3/17	Update for 7 ICPs out of 12 were uploaded later than 5 business days (clause 10 of Schedule 11.1). All late updates were related of profile and reconciliation type <b>Potential impact:</b> None <b>Actual impact:</b> None <b>Audit history:</b> None <b>Controls:</b> Moderate <b>Breach risk rating:</b> 2

Non-compliance	Description
<b>Audit Ref: 13.3</b> <b>With:</b> 9(1)(k) of Schedule 11.1  <b>From/to:</b> 1/9/16 – 30/04/17	HE estimates incorrectly displayed in AV080 as “0”, which was incorrect, due to programming error. <b>Potential impact:</b> None <b>Actual impact:</b> None <b>Audit history:</b> none <b>Controls:</b> Weak <b>Breach risk rating:</b> 3

## 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

During the audit we checked accuracy of information in the registry. We also analysed some of reconciliation files. Electrica endeavours to provide complete and accurate information.

#### Audit commentary

The company put in place a stringent process of data validation received from MEPs. Each month, before submission of reconciliation files Electrica follows “Reconciliation Working Instruction” document, which describes the steps to be followed.

#### Audit outcome

Compliant

### 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

This is discussed in a number of sections of this report. We discussed this with Electrica and asked if they were requested to provide any information by the Authority or participants. The requests from other participants were related to switching or reconciliation files. There were no requests from the Authority to provide information. During the audit we reviewed registry and reconciliation files.

#### Audit commentary

This is discussed in a number of sections in this report. Electrica provides information to their best ability. It was one self-breach lodged in relation to late reconciliation files. The breach was cleared by the Authority.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.2 With: 15.35  From: 17-Jun-17 To: 08-Jan-18	Reconciliation files were late for consumption period of June'17. The files were delivered by the end of 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 rated as strong because it happens only once, and it was caused by number of unforeseen circumstances. There was no impact on settlement. The audit risk rating is recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The Electricity Authority decided to take no further action on the breach under regulation 11(1)(c) of the Electricity Industry (Enforcement) Regulation 2010 (Regulations).			Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
We have created a backup environment, so that if our main environment (production server) is not available we can still run our reconciliation process. This will allow us to send the reconciliation files in time.		31 July 2017	

### 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

All metering data transmissions from MEPs are conducted electronically via SFTP using FileZilla. Data is received daily from MTRX and AMS (NGCM, AMCI). Reconciliation files are uploaded via the RM portal.

#### Audit commentary

During the audit Electrica showed us how metering files are downloaded using FileZilla.

## Audit outcome

Compliant

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

#### Code reference

Clause 21 Schedule 15.2

#### Code related audit information

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

*The audit trail must include details of information:*

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

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

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

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

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

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

#### Audit observation

Electrica retains an audit trail of downloading data via FileZilla. The audit trail of reconciliation files is recorded by the RM portal.

Switching is conducted using the registry web interface, which has a built-in audit trail of all transactions.

Additionally, EnelSoft keeps a log of all activities within the software and exchange of data with external parties.

#### Audit commentary

Compliance confirmed based on observation.

## 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

Electrica provided Terms and Conditions of Supply. The terms and Conditions were reviewed by the Authority.

#### **Audit commentary**

We reviewed the Terms and Conditions of Supply to assess compliance with above clause. Section 1.1 and 17 explains that this agreement extends to the full term of arrangement.

#### **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**

As described in the previous section, Electrica provided Terms and Conditions of Supply to assess compliance. We confirm that section 9 covers access to premises listed as code references for this section.

#### **Audit commentary**

Compliance confirmed based on a review of the Terms and Conditions of Supply.

#### **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**

Electrica trades only in ICPs connected using cat 1 and 2 metering installations. One of the characteristics of metering installation category 1 and 2 is that they are metered at the point of connection. The company rely on the professional knowledge of ATHs which certify the installations.

#### **Audit commentary**

We confirmed compliance based on conversations with Electrica. They were not aware of any installations traded by them that are not located at the point of connection.

#### **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

Section 17.5 of the Terms and Conditions of Supply states that, “We can transfer or assign all or any of our rights and obligations under this Agreement to someone else”.

### Audit commentary

The Terms and Conditions were reviewed by the Authority. The Authority made the following comment in relation to section 17.5.

*“The Contract does not provide for where the Consumer can access the information the Consumer needs to contact the company it is being transferred to or when the transfer takes effect (i.e. is it immediately upon receiving notice or within a certain amount of working days). Though these details may be contained in any notice, this should be made clearer in the Contract itself”*

*The Contract does not provide for whether or how the terms of any transferred contracts can be varied, nor does it comply with clause 11.15B(1)(b) of the Electricity Industry Participation Code.*

In the last audit it was noted that the wording in T&C should be more explicit. At the time of this audit the wording has not been changed.

The company addresses most of the Authority’s recommendations but this one is still outstanding.

### Audit outcome

Non-compliant

Non-compliance		Description	
Audit Ref: 2.8 With: 11.15B  From: 17-Jun-17 To: 08-Jan-18		The wording on the Terms & Conditions was not compliant with clause 11.15B  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Weak  Breach risk rating: 3	
Audit risk rating		Rationale for audit risk rating	
Low		Controls are rated as weak because the issue has been known to the company, but implementation of the Authority’s recommendation is slow. There was no impact on settlement. The audit risk rating is recorded as low.	
Actions taken to resolve the issue		Completion date	Remedial action status
We have already updated all the clauses where EA has found our terms and conditions to have “non-existent” or “low” compliance and we are working to update the rest. We aim to have our Terms and Conditions fully compliant by the end of March 2018.		End of March 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

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

### Code reference

Clause 10.32

### Code related audit information

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

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

### Audit observation

The company policy is to sign up a customer already connected to a network. Electrica has not had any new connections since they entered the electricity market.

