

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

For

ELECTRICA

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Date audit commenced: 11 January 2019
Date audit report completed: 1 February 2019
Audit report due date: 02-Feb-19

TABLE OF CONTENTS

Executive summary	5
Audit summary	6
Non-compliances	6
Recommendations	7
Issues 7	
1. Administrative	8
1.1. Exemptions from Obligations to Comply with Code (Section 11)	8
1.2. Structure of Organisation	8
1.3. Use of Agents (Clause 15.34)	8
1.4. Hardware and Software	8
1.5. Breaches or Breach Allegations	8
1.6. ICP Data	8
1.7. Authorisation Received	9
1.8. Scope of Audit	9
1.9. Summary of previous audit	11
2. Operational Infrastructure	12
2.1. Relevant information (Clause 10.6, 11.2, 15.2)	12
2.2. Provision of information (Clause 15.35)	13
2.3. Data transmission (Clause 20 Schedule 15.2)	14
2.4. Audit trails (Clause 21 Schedule 15.2)	15
2.5. Retailer responsibility for electricity conveyed - participant obligations (Clause 10.4) ..	15
2.6. Retailer responsibility for electricity conveyed - access to metering installations (Clause 10.7(2), (4), (5) and (6))	16
2.7. Physical location of metering installations (Clause 10.35(1) & (2))	16
2.8. Trader contracts to permit assignment by the Authority (Clause 11.15B)	17
2.9. Connection of an ICP (Clause 10.32)	18
2.10. Temporary Electrical Connection of an ICP (Clause 10.33(1))	19
2.11. Electrical Connection of Point of Connection (Clause 10.33A)	19
2.12. Arrangements for line function services (Clause 11.16)	19
2.13. Arrangements for metering equipment provision (Clause 10.36)	20
3. Maintaining registry information	21
3.1. Obtaining ICP identifiers (Clause 11.3)	21
3.2. Providing registry information (Clause 11.7(2))	21
3.3. Changes to registry information (Clause 10 Schedule 11.1)	22
3.4. Trader responsibility for an ICP (Clause 11.18)	22
3.5. Provision of information to the registry manager (Clause 9 Schedule 11.1)	23
3.6. ANZSIC codes (Clause 9 (1(k) of Schedule 11.1)	24
3.7. Changes to unmetered load (Clause 9(1)(f) of Schedule 11.1)	24
3.8. Management of “active” status (Clause 17 Schedule 11.1)	24
3.9. Management of “inactive” status (Clause 19 Schedule 11.1)	25
3.10. ICPs at new or ready status for 24 months (Clause 15 Schedule 11.1)	25
4. Performing customer and embedded generator switching	27
4.1. Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3) ..	27

4.2.	Losing trader response to switch request and event dates - standard switch (Clauses 3 and 4 Schedule 11.3)	27
4.3.	Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3)	28
4.4.	Retailers must use same reading - standard switch (Clause 6(1) and 6A Schedule 11.3)	28
4.5.	Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3)	29
4.6.	Disputes - standard switch (Clause 7 Schedule 11.3).....	29
4.7.	Gaining trader informs registry of switch request - switch move (Clause 9 Schedule 11.3)	30
4.8.	Losing trader provides information - switch move (Clause 10(1) Schedule 11.3)	30
4.9.	Losing trader determines a different date - switch move (Clause 10(2) Schedule 11.3)	32
4.10.	Losing trader must provide final information - switch move (Clause 11 Schedule 11.3)	32
4.11.	Gaining trader changes to switch meter reading - switch move (Clause 12 Schedule 11.3)	33
4.12.	Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3)	33
4.13.	Losing trader provision of information - gaining trader switch (Clause 15 Schedule 11.3)	34
4.14.	Gaining trader to advise the registry manager - gaining trader switch (Clause 16 Schedule 11.3)	35
4.15.	Withdrawal of switch requests (Clauses 17 and 18 Schedule 11.3).....	35
4.16.	Metering information (Clause 21 Schedule 11.3)	36
4.17.	Switch saving protection (Clause 11.15AA to 11.15AB).....	36
5.	Maintenance of unmetered load	38
5.1.	Maintaining shared unmetered load (Clause 11.14).....	38
5.2.	Unmetered threshold (Clause 10.14 (2)(b))	38
5.3.	Unmetered threshold exceeded (Clause 10.14 (5))	39
5.4.	Distributed unmetered load (Clause 11 Schedule 15.3, Clause 15.37B).....	39
6.	Gathering raw meter data	41
6.1.	Electricity conveyed & notification by embedded generators (Clause 10.13, Clause 10.24 and 15.13)	41
6.2.	Responsibility for metering at GIP (Clause 10.26 (6), (7) and (8)).....	41
6.3.	Certification of control devices (Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3)	42
6.4.	Reporting of defective metering installations (Clause 10.43(2) and (3))	42
6.5.	Collection of information by certified reconciliation participant (Clause 2 Schedule 15.2)	43
6.6.	Derivation of meter readings (Clause 3(1), 3(2) and 5 Schedule 15.2)	43
6.7.	NHH meter reading application (Clause 6 Schedule 15.2)	44
6.8.	Interrogate meters once (Clause 7(1) and (2) Schedule 15.2)	44
6.9.	NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2)	45
6.10.	NHH meters 90% read rate (Clause 9(1) and (2) Schedule 15.2)	45
6.11.	NHH meter interrogation log (Clause 10 Schedule 15.2)	46
6.12.	HHR data collection (Clause 11(1) Schedule 15.2)	46
6.13.	HHR interrogation data requirement (Clause 11(2) Schedule 15.2)	47
6.14.	HHR interrogation log requirements (Clause 11(3) Schedule 15.2).....	47
7.	Storing raw meter data	49
7.1.	Trading period duration (Clause 13 Schedule 15.2).....	49
7.2.	Archiving and storage of raw meter data (Clause 18 Schedule 15.2)	49
7.3.	Non-metering information collected / archived (Clause 21(5) Schedule 15.2)	49