### Audit commentary

We checked the LIS file dated 4<sup>th</sup> January 2018 and confirm no new connection has been traded in the period covered by this audit.

### 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

As described in the previous section, Electrica will not be dealing with new connections for some time.

### Audit commentary

Compliance was not assessed because there were no new connections.

### Audit outcome

Not applicable

## 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**

As described in the previous section, Electrica will not be dealing with new connections for some time.

#### **Audit commentary**

Compliance was not assessed because there were no new connections.

#### **Audit outcome**

Not applicable

### **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**

Electrica provided Terms and Conditions of Supply to assess compliance. Section 15 describes arrangements with network companies. Network companies' charges are passed through to Electrica's customers. The company has an arrangement with Metrix and AMS as the MEP.

#### **Audit commentary**

Compliance confirmed based on a review of the Terms and Conditions and copies of signed contracts with AMS and Metrix.

#### **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**

Electrica trades ICPs for which AMS or Metrix provide the MEP services only. If they come across installations for which another MEP is listed in the registry, the company will contact the MEP

immediately to ensure an arrangement is put in place with the relevant MEP prior to accepting responsibility.

**Audit commentary**

Compliance confirmed based on a review of signed contracts with AMS and Metrix.

**Audit outcome**

Compliant

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### 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

Electrica will not be dealing with new connections for some time.

##### Audit commentary

This clause is not applicable. Compliance was not assessed.

##### Audit outcome

Not applicable

#### 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

We reviewed the LIS file dated 4<sup>th</sup> January 2018 and confirm that Electrica provided information to the registry about each ICP at which it trades electricity.

##### Audit commentary

Compliance was confirmed based on an evaluation of the LIS file.

## 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

To assess compliance with this clause, Electrica Provided the Event file for the period 1/5/17 to 31/12/17. In total, there were 16 entries recorded as "trader". Two updates were backdated. The table below shows backdated ICPs and a reason for update.

ICP	Effective Date	Input Date	Number of BD	Reason for update	Comment
0000146406UN951	26/09/16	12/05/17	-155	update to RPS profile and type of reconciliation NHH	
0000146406UN951	1/03/17	12/05/17	-50	update to HNL profile and type of reconciliation HHR	
1001141585LCD5D	1/10/17	20/10/17	-15	update of ANZSIC code after switch finalised	We do not consider as non-compliance because Contact "force" Electrica to change a switch date from 18/10/17 to 1/10/17. It was incorrect interpretation of the Code by Contact. Electrica populated the registry with correct ANZSIC code going back a switch date.

#### Audit commentary

We identified two updates to ICP information which were backdated. Both updates were related to the type of reconciliation and profile. The updates were related to ICPs for which MTRX was the MEP. It was discussed with Electrica and the company stated that it was correction of input error.

Electrica made the following comment:

1. The initial submission type (when the ICP was switched to Electrica, on 26/09/16 was NHH and profile was RPS.
2. On 1/03/17 the submission type was changed from NHH to HHR and profile to HNL, but Electrica forgot to update the event date, and the date defaulted to the date of previous event (26/09/16).

3. On 12/05/17 it was noticed the error and it was fixed by changing the submission type from HHR to NHH and profile from HNL to RPS on the event created at previous step (b) and then added a new event with correct date, submission type and profile (1/3/17, HHR and HNL).

As was described in the previous audit, the changes to profile or type of reconciliation is driven by low quality of data delivered by Metrix. For a start, Electrica reconciled this ICP as HHR but the quality of data was low therefore the type of reconciliation was changed to NHH. When Electrica was confident that a meter communicated reliably, and the data delivered did not have gaps, then the registry type of reconciliation is changed to HHR.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.3 With: 10 of Schedule 11.1 From: 26-Sep-16 To: 20-Oct-17	Two updates (trader's transaction) to the registry were backdated 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	Controls are rated as moderate because there are some improvements that can be made to them. There was no impact on settlement because it was only two ICPs. Change of profile was included in revision files. The audit risk rating is recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
This was not an intentional backdate but rather a data input error. We fixed the error as soon as we found about it. The error and the corrections resulted in backdating events.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We have put the following note in our registry maintenance documentation "When creating a new event, the event date defaults to the date of the previous event. This date must be changed to the desired date of the new event."		31 May 2017	

### 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**

Electrica fully understand that as soon as they are recorded in the registry as accepting responsibility, the responsibility will cease only when an ICP switches out to another trader and its four-letter code is recorded in the registry.

We checked and confirm that Metrix and AMS are recorded as the MEP for all ICPs that Electrica is currently responsible for. Electrica does not trade UML.

#### **Audit commentary**

Compliance is confirmed based on a review of the LIS file dated 4<sup>th</sup> January 2018.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 9 Schedule 11.1*

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

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

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



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

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

#### **Audit observation**

Electrica provided the LIS file dated 4<sup>th</sup> January 2018. We reviewed the file and confirmed that information recorded in the registry is correct. Information was provided within 5 BD but as noted in section 3.3, some information was later changed.