8.	Creating and managing (including validating, estimating, storing, correcting and archiving) volume information.....	51
8.1.	Correction of NHH meter readings (Clause 19(1) Schedule 15.2).....	51
8.2.	Correction of HHR metering information (Clause 19(2) Schedule 15.2).....	51
8.3.	Error and loss compensation arrangements (Clause 19(3) Schedule 15.2).....	52
8.4.	Correction of HHR and NHH raw meter data (Clause 22(1) and (2) Schedule 15.2).....	52
9.	Estimating and validating volume information.....	54
9.1.	Identification of readings (Clause 3(3) Schedule 15.2).....	54
9.2.	Derivation of volume information (Clause 3(4) Schedule 15.2).....	54
9.3.	Meter data used to derive volume information (Clause 3(5) Schedule 15.2).....	54
9.4.	Half hour estimates (Clause 15 Schedule 15.2).....	55
9.5.	NHH metering information data validation (Clause 16 Schedule 15.2).....	55
9.6.	Electronic meter readings and estimated readings (Clause 17 Schedule 15.2).....	56
10.	Provision of metering information to the pricing manager in accordance with subpart 4 of Part 13 (clause 15.38(1)(f)).....	58
10.1.	Generators to provide HHR metering information (Clause 13.136).....	58
10.2.	Unoffered & intermittent generation provision of metering information (Clause 13.137).....	58
10.3.	Loss adjustment of HHR metering information (Clause 13.138).....	59
10.4.	Notification of the provision of HHR metering information (Clause 13.140).....	59
11.	Provision of submission information for reconciliation.....	60
11.1.	Buying and selling notifications (Clause 15.3).....	60
11.2.	Calculation of ICP days (Clause 15.6).....	60
11.3.	Electricity supplied information provision to the reconciliation manager (Clause 15.7).....	61
11.4.	HHR aggregates information provision to the reconciliation manager (Clause 15.8).....	62
12.	Submission computation.....	64
12.1.	Daylight saving adjustment (Clause 15.36).....	64
12.2.	Creation of submission information (Clause 15.4).....	64
12.3.	Allocation of submission information (Clause 15.5).....	65
12.4.	Grid owner volumes information (Clause 15.9).....	66
12.5.	Provision of NSP submission information (Clause 15.10).....	67
12.6.	Grid connected generation (Clause 15.11).....	67
12.7.	Accuracy of submission information (Clause 15.12).....	68
12.8.	Permanence of meter readings for reconciliation (Clause 4 Schedule 15.2).....	69
12.9.	Reconciliation participants to prepare information (Clause 2 Schedule 15.3).....	69
12.10.	Historical estimates and forward estimates (Clause 3 Schedule 15.3).....	70
12.11.	Historical estimate process (Clause 4 and 5 Schedule 15.3).....	71
12.12.	Forward estimate process (Clause 6 Schedule 15.3).....	72
12.13.	Compulsory meter reading after profile change (Clause 7 Schedule 15.3).....	72
13.	Submission format and timing.....	74
13.1.	Provision of submission information to the RM (Clause 8 Schedule 15.3).....	74
13.2.	Reporting resolution (Clause 9 Schedule 15.3).....	74
13.3.	Historical estimate reporting to RM (Clause 10 Schedule 15.3).....	74
	Conclusion.....	77
	Participant response.....	77

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 61 ICPs at the time of this audit. This is an increase of 37 ICPs since the last audit. 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 type of reconciliation is changed to HHR in the registry .

Switching is conducted using the registry web interface except for CS files which are created by EnelSoft and uploaded to the registry. During the audit, we reviewed the documented processes and confirm they are compliant. Metering data is provided by MEPs (MTRX and AMS) and AMCI as an agent. The AMCI audit report (AMS HHR agent report) dated 28/02/18 was reviewed.

Overall the level of compliance is good. We identified seven non-compliances. Two “events“ resulted in multiple (4) non-compliances.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. Table 1 of the Guidelines for Reconciliation Participant audit provides some guidance on this matter. The Future Risk Rating score is 9s which results in an indicative audit frequency of 18 months. We agree with the result.

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	Incorrect NSP allocated to three ICPs for a period of time and a delay to submit volumes for one ICP for two months	Moderate	Low	1	Identified
Losing trader provides information – switch move	4.8	10(1)(a)(ib) of Schedule 11.3	No AN files were sent for four switch move switches	Weak	Low	3	Identified
Electronic meter readings and estimated meter readings	0	17 of Schedule 15.2	EnelSoft does not check for unexpected 0 values	Moderate	Low	2	Identified
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHRAGGR files do not contain electricity supplied information	Strong	Low		Not required. The Code change required a line up with RN file specification. Breach risk rating excluded from total
Creation of submission information	12.2	15.4	Volumes not submitted for one ICP (new switch) for two months	Strong	Low	1	Identified
Allocation of submission information	0	15.5	Incorrect NSP allocated to three ICPs for a period of time	Strong	Low	1	Identified
Accuracy of submission information	12.7	15.12	Incorrect NSP allocated to three ICPs for a period of time	Strong	Low	1	Identified
Future Risk Rating						9	

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

RECOMMENDATIONS

Subject	Section	Description	Recommendation
			Nil

ISSUES

Subject	Section	Description	Issue
			Nil

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

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

No breaches or alleged breaches were recorded against Electrica since the last audit.