#### **Audit commentary**

Compliance based on a review of the LIS file.

#### **Audit outcome**

Compliant

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

#### **Code reference**

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

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

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

#### **Audit observation**

At the time of this audit Electrica was trading 24 ICPs. 18 ICPs had the ANZSIC code of "0" (residential) assigned. The rest of the ICPs were representing connections to businesses. We checked the ANZSIC codes for all non-residential ICPs to confirm that they were correct.

#### **Audit commentary**

Compliance confirmed based on validation of ANZSIC code for all ICPs (24).

#### **Audit outcome**

Compliant

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

#### **Code reference**

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

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

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

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

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

#### **Audit observation**

Electrica's policy is not to trade UML. We checked the LIS file and confirm no UML ICPs were assigned to Electrica.

#### **Audit commentary**

Compliance confirmed based on a verbal confirmation from Electrica and review of the LIS file.

## 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 LIS file dated 4<sup>th</sup> January 2018 was examined. All ICPs had the status “Active” and were metered by certified installations and volumes recorded are submitted to the reconciliation manager. Each ICP had only one customer recorded in EnelSoft.

#### Audit commentary

Compliance confirmed based on the LIS file analysis.

## Audit outcome

Compliant

### 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

Electrica did not have any ICPs with the status “inactive”. According to Electrica’s policy a customer could be disconnected due to non-payment. Such an occurrence has not happened yet. At the time of the audit Electrica was working with Metrix to set-up a “soft” disconnection process.

#### Audit commentary

Compliance was confirmed based on the company’s process.

## Audit outcome

Compliant

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

**Code reference**

Clause 15 Schedule 11.1

**Code related audit information**

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

**Audit observation**

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

**Audit commentary**

Compliance was not assessed because Electrica has not been trading for 24 months and the company does not accept new connections.

**Audit outcome**

Not applicable

## 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

Electrica sent notifications to the registry (NT file) for 13 ICPs. The notifications were sent within 2BD. The exception is ICP 1001141585LCD5D for which Electrica had to send NT files twice. The first file was sent on 18/10/17 with a proposed switch date of 18/10/17. The NT file was rejected by Contact by sending NW file with the reason code "DF". The explanation given by Contact was that because it is a non-AMI metering installation it had to be switched on the first of the month. In our opinion Contact was incorrect in their interpretation of the Code.

Electrica did not have much choice but to proceed with the switch and sent another NT on 19/10/17, Contact accepted and the ICP switched to Electrica on 01/10/17.

#### Audit commentary

Analysis of the EDA files showed Electrica compliance. We also reviewed switching processes documentation, which we found easy to follow.

#### 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**

Electrica has not lost any ICPs since the last audit which was confirmed by analysis of the EDA file.

#### **Audit commentary**

We reviewed the document “WI-LosseanICP”, which described the TR switch out process. Compliance confirmed based on process evaluation.

#### **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**

Electrica has not lost any ICPs since the last audit which was confirmed by analysis of the EDA file.

#### **Audit commentary**

The process of switching out is documented but it was not applied because Electrica has not lost any ICP. Compliance is confirmed based on process evaluation.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 6(1) and 6A Schedule 11.3*

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

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

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

- *the gaining trader may dispute the switch meter reading if the validated meter reading or permanent estimate provided by the losing trader differs by 200 kWh or more. (clause 6(b)).*

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

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

#### **Audit observation**

Electrica switches ICPs as NHH and later on changes to HHR once it is confident with the quality of data. Once a switch is finalised a switch event read is compared with a read received from an MEP. If the difference between reads is less than 200 kWh, the switch event read provided by a losing trader is accepted and used for calculating submission volumes.

No RR were sent or received during the period covered by the audit.

#### **Audit commentary**

We compared five switch event reads between CS files and EnelSoft record. We confirm it was a 100% match.

#### **Audit outcome**

Compliant

### **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**

Electrica switches ICPs in as NHH. Once it has confidence in the quality of data it will change it to HHR.

#### **Audit commentary**

The process of switching out is documented but it was not applied because Electrica has not lost any ICP. Compliance is confirmed based on process evaluation.

#### **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

Since the last audit, Electrica has not had any disputes related to a switch event meter reading. It was discussed with the company, which stated that their aim is to resolve such issues using the RR process as quickly as possible.

#### Audit commentary

Compliance is confirmed based on process evaluation.

#### 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

Electrica sent six NT MI files. All of them were sent within 2BD after the arrangement with a customer came to effect. We reviewed the EDA file for the period 01/05/2017 to 31/12/2017 to assess compliance.

#### Audit commentary

Compliance confirmed based on analysis of the EDA file and process evaluation.

#### 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

Electrica has not lost any ICPs using a switch move process.

#### Audit commentary

Compliance is confirmed based on process evaluation.

#### Audit outcome

Compliant

### 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

Electrica has not lost any ICPs using a switch move process.

#### Audit commentary

Compliance is confirmed based on process evaluation.

#### 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**

Electrica has not lost any ICPs using a switch move process during the period covered by this audit.

#### **Audit commentary**

Compliance is confirmed based on process evaluation.