1.6. ICP Data

Electrica provided the LIS file dated 27/12/18. The total number of ICPs was 61.

Metering Category	(27/12/2018)	(04/01/2018)	(05/05/2017)
1	60	23	7
2	1	1	0
3	0	0	0
4	0	0	0
5	0	0	0
9	0	0	0

Status	Number of ICPs (27/12/2018)	Number of ICPs (04/01/2018)	Number of ICPs (05/05/2017)
Active (2,0)	61	24	7
Inactive – new connection in progress (1,12)	0	0	0
Inactive – electrically disconnected vacant property (1,4)	0	0	0
Inactive – electrically disconnected remotely by AMI meter (1,7)	0	0	0
Inactive – electrically disconnected at pole fuse (1,8)	0	0	0
Inactive – electrically disconnected due to meter disconnected (1,9)	0	0	0
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	0	0	0
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	0	0	0

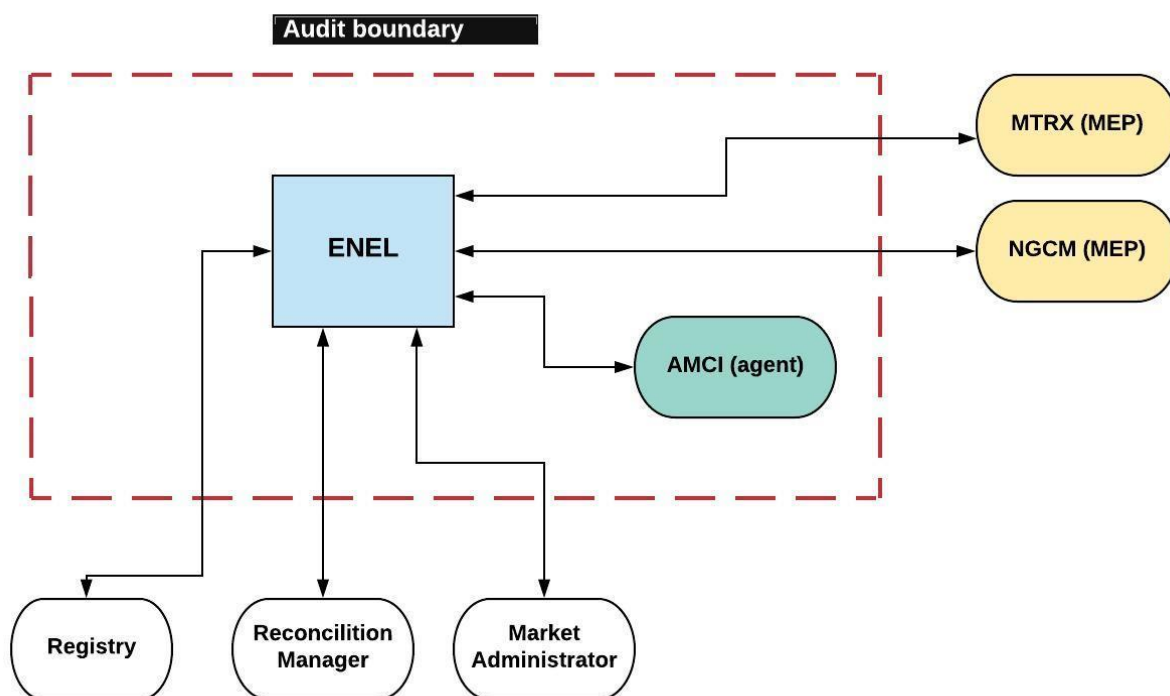
1.7. Authorisation Received

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 10th January 2019.

The scope of audit is shown in the diagram below:



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 in Feb'18. Three non-compliances were identified. All of them were cleared.

Subject	Section	Clause	Non-Compliance	Comment
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	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	Cleared
Changes to registry information	3.3	10 of Schedule 11.1	Two updates (trader transaction) to the registry were backdated	Cleared

2. OPERATIONAL INFRASTRUCTURE

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

Code reference

Clause 10.6, 11.2, 15.2

Code related audit information

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

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

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

Audit observation

The LIS file dated 27/12/2018 was examined to identify any inaccuracies. The Event Detail (EDA) file for the period 01/01/18 to 31/12/18 was examined to determine how quickly Electrica provides information to the registry and corrects information which is identified as inaccurate.

Audit commentary

The LIS file and Metering Installation Information (PR-255) was analysed, the results are shown below:

Issue	Quantity	Comments
ICP Status = 002, MEP = blank, UNM Flag = N	0	No evidence of this occurring
ICP Status = 002, Generation Capacity is not blank,	0	No evidence of this occurring
Highest Metering Category >2 with residential ANZSIC code assigned (000000)	0	No evidence of this occurring
ANZSIC code = blank or T994, T994000, T99, T999, T999999, T995, T995000, T997, T997000, T998, T998000	0	No evidence of this occurring
ICP with B or G Inst Type, or non-null Fuel or Gen Capacity that do not have a corresponding Injection Register	0	No evidence of this occurring
Highest Metering Category greater than 2, Submission Type HHR = No	0	No evidence of this occurring
Highest Metering Category = 9, UNM Flag=N	0	No evidence of this occurring
All active ICPs with Initial Energisation Date populated during a defined period	0	No evidence of this occurring
All Active ICPs (ICP Status = 2) with Shared ICP List not blank	0	No evidence of this occurring
All ICPs at ICP Status 001,12	0	No evidence of this occurring
Submission Type HHR = Y, Profile does not contain HH	0	No evidence of this occurring
Submission Type HHR and Submission Type NHH both = Y	0	No evidence of this occurring
All active ICPs where Distributor has indicated UML (UML Load Details not NULL) but Retailer has none (UNM Flag = N)	0	No evidence of this occurring
All active ICPs with UNM Flag = Y	0	No evidence of this occurring
All active ICPs with load in excess of 6kWh (Daily Unmetered kWh greater than 16.4 daily)	0	No evidence of this occurring
All active ICPs with load between 3-6k kWh (Daily Unmetered kWh between 8.2-16.4 daily)	0	No evidence of this occurring

All active ICPs with Engineered profile (Daily Unmetered kWh = ENG)	0	No evidence of this occurring
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Our review showed that all information in the registry is complete and accurate. Electrica is committed to having complete and accurate data in the registry.

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.

Audit commentary

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. This is discussed in a number of sections in this report.

Electrica closely monitors submission calculation conducted by EnelSoft. During the audit it was found that Electrica had a couple of problems with EnelSoft:

1. The validation tool that is supposed to be run as part of the reconciliation process, and it should detect all ICP configuration changes (e.g. when an ICP was moved from one POC to another one for a reconciliation period). The following problems were found:

- a. The validation tool was not run as part of the reconciliation process every time
- b. The validation tool has failed to find the situation when an ICP was moved to another POC and then moved back to the initial POC in the same reconciliation period (month)

Affected ICPs are listed below:

0000200269UND98 Was allocated to ALB1101 between 18-05-11 and 18-05-14
 Rec periods affected: 2018/05
 Revisions were submitted to correct it

0237891026LC7AF Contract ended on 2018-09-24 and ICP deactivated on 2018-10-17 -
 System wrongly using contract end date instead of deactivation date for reconciliation
 Rec periods affected: 2018/09 and 2018/10
 Fixed - using the appropriate date now

0000141647UN9D6 Was allocated to HEP0331 from 2018-11-02
 Rec periods affected: 2018/05 and 2018/06

Revisions were submitted to correct it

2. New ICP for an existing customer was setup in the system late
This was addressed as, now, new ICPs are setup automatically by the system.

0000199798UN31F Customer adding new ICP to existing contract on 2018-05-01 ICP setup manually in the system only in July 2018.

Rec periods affected: 2018/05 and 2018/06

Fixed - ICPs are set up automatically now

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.2 With: 15.35 From: 11-May-18 To: 31-Oct-18	Incorrect NSP allocated to three ICPs for a period of time and a delay to submit volumes for one ICP for two months Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because there are some improvements that can be made to them. The issue has been fixed. Audit risk is recorded as low as impact on settlement outcomes is minor because of small number of ICPs		
Actions taken to resolve the issue		Completion date	Remedial action status
We've updated the data in our system to accurately reflect the ICP configuration changes.		November 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We've updated our validation system to properly track the changes in the ICP configuration. New ICPs are automatically added to our system as part of the switching process, rather than them being added manually as it happened in the past. This will ensure the new ICPs will not miss from our submissions for reconciliation.		November 2018	

2.3. Data transmission (Clause 20 Schedule 15.2)

Code reference

Clause 20 Schedule 15.2

Code related audit information

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

Audit observation

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 of Electrica we observed 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

We checked the audit trail for all data gathering, validation, and correction.

Audit commentary

Electrica retains an audit trail of downloading data via FileZilla. The audit trail of reconciliation files is recorded by the RM portal. EnelSoft keeps a log of all activities within the software and exchange of data with external parties. 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 the above clause. Section 1.1 and 17 explains that this agreement extends to the full term of the 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 **section 2.5**, 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 61 ICPs of category 1 metering installations and 1 ICP category 2 metering installation. One of the characteristics of category 1 and 2 metering installations is that they are metered at the point of connection.

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

We reviewed the Terms and Conditions provided by Electrica.

Audit commentary

In the last audit we identified non-compliance. The company reviewed their Terms and Conditions and added a new clause to section 17, which says:

Where Electrica is in a “event of default” situation, as defined by the Electricity Industry Participation Code 2010, Electricity Authority may assign Electrica’s rights and obligations under this Agreement to an alternative electricity retailer. In the event that such an assignment occurs, the terms on which you will be supplied with electricity by the new retailer will be amended to the standard terms that the new retailer would normally have offered to you immediately before the relevant “event of default” occurred (or such other terms that are more advantageous to you than the new retailer’s standard terms, as the new retailer and the Electricity Authority agree). On such an assignment, these terms may be amended to include a minimum term in respect of which you must pay an amount if you wish to cancel these terms prior to the expiry of that minimum term. We may provide information about you to the Electricity Authority (and the Electricity Authority may pass this information on to the new electricity retailer), if required under the Electricity Code.

Compliance with this clause is met.

Audit outcome

Compliant

2.9. Connection of an ICP (Clause 10.32)

Code reference

Clause 10.32

Code related audit information

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

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

Audit observation

The company policy is to sign up a customer already connected to a network. The LIS and EDA files were reviewed.

Audit commentary

The LIS file, dated 27/12/18, confirms no new connection has been traded in the period covered by this audit. The process for connection and reconnection on exiting ICPs was examined, we found it compliant.

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 **section 2.9**, 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 **section 2.9**, Electrica will not be dealing with new connections in the near future.