#### **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**

Electrica gained six ICPs using the switch move process. In all instances Electrica accepted a switch event read provided by the losing trader. We selected three ICPs and compared a switch event read provided by the losing trader and a read recorded in EnelSoft and used this to calculate submission volumes. It was a 100% match.

#### Audit commentary

Compliance confirmed based on sampling and process evaluation.

#### Audit outcome

Compliant

### 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

Electrica did not use this process to gain new ICPs since the last audit. The process is documented.

#### Audit commentary

Compliance confirmed based on process evaluation.

#### 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

Electrica did not use this process to gain new ICPs since the last audit. The process is documented.

##### Audit commentary

Compliance confirmed based on process evaluation.

#### Audit outcome

[Click here to choose outcome from the drop down list.](#)

#### 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

Electrica did not use this process to gain new ICPs since the last audit. The process is documented.

##### Audit commentary

Compliance confirmed based on process evaluation.

#### Audit outcome

Compliant

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

##### Code reference

*Clauses 17 and 18 Schedule 11.3*

### Code related audit information

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

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

- *for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*
  - o *the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and*
  - o *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

According to the EDA file, Electrica sent 2 NW files. In both cases, ICP 0362586535LC801 and 1001145467LC8E6, the files were sent with the reason code "CX". The customers were under contract with Mercury and had to wait till the end of their contract to switch to Electrica.

Files were sent within two and four BD respectively.

### Audit commentary

Compliance confirmed based on a review of the EDA file.

### 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

We examined the meter reading process in relation to the switching process. Electrica has not lost any ICPs in the period covered by this audit. In the event that an actual read won't be available EnelSoft will calculate an estimate.

#### **Audit commentary**

Compliance confirmed based on process evaluation.

#### **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**

Electrica has not lost any ICPs since the last audit. According to the company's policy, Electrica won't be offering a better deal to a customer who wishes to switch away.

#### **Audit commentary**

Compliance confirmed based on verbal communication during the audit.

#### **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

Electrica does not have the intention to trade unmetered ICPs. If there is SUML found at a later date, Electrica will discuss with the customer the option to have metering put in place or switch to another retailer. The LIS file was examined and no SUML ICPs were identified.

#### Audit commentary

Based on analysis of the LIS file we confirm that Electrica does not trade ICPs with shared unmetered load. If it is not possible to switch out an SUML ICP, Electrica will create consumption based on the daily kWh information either from the distributor or the customer. The registry will be updated with the required SUML information immediately on finding any UML attached to an ICP for which the company is responsible.

#### Audit outcome

Compliant

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

#### Code reference

Clause 10.14 (2)(b)

#### Code related audit information

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

**Audit observation**

This clause is not applicable.

**Audit commentary**

This clause is not applicable. Compliance was not assessed.

**Audit outcome**

Not applicable

**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**

This clause is not applicable.

**Audit commentary**

This clause is not applicable. Compliance was not assessed.

**Audit outcome**

Not applicable

**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**

Electrica does not trade distributed unmetered load as per the LIS file dated 4<sup>th</sup> January 2018.

**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 Electrica are metered. No subtraction method is used to determine submission information provided to the reconciliation manager. No ICPs traded by Electrica have solar panels installed.

To identify bypassed metering, Electrica monitor “active” ICPs to note zero readings where there should be a reading

#### Audit commentary

Compliance confirmed based on analysis of the LIS file.

#### 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**

This clause is not applicable.

#### **Audit commentary**

This clause is not applicable. Compliance was not assessed.

#### **Audit outcome**

Not applicable

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

#### **Code reference**

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

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

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

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

#### **Audit observation**

The LIS file analysis showed that Electrica submits volumes to the reconciliation manager using RPS and HHR profiles. No control devices are needed therefore they have never approached a MEP asking for a control device to be certified.

#### **Audit commentary**

Compliance confirmed based on a review of the LIS file, dated 4<sup>th</sup> January 2018, and reconciliation files.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 10.43(2) and (3)*

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

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

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

#### **Audit observation**

For the period covered by this audit, Electrica has had no faulty metering installations to report.

#### **Audit commentary**

According to Electrica's business practice, event logs and data provided by MEPs is monitored to identify issues related to metering. If a site visit is needed or a fault is recorded on the log, then the company will let the MEP know of the fault.

## 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

Electrica does not read meters themselves. Metering data is provided by Metrix and AMS including AMCI. The AMCI audit report was examined as a part of this audit to assess compliance.

#### Audit commentary

Compliance confirmed based on a review of arrangements with MEPs.

## 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**

Electrica does not read meters themselves and does not accept readings from customers. Clause 5 of Schedule 15.2 is not applicable. All readings are validated on import to EnelSoft.

#### **Audit commentary**

Compliance confirmed based on observation of how metering data is collected and imported into EnelSoft.

#### **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**

In section 12.10 we will describe test scenarios used to assess the compliance of the calculation of forward and historic estimates for NHH ICPs.

#### **Audit commentary**

Compliance confirmed based on an evaluation of the results of the NHH scenarios, section 12.10.

#### **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**

Electrica has not lost any customer since it began trading in September'16. The company receives data daily from remotely read meters. Data is imported to EnelSoft and any missing data is reported, and it is followed up with MEPs.

#### **Audit commentary**

Compliance is confirmed based on process evaluation. Electrica monitors readings received from MEPs very closely.