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

We reviewed Terms and Conditions of Supply provided by Electrica.

Audit commentary

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 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 provided a copy of signed agreements with Metrix and AMS.

Audit commentary

Compliance confirmed based on a review of the relevant documents. The company stated that if they come across installations for which another MEP is listed in the registry, they will contact the MEP immediately to ensure an arrangement is put in place with the relevant MEP prior to accepting responsibility.

Audit outcome

Compliant

3. MAINTAINING REGISTRY INFORMATION

3.1. Obtaining ICP identifiers (Clause 11.3)

Code reference

Clause 11.3

Code related audit information

The following participants must, before assuming responsibility for certain points of connection on a local network or embedded network, obtain an ICP identifier for the point of connection:

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

ICP identifiers must be obtained for points of connection at which any of the following occur:

- a consumer purchases electricity from a trader 11.3(3)(a)*
- a trader purchases electricity from an embedded generator 11.3(3)(b)*
- a direct purchaser purchases electricity from the clearing manager 11.3(3)(c)*
- an embedded generator sells electricity directly to the clearing manager 11.3(3)(d)*
- a network is settled by differencing 11.3(3)(e)*
- there is a distributor status ICP on the parent network point of connection of an embedded network or at the point of connection of shared unmetered load. 11.3(3)(f)*

Audit observation

As described in **section 2.9**, Electrica does not trade new connections. The LIS file dated 27/12/18 was reviewed.

Audit commentary

The review of the LIS file showed that Electrica has not gained any new connections as per their business strategy.

Audit outcome

Compliant

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

Code reference

Clause 11.7(2)

Code related audit information

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

Audit observation

We reviewed the LIS file dated 27/1/2018.

Audit commentary

The review of the LIS file showed that Electrica provided information to the registry about each ICP at which it trades electricity.

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 1/01/18 to 31/12/18.

Audit commentary

In total, there were 16 entries recorded as "trader" and one update of "status" field.

Activity	Status code	No of updates	No of updates later than 5BD	Date range of updates [BD]
Status (1,4)	De-energised - vacant	1	0	Up to 5 BD
Trader		16	0	Up to 5 BD

Audit outcome

Compliant

3.4. Trader responsibility for an ICP (Clause 11.18)

Code reference

Clause 11.18

Code related audit information

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

A trader ceases to be responsible for an ICP if:

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

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

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

Audit observation

The LIS file dated 27/12/18 was reviewed was analysed and we confirm that all ICPs have a MEP recorded in the registry.

Audit commentary

Electrica understands that as soon as they are recorded in the registry as accepting responsibility, that responsibility will only cease when an ICP switches out to another trader. No ICPs were marked as “ready for decommissioning”.

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 27/12/18.

Audit commentary

We reviewed the file and confirmed that information recorded in the registry is correct. Information was provided within 5BD.

Audit outcome

Compliant

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

Code reference

Clause 9 (1(k) of Schedule 11.1

Code related audit information

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

Audit observation

The LIS file was reviewed. We checked the ANZSIC codes for all non-residential ICPs to confirm that they were correct.

Audit commentary

At the time of this audit Electrica was trading 61 ICPs. 54 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 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

The LIS file was reviewed.

Audit commentary

Electrica's policy is not to trade UML. We checked the LIS file and confirm no UML ICPs were assigned to Electrica. If there is UML found at a later date, Electrica will create consumption based on the daily kWh information from the distributor.

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 and EDA files were examined. The process for status change was discussed during the audit. 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

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 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

The LIS and EDA files were reviewed. The process for connections and disconnection was reviewed.

Audit commentary

Electrica did not have any ICPs with the status “inactive”. The EDA file showed one transaction, changing an ICP status to “inactive-vacant”. In **section 2.9** we reviewed the disconnection process, which has not been used yet.

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

Electrica does not trade new connection therefore has not been approached by any distributor asking for updates.

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 provided the Event Listing file (EDA) and the Switch Breach History details report for the time period. The standard switch process was examined.

Audit commentary

Electrica sent 43 NTTR notifications to the registry. Electrica uses the registry web interface to conduct switching. Analysis of the EDA files showed compliance.

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 provided the Event Listing file (EDA) and the Switch Breach History details report for the time period. The standard switch process was examined (“WI-LosseanICP”).

Audit commentary

Electrica did not send any AN files for a standard switch. CS files were sent as per clause 5 of Schedule 11.3. For each switch, Electrica accepted the date specified by a gaining trader.

Audit outcome

Compliant

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

Code reference

Clause 5 Schedule 11.3

Code related audit information

If the losing trader provides information to the registry manager in accordance with clause 3(a) of Schedule 11.3 with the required information, no later than 5 business days after the event date, the losing trader must complete the switch by:

- *providing event date to the registry manager (clause 5(a)); and*
- *provide to the gaining trader a switch event meter reading as at the event date, for each meter or data storage device that is recorded in the registry with accumulator of C and a settlement indicator of Y (clause 5(b)); and*
- *if a switch event meter reading is not a validated reading, provide the date of the last meter reading (clause 5(c)).*

Audit observation

The EDA file and the Switch Breach Report for the period covered by this audit was analysed. The standard switch process was examined.

Audit commentary

Electrica has 6 ICPs using the standard switch process which was confirmed by analysis of the EDA file. We confirm that other information contained in the file was correct.

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

The EDA file and the Switch Breach Report for the period covered by this audit was analysed. The standard switch process was examined.

Audit commentary

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

Electrica sent one RR file for 0128809078LCEBA, which was accepted by the losing trader. The company did not receive any RR files.