#### **Audit outcome**

Compliant

### **6.9. NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2)**

#### **Code reference**

*Clause 8(1) and (2) Schedule 15.2*

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

*At least once every 12 months, each reconciliation participant must obtain a validated meter reading for every meter register for non-half hour metered ICPs, at which the reconciliation participant trades continuously for each 12-month period.*

*If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 8(1).*

#### **Audit observation**

Electrica monitors meter readings closely. The fact that reads are received daily makes it easier to make sure that each ICP is read at least once every month. A Meter Reading Frequency report is sent to the Authority every month.

#### **Audit commentary**

Compliance confirmed

#### **Audit outcome**

Compliant

### **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**

Every month Electrica sends a Meter Frequency report to the Authority. All NHH ICPs were read at least once per 4 months.

#### **Audit commentary**

Compliance confirmed based on a review of the Meter Reading Frequency report for several months.

#### **Audit outcome**

Compliant

### **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 reads are provided by MEPs. Meters are read electronically as HHR. Electrica received both NHH and HHR data.

#### **Audit commentary**

This clause is more relevant to NHH meters which are read by meter readers. Electrica does not trade such installations.

#### **Audit outcome**

Not applicable

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

#### **Code reference**

*Clause 11(1) Schedule 15.2*

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

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

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

#### **Audit observation**

HHR data is read by Metrix and AMS on behalf of Electrica. The AMS and MTRX data collection process was reviewed as part of their MEP audit. AMCI provides readings for one ICP and their audit report was reviewed as part of this audit.

#### Audit commentary

Compliance confirmed based on a review of processes and the AMCI audit report.

#### 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 exception.*

#### Audit observation

The AMS and MTRX data collection process was reviewed as part of their MEP audit. AMS provides the interrogation logs to Electrica for review. Metrix does not provide the interrogation log.

#### Audit commentary

Compliance confirmed based on a review of processes and the AMCI audit report.

#### 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**

AMS and Metrix are responsible for the metering interrogation log requirements specified in this clause. It is reviewed during their audits. Electrica provided the AMCI audit report.

**Audit commentary**

Compliance confirmed based on a review of the AMCI audit report.

**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

Electrica receives HHR data from AMS and Metrix.

#### Audit commentary

AMS and MTRX are responsible for meeting compliance with this clause. It is reviewed during their audits. We reviewed data provided by AMS and confirm that the trading period duration is 30 minutes. The AMCI audit report was reviewed.

#### 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

Electrica does not read meter themselves, meters are read by MEPs and AMCI. The company does not receive raw meter data from MEPs and AMCI. Electrica keep a copy of data provided by the MEPs.

#### Audit commentary

AMS and MTRX are responsible for meeting compliance with this clause. It is reviewed during their audits. The AMCI audit report was reviewed.

#### Audit outcome

Compliant

### 7.3. Non-metering information collected / archived (Clause 21(5) Schedule 15.2)

#### Code reference

Clause 21(5) Schedule 15.2

#### Code related audit information

*All relevant non-metering information, such as external control equipment operation logs, used in the determination of profile data must be collected, and archived in accordance with clause 18.*

**Audit observation**

Electrica uses only RPS and HHR profiles for reconciliation submissions. No external control equipment is used.

**Audit commentary**

Electrica uses only RPS and HHR profiles for reconciliation submissions. The LIS file and submission files analysis confirm it.

**Audit outcome**

Compliant

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

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

#### Code reference

Clause 19(1) Schedule 15.2

#### Code related audit information

*If 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

We reviewed the process of the correction of NHH readings performed by Electrica. Electrica makes sure to have frequent reads for all NHH sites. If there are missing NHH reads, MEPS will be asked to provide missing data.

Only Metrix often provides the same register read for 3 days when actual read is not available. In such a situation, Electrica waits for the correct reading which accounts for all consumption.

#### Audit commentary

Compliance confirmed based on a review of processes adopted by Electrica.

#### 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

Correction of HHR metering information will be conducted by Electrica if necessary. There were instances when HHR metering data had to be corrected which relates to the validation of Metrix data as per the HLN profile approval. The HNL profile will be audited under a separate audit.

#### Audit commentary

EnelSoft conducts a very thorough validation of HHR data to detect any possible data inaccuracies. There has been no need to correct HHR data since the last audit except Metrix data to fulfil the HNL profile requirement.

#### **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**

No compensation factors are applied to metering data for ICPs traded by Electrica.

#### **Audit commentary**

Compliance was not assessed because Electrica does not have any ICPs for which an error or compensation factor needs to be applied.

#### **Audit outcome**

Not applicable

### **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**

First of all, Electrica does not have access to raw metering data. Raw metering data is stored by MEPs and AMCI. Electrica has only a copy of raw metering data.

During the audit Electrica stated that there were no NHH data corrections made since the last audit. The methodology of NHH data correction is built into EnelSoft. If a correction would be required, a journal will be recorded.

A copy of HHR raw metering data received from Metrix was corrected to comply with profile validation (6 ICPs). MTRX. The company presented an audit trail of changes.

**Audit commentary**

Compliance confirmed based on a review of the methodology for correction if necessary. The HNL profile will be audited under a separate audit.

**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

A flag is recorded against each interval such as "I" meaning initial, "PE" - permanent estimate. NHH register reads have slightly different terminology such as "A", "FE", "SW", "MC".

#### Audit commentary

We viewed meter readings in EnelSoft and confirm that each interval and register read are clearly identified by a relevant flag.