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

The EDA file for the period of the audit was reviewed.

Audit commentary

As stated in **section 4.4**, Electrica always gains new ICPs as NHH. The process prescribed in this clause was not used.

Audit outcome

Compliant

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

Code reference

Clause 7 Schedule 11.3

Code related audit information

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

Audit observation

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

Audit commentary

Electrica confirmed that no disputes occurred in the period covered by this audit which would require a resolution. ENEL stated that they will not decline to accept another traders' validated meter reading or permanent estimate if they are reasonable and appropriate in the applicable circumstances.

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 provided the Event Listing file (EDA) and the Switch Breach History detail report for the period covered by this audit. The switch move process was examined, we found it compliant.

Audit commentary

Electrica sent five NTMI 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 01/01/2018 to 31/12/2018 to assess compliance.

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 complete the switch by providing to the registry
 - 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 provided the Event Listing file (EDA) and the Switch Breach History detail report for the period covered by this audit.

Audit commentary

Electrica lost five ICPs using the switch move process. The company for each switch accepted the date specified by a gaining trader. The AN file was sent only for 0000109433UN113. No AN files were sent for four switches. It is identified as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 4.8 With: 10(1)(a)(ib) of Schedule 11.3 From: 01-Jan-18 To: 31-Dec-18	No AN files were sent for four switch move switches Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3	
Audit risk rating	Rationale for audit risk rating	
Low	Controls are recorded as moderate because there are some improvements that can be made to them. Electrica “misread” the Code. Audit risk is recorded as low as impact on settlement outcomes is minor	
Actions taken to resolve the issue	Completion date	Remedial action status
We’ve updated our documentation to state it’s compulsory to send AN file if the switch type is a move one.	January 2019	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	

This was an omission in our documentation, and we updated our documentation	January 2019	
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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 provided the Event Listing file (EDA) and the Switch Breach History detail report for the period covered by this audit.

Audit commentary

We evaluated all switch move switches and confirm that Electrica did not specify a different date for the switch.

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 provided the Event Listing file (EDA) and the Switch Breach History detail report for the period covered by this audit.

Audit commentary

Electrica lost five ICPs using the switch move process. The CS files were sent within the timeframe specified by this clause. We compared three switch event reads between the CS files and EnelSoft records. We confirm it was a 100% match.

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 provided the Event Listing file (EDA) and the Switch Breach History detail report for the period covered by this audit.

Audit commentary

Electrica gained six ICPs using the switch move process. In all instances Electrica accepted the 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 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 provided the Event Listing file (EDA) and the Switch Breach History detail report for the period covered by this audit. The gaining traders switch process was examined, we found it compliant.

Audit commentary

No gaining trader switches occurred during the period of this audit.

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

No gaining trader switches occurred during the period of this audit.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 11.3

Code related audit information

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

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

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

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

Audit observation

Electrica provided the Event Listing file (EDA) and the Switch Breach History detail report for the period covered by this audit. The gaining trader switch process was examined

Audit commentary

No gaining trader switches occurred during the period of this audit.

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

The switch withdrawal process is documented. The EDA file was reviewed.

Audit commentary

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.

NW was sent within two and four BD respectively.

Electrica received 8 NW files from losing traders. AW files were sent within five business days.

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 lost a small number of ICPs. In the event that an actual read won't be available EnelSoft calculates an estimate.

Audit commentary

All meter readings used in the switching process are validated meter readings or estimates.

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

According to the company's policy, Electrica won't be offering a better deal to a customer who wishes to switch away.

Audit commentary

The Win-back process was discussed during the audit. To assess compliance with this clause we are limited to analysing the NW files for the CX code and information provided by a losing trader. It was described in **section 4.15**.

Audit outcome

Compliant

5. MAINTENANCE OF UNMETERED LOAD

5.1. Maintaining shared unmetered load (Clause 11.14)

Code reference

Clause 11.14

Code related audit information

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

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

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

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

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

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

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

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

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

Audit observation

The LIS file was examined and no SUML ICPs were identified.

Audit commentary

Electrica does not have the intention to trade unmetered ICPs. If there is SUML found at a later date Electrica will create consumption based on the daily kWh information from the distributor.

Audit outcome

Compliant

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

Code reference

Clause 10.14 (2)(b)

Code related audit information

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

Audit observation

The LIS file was examined, and no UML ICPs were identified.

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

The LIS file was examined, and no UML ICPs were identified.

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 27/12/2018.

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

The LIS file was examined.

Audit commentary

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 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

Electrica does not trade such installations..

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

Audit observation

The LIS file and reconciliation files were analysed.

Audit commentary

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 outcome

Compliant

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

Code reference

Clause 10.43(2) and (3)

Code related audit information

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

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

Audit observation

The process related to defective installations was examined.

Audit commentary

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

Audit commentary

The AMCI audit report was examined as a part of this audit to assess compliance. Compliance with this clause is validated during the AMS/Metrix audit.

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. All readings are validated on import to EnelSoft.

Audit commentary

Clause 5 of Schedule 15.2 is not applicable.

All reads are received from MEPs and AMCI. Submission data is derived from a copy of raw data.

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 12.11** 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 12.11**.

Audit outcome

Compliant

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

Code reference

Clause 7(1) and (2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

The company receives data daily from remotely read meters and once per month from AMCI. Data is imported to EnelSoft and any missing data is reported,.

Audit commentary

Electrica monitors readings received from MEPs very closely. If reads are missing for a few days, the MEP is requested to provide data.

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

We reviewed the Meter Frequency Reports (MFR) for 3 months. The Reports were accurate and submitted to the Authority in time.

Audit commentary

A review of the Meter Frequency Reports confirmed that Electrica met the read attainment requirements.

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

We reviewed the Meter Frequency Reports (MFR) for 3 months. The Reports were accurate and submitted to the Authority in time.

Audit commentary

A review of the Meter Frequency Reports confirmed that Electrica met the read attainment requirements.

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

Meters are read electronically by MEPS. Electrica received both register reads and HHR data.

Audit commentary

Electrica does not trade installations for which a meter reading company must be used as an agent.

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 collected by AMS, MTRX, and AMCI.

Audit commentary

HHR interrogation data requirements were reviewed as part of the MEPs and AMCI audits. AMCI provides readings for one ICP and their audit report was reviewed as part of this audit.

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

HHR data is collected by AMS, MTRX, and AMCI.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 11(3) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

HHR data is collected by AMS, MTRX, and AMCI.

Audit commentary

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

Audit outcome

Compliant

7. STORING RAW METER DATA

7.1. Trading period duration (Clause 13 Schedule 15.2)

Code reference

Clause 13 Schedule 15.2

Code related audit information

The trading period duration, normally 30 minutes, must be within $\pm 0.1\%$ (± 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.

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. 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 and compliance confirmed.

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

Audit commentary

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

Audit outcome

Not applicable

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

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

Code reference

Clause 19(1) Schedule 15.2

Code related audit information

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

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

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

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

Audit observation

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.

Audit commentary

No correction of NHH data was done since the last audit. 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. We reviewed the process and methodology

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. If such a situation occurs when MEPs can't provide data, Electrica will estimate data.

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

Error and loss compensation was discussed during the audit.

Audit commentary

Electrica does not have any ICPs for which error or compensation needs to be applied.

Audit outcome

Compliant

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

Code reference

Clause 22(1) and (2) Schedule 15.2

Code related audit information

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

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

The journal must contain the following:

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

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

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

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

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

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

Audit observation

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

Audit commentary

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. Audit trails were discussed in **section 2.4**.

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

The estimation process and readings classification was reviewed.

Audit commentary

A flag is recorded against each interval such as "I" - initial, "PE" - permanent estimate. NHH register reads have slightly different terminology such as "A", "FE", "SW", "MC". We viewed meter readings in EnelSoft and confirm that each interval and register read are clearly identified by the 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

The data provided by Electrica was reviewed in **section 11** and **12** to confirm that volumes were based on readings as required.

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

Meter data is collected by MEPs and AMCI.

Audit commentary

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

Audit outcome

Compliant

9.4. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

If a reconciliation participant is unable to interrogate an electronically interrogated metering installation before the deadline for providing submission information, the submission to the reconciliation manager must be the reconciliation participant's best estimate of the quantity of electricity that was purchased or sold in each trading period during any applicable consumption period for that metering installation. The reconciliation participant must use reasonable endeavours to ensure that estimated submission information is within the percentage specified by the Authority.

Audit observation

The methodology used to estimate data for a few days gaps is to replace the missing value with the most recent actual (ReadType "I") value that had the same trading period and same day of week. If a gap is greater than a few intervals, EnelSoft will use a profiling methodology.

Audit commentary

The only instances where it was necessary to estimate HHR data was when Metrix sent data with gaps. 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

Meter reads are received from AMS and Metrix. Data is validated by MEPs. The metering data is additionally validated when uploaded to EnelSoft.

Audit commentary

During the upload of data (daily) 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

If data does not meet the criteria specified above, the data won't be imported.

Any discrepancies will be conveyed to the MEP. Electrica uses NHH data (register reads), until they are confident that HHR data is accurate and received regularly, without gaps. Once they are confident the type of reconciliation is changed to HHR.

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. If data does not meet the criteria specified in this clause, the data won't be imported.

Audit commentary

During the audit, Electrica stated that checks for unexpected 0 values were 'turned off', which means non-compliance with clause 17(4)(d) of Schedule 15.2. After the discussion, Electrica decided to re-activate this functionality.

Metrix provides log files and AMS notifies if any events occur which could affect the integrity of data.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 9.6 With: 17 of Schedule 15.2 From: 01-Jan-18 To: 31-Dec-18	EnelSoft does not check for unexpected 0 values Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because there are some improvements that can be made to them. Audit risk is recorded as low as impact on settlement outcomes is minor because of small number of ICPs		
Actions taken to resolve the issue		Completion date	Remedial action status
We reinstated the checking of 0 values as part of our metering data validations. We stopped it when we started receiving certified HH data from Metrix because we didn't realise we still have to check for this.		January 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We reinstated the checking of 0 values as part of our metering data validations.		January 2019	

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

Electrica is not required to provide information to the pricing manager.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 13.137

Code related audit information

Each generator must provide the 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

Electrica is not required to provide information to the pricing manager.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 13.138

Code related audit information

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

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

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

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

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

Audit observation

Electrica is not required to provide information to the pricing manager.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 13.140

Code related audit information

If the generator provides half-hourly metering information to 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

Electrica is not required to provide information to the pricing manager.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

11.1. Buying and selling notifications (Clause 15.3)

Code reference

Clause 15.3

Code related audit information

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

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

Audit observation

The LIS file dated 27/12/18 showed that Electrica uses HHR and RPS profiles.

Audit commentary

For submissions Electrica uses the profiles of HHR, RPS, and PV1. Trading notifications were not required.

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 Apr'18 to Nov'18. Electrica also provided a set of GR100 files for the period Jan'18 to Nov'18.