#### 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

Both NHH and HHR volumes are derived only from meter readings validated by EnelSoft at the time of uploading to the system. Every switch event read, for reconciliation purposes, is treated as a permanent estimate unless a losing trader sends a RR file.

#### Audit commentary

Compliance is confirmed based on an evaluation of the validation of meter readings at the time of uploading to the system. Further analysis of volumes calculation was conducted in section.12.9.

#### 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**

EnelSoft does not round or truncate data. We checked two readings from each MEP and no data is truncated or rounded.

#### **Audit commentary**

Compliance confirmed based on observation.

#### **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**

No estimation of metering data provided by AMS and AMCI has been necessary since the last audit. The only instances where it was necessary to estimate HHR data was when Metrix sent data with gaps. Metrix provides HHR data at the end of each month in the form of a spreadsheet. The fact that data is provided only once per month does not allow Electrica to monitor readings during the month and follow up if gaps are identified. Electrica uses an historic profile when estimation is required. It is flagged as PE.

#### **Audit commentary**

Compliance confirmed based on two examples shown by Electrica.

#### **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 meter reads are received from AMS and Metrix. Data is validated by MEPs. The metering data is additionally validated when uploaded to EnelSoft. During the upload of data the system ensures that

- a read received is assigned to a meter on the correct ICP.
- a read received is assigned to a meter with the correct serial number.
- a read received is assigned to a channel with the correct channel number
- high and low usage
- rollouts
- negative consumption

#### Audit commentary

Data is received daily and uploaded to the system. Each time additional validation is performed. Any discrepancies will be conveyed to the MEP.

#### 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

Electrica receives remotely read metering data from AMS and Metrix. When data is uploaded into EnelSoft a validity check of meter readings is conducted and an exception report is created. EnelSoft checks the file format, consecutive zeros, invalid dates and times. Register reads are used to check standard deviation within a month.

#### Audit commentary

Compliance is confirmed based on observation and provided reports.

#### 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.

#### Audit commentary

This clause is not applicable. Compliance was not assessed.

#### Audit outcome

Not applicable

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

#### Code reference

Clause 13.137

#### Code related audit information

*Each generator must provide the 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.

#### Audit commentary

This clause is not applicable. Compliance was not assessed.

#### Audit outcome

Not applicable

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

#### Code reference

Clause 13.138

#### Code related audit information

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

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

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

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

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

#### Audit observation

This clause is not applicable.

#### Audit commentary

This clause is not applicable. Compliance was not assessed.

#### Audit outcome

Not applicable

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

#### Code reference

Clause 13.140

#### Code related audit information

*If the generator provides half-hourly metering information to 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.

#### Audit commentary

This clause is not applicable. Compliance was not assessed.

#### Audit outcome

Not applicable

## 11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

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

#### Code reference

Clause 15.3

#### Code related audit information

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

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

#### Audit observation

The LIS file dated 4<sup>th</sup> January 2018 showed that Electrica uses HHR, RPS, and HNL (Metrix only) profiles.

#### Audit commentary

There are no plans to use other profiles in the future

#### 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

Electrica provided a set of reconciliation files, including AV110 (ICPs days), for October'17 to December '17. The calculation of ICP days is based on data stored in EnelSoft. Electrica also provided a set of GR100 files, which are created by the reconciliation manager.

These files were used to compare ICPdays counted by the reconciliation manager and a participants' system.

#### Audit commentary

We compared ICP days calculated by Electrica for the period August'16 to December'17 with GR-100. There were no differences between ICP days calculated by the registry and Electrica's system.

#### 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.*

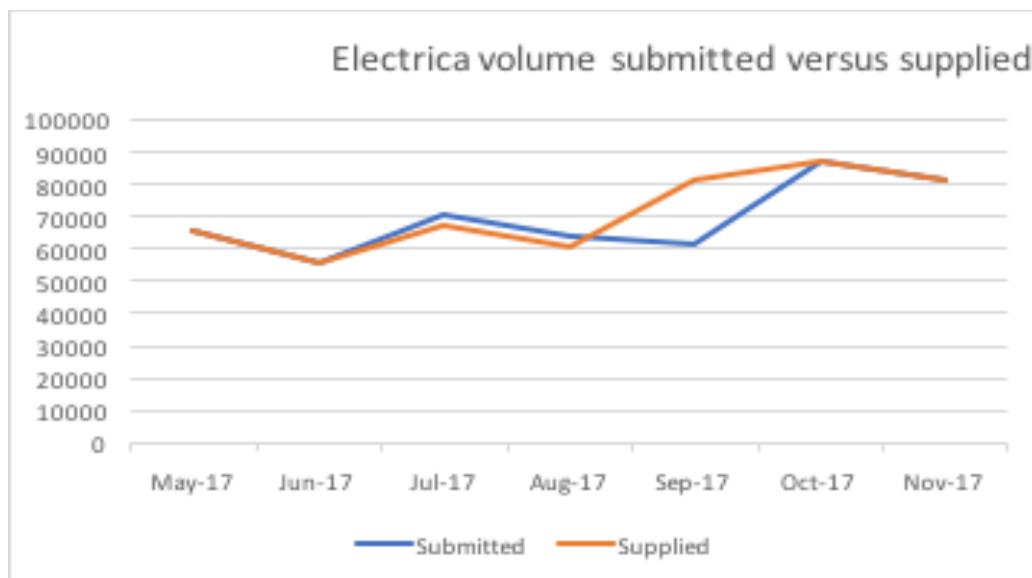
#### Audit observation

We analysed AV120 files submitted to the reconciliation manager. File AV120 is created in EnelSoft based on billing volumes calculated in Electrica's billing system.

We compared supplied volumes versus submitted volumes, it is presented in the attached graph. In month of September'17 there is a discrepancy between volumes submitted and reconciled by a value of 19,677 kWh. It was caused by an incorrect switch.

Month	Sum of Submitted	Sum of Supplied
May-17	65,887	65,644
Jun-17	55,393	55,338
Jul-17	70,283	66,906
Aug-17	63,968	60,798
Sep-17	61,748	81,426
Oct-17	87,128	87,144
Nov-17	81,364	81,376
<b>Grand Total</b>	<b>485,772</b>	<b>498,632</b>

Overall difference between volume supplied and reconciled is 2.67% over 7 months.



#### Audit commentary

Compliance confirmed based on analysis of AV-120 and GR-130.

#### Audit outcome

Compliant

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

#### Code reference

Clause 15.8

#### Code related audit information

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

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

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

#### Audit observation

HHR aggregated volumes are submitted as AV-140. This file contains volumes for all HHR ICPs, for which the registry flag of reconciliation type is HHR. AV-140 is created by Electrica every month and submitted on d4 and d13 of each reconciliation month.

#### Audit commentary

We reviewed files for October 2017 to December 2017 and cross checked with and HHRVOLS (AV-090). Submitted volumes in both files are the same. Analyses of AV-090 files confirmed that volumes for all HHR ICPs listed in the registry were submitted.

Clause 15.8 states that the aggregates file should contain electricity supplied information rather than submission information. It differs from the Reconciliation Manager Functional Specification. In Section 3 of the Reconciliation Manager Functional Specification, HHR Aggregates information is described as:

“HHR submission information that is aggregated per ICP for the whole month (not half-hourly)”, which suggests an intention that this information should be sourced from submission information not electricity supplied information, which is covered by clause 15.7. It was brought to the Authority’s attention and we received assurance that it is on the list of proposed changes to the Code.

#### **Audit outcome**

Compliant

## 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

Metrix provides data in NZ Standard time. Electrica's system has the functionality to adjust metering data for NZDT. The type of technique used is TPR.

#### Audit commentary

DLS shift was verified on an example of data from Metrix for September'17.

#### 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

Electrica uses EnelSoft to calculate and provide reconciliation files. Reconciliation data is provided for both HHR and NHH ICPs. We checked the timing of file submissions and confirm that except for June'17, as per self-breach (section 1.5), data was submitted as per this clause requirement.

#### Audit commentary

We checked the RM website and confirm that reconciliation files were submitted in time. On day 13 each month Electrica was submitting all relevant revisions.

#### 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**

Electrica thoroughly validates and checks volumes data before submission files are sent to the reconciliation manager. On day 13 every month, revisions 3 and 7, were submitted

#### **Audit commentary**

We reviewed GR-170NHH provided by the reconciliation manager, which confirmed all revisions were submitted. We observed that there were very small volume changes in consecutive revisions for a few NSPs. Electrica does not trade in many ICPs and the data quality provided by MEPs is mostly good. By day 4 Electrica estimates missing data if actual data is not available.

#### **Audit outcome**

Compliant

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

#### **Code reference**

Clause 15.9

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

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

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

#### **Audit observation**

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**

We reviewed the schedule of reconciliation submissions used by Electrica. The company also provided GR-170NHH from the reconciliation manager.

#### **Audit commentary**

We confirm that Electrica submitted revision files to the reconciliation manager. We reviewed the initial and revision reconciliation files for July'17 to October'17 and discussed reasons for volume changes. We noted a change of volumes (3,443.51) for PEN1101 for July'17 between initial submission and rev3.

It was discussed with Electrica. The company explained that a customer (0150289464LCFE3) that moved into a new premise. Initially the consumption was estimated based on the consumption at their previous premise. The new premise was not occupied for a while and a previous trader didn't read the meter and used a very bad estimate for the switch. The premise was not occupied so Electrica couldn't read the meter to validate the switch event read. A new meter was installed on 14/09/17 and the final read from removed meter showed that the switch event read was underestimated. At the end, Electrica decided to accept the switch event read provided by the previous trader. The difference is between the initial estimate and what it was calculated when the actual read was received.

#### **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**

At the time of the audit Electrica submitted revision 14 file for November'16. The volumes for November'16 contained 100% historic estimates.

#### **Audit commentary**

The compliance was confirmed by analysis of GR-170NHH. In last audit it was identified that HE estimates were incorrectly displayed in AV080 as "0" for month of October'16 which was incorrect, due to programming error. The incorrect programming was fixed.

#### **Audit outcome**

Compliant

### **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**

Electrica prepares submission files based on information in EnelSoft. Submission files are prepared for both NHH and HHR ICPs. Electrica trades category 1 and 2 metering installations. For month of December'17 HHR data was submitted for 7 ICPs as HHRAGGR and HHRVOLS and NHHVOLS for 17 ICPs. There were no UML ICPs.

#### **Audit commentary**

Compliance confirmed based on review of a process and submissions for December'17.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 3 Schedule 15.3*

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

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

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

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

#### **Audit observation**

For the assessment of compliance with this clause we provided Electrica with a set of scenarios to validate the accuracy of the calculation of historic and forward estimation for NHH ICPs. During testing of these scenarios ICP days calculation was also checked. The methodology of calculation performed by EnelSoft has not changed since the last audit. There were no changes to the software. We

Many scenarios tested during the last audit using a test system are not applicable to day-to-day operation because actual register reads are received daily therefore there is no need to calculate forward estimates. The results of testing are shown below:

Ref	Test	Comments	Result of Audit
1	Switch in during the month with estimated switch read, actual read gained in the next month, full profile data available.	Confirm that HE is calculated for the relevant part of the month, even though the switch in read is an estimate, and calculation begins on correct day	compliant
2	Switch in during the month with actual switch read, actual read gained in the next month, full profile data available.	Confirm that HE is calculated for the relevant part of the month, and calculation begins on correct day	compliant
3	Status change to active during the month, read gained in the next month, full profile data available	Confirm that HE is calculated for the relevant part of the month	No such ICPs
4	Switch out on estimate during the month	Confirm that HE is calculated even though the reading is an estimate Confirm that HE calculation ends on the correct day.	No such ICPs
5	Switch out on actual during the month	Confirm that HE is calculated for the relevant part of the month, and calculation ends on correct day	No such ICPs
6	Complete month without a read in the month	Read in the previous month and the month after, confirm correct HE for the month	No such ICPs
7	Complete month with a read during the month	Confirm the two calculations for the month are correct	compliant
8	GXP change during the month	Confirm submission against one GXP for part month then the other GXP for part month, with correct HE/FE balance on each	No such ICPs
11	Meter change during month	Confirm estimation is calculated for both meters, and summed correctly	Such event occurred but actual reads were available for both meters
14	FE based on default value	Confirm the default multiplied by correct number of days	Not used
15	FE based on daily kWh from CS file	Confirm CS value multiplied by correct number of days.	compliant
16	FE based on historic consumption	Confirm methodology for calculation	compliant
18	No longer any ICPs with a combination of GXP, loss cat code etc.	Confirm that this row is "zeroed" in subsequent submissions	compliant
19	Consumption submitted for a given revision then changed for a subsequent revision.	Confirm that if a reading is changed, the change flows through to the revision for the relevant month	compliant
20	CS read modified by RR	Confirm that consumption is updated to match RR read replacing CS	compliant
21	GXP change backdated	Confirm usage is shown against correct GXP for the time of usage	No such ICPs

#### Audit commentary

Compliance confirmed based on results of scenarios provided by Electrica.

#### Audit outcome

Compliant

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

#### Code reference

Clause 4 and 5 Schedule 15.3

#### Code related audit information

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

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

#### Audit observation

If seasonal adjustment file (GR-30) is not available, Electrica does not create their own shape file. It will calculate forwards estimate, which will be replaced by historic estimates once shape file provided by the reconciliation manager is available. More common scenario is that an MEP will provide an actual catch-up data by day 13.

#### Audit commentary

All read provided to Electrica come from remotely read meters. NHH register reads are received daily therefore a calculation of historic estimates does not occurs often. We analysed reconciliation files submitted in the period covered by this audit which confirm the case. More details are in section 13.3

#### 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

EnelSoft has a functionality to calculate forwards estimates. Forward estimates are calculated if required using daily kWh provided in CS file.

#### Audit commentary

Calculations were checked as a part of scenarios described in section 12.10

## 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

Electrica submits data to the reconciliation manager, which is provided by Metrix and AMS. When Electrica changes the type of reconciliation for an ICP from NHH to HHR, as a part of their standard process the profile changes from RPS to HHR or HNL. It is the only situation when Electrica changes a profile recorded in the registry. Submission volumes are calculated for both profiles using validated meter readings.

#### Audit commentary

The only time when Electrica changes a profile of ICP recorded in the registry is when the company is confident that a meter communicated reliably, and the data delivered did not have gaps.

## 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 reconciliation files for – October 2017 and November 2017.

#### Audit commentary

Submission information is provided to the reconciliation manager in the correct format.

#### 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 AV-080 for November'17. The correct rounding methodology is used. Data is rounded in the final calculation.

#### Audit commentary

AV-080, AV-090, and AV140 files are rounded to two decimal places.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 10 Schedule 15.3*

### Code related audit information

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

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

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

### Audit observation

The quantity of HE is contained in the reconciliation submission file (AV-140) and is not a separate report. We reviewed Electrica submissions to assess compliance with this clause using GR-170NHH provided by the reconciliation manager. We covered in our analysis submissions uploaded to the reconciliation manager between July'17 and Jan'18.

The analyses results are shown below:

Month	Number of NSP	R3	R7	R14
Nov-16	3	0%	100%	100%
Dec-16	2	0%	100%	
Jan-17	2	0%	100%	
Feb-17	2	0%	100%	
Mar-17	2	100%	100%	
Apr-17	2	100%	100%	
May-17	3	100%	100%	
Jun-17	8	100%	100%	
Jul-17	8	100%		
Aug-17	8	100%		
Sep-17	8	100%		

### Audit commentary

Electrica met targets of historical estimates as set by this clause for the period Nov'16 to Sept'17.

### Audit outcome

Compliant



## CONCLUSION

## PARTICIPANT RESPONSE