Audit commentary

The calculation of ICP days is based on data stored in EnelSoft. We compared ICP days calculated by Electrica for the period Apr'18 to Nov'18 with GR-100. There were no differences between ICP days calculated by the registry and Electrica's system.

We identified only two instances where the registry and EnelSoft calculations varied by 31 ICP days in May and June'18 (initial submissions and rev1), due to late switches. It was resolved by rev 3 submission.

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

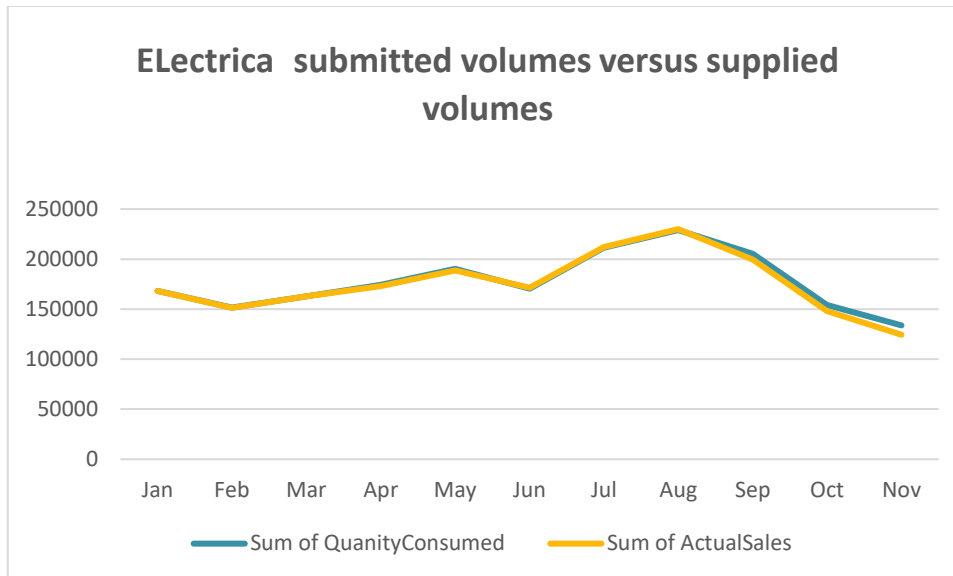
We analysed AV120 files submitted to the reconciliation manager. File AV120 is created in EnelSoft based on billing volumes calculated in Electrica's billing system.

Audit commentary

We compared supplied volumes versus submitted volumes, it is presented in the attached graph for 2018.

Month	Sum of Submitted	Sum of Supplied
Jan'18	168195	168208
Fe'18b	151502	151324
Mar'18	162740	162744
Apr'18	174334	173013
May'18	190263	188800
Jun'18	170404	171308
Jul'18	211341	212027
Aug'18'	229002	229955
Sep'18	205207	199434
Oct'18	153998	147896
Nov'18	133748	124399
Grand Total	1950737	1929108

Overall difference between volume supplied and reconciled is 1.12%.



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

Electrica provided a set of submission files (AV140) for Jan'18 to Nov'18.

GR-090 (missing ICPs) was reviewed for Jan'18 to Nov'18.

We compared the volumes in HHRVOLS and HHRAGGR for selected months.

Audit commentary

We reviewed files for Jan'18 to Nov'18 and cross checked with and HHRVOLS (AV-090). There were only small rounding differences between the volumes and aggregates or not at all. 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.

Reconciliation Manager Functional Specification in section 3, described HHRAGGR as HHR submission information that is aggregated per ICP for the whole month.

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

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.4 With: 15.8 From: 01-Jan-18 To: 31-Dec-18	HHRAGGR files do not contain electricity supplied information Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Electrica submits submissions volumes as per the reconciliation manager specification.		
Actions taken to resolve the issue		Completion date	Remedial action status
			Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	

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

Electrica received HHR data from MEPs and ACMI. Metrix provided data in NZ Standard time. Electrica's system has the functionality to adjust metering data for NZDT. The type of technique used is TPR. Since Metrix implemented their new system, daylight shifted data is provided to Electrica.

Audit commentary

As part of this audit we reviewed the AMCI agent report. MTRX and AMS's compliance with this clause is covered by the MEP audit. We reviewed HHRVOLS file for Sept'18 and confirm the correct number of trading periods on 30/09/18 were recorded.

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.

In the period covered by this audit, no breaches have been recorded for the late provision of submission files to the reconciliation manager.

Audit commentary

The process for the creation of submission files has not changed since the last audit. Submissions are based on readings provided by MEPs and agents.

Accuracy of submissions between HHRVOLS and HHRAGGR were checked in **section 11.4**.

As described in **section 2.2**, volumes for **0000199798UN31F** were submitted for 2018/05 and 2018/06 with a delay. It was corrected through the submission process.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.2 With: 15.4 From: 01-May-18 To: 30-Jun-18	Volumes not submitted for one ICP (new switch) for two months Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as strong. Electrica identified the problem before the audit and corrected it. Audit risk is recorded as low as impact on settlement outcomes is minor because of small number of ICPs		
Actions taken to resolve the issue		Completion date	Remedial action status
The issue was resolved when we added the ICP to our system.		July 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
New ICPs are automatically added to our system as part of the switching process, rather than them being added manually as it happened in the past. This will ensure the new ICPs will not miss form our submissions for reconciliation.		July 2018	

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

On day 13 every month, Electrica submits revisions 1, 3, 7, and 14.

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.

We compared consecutive submissions for Jan'18 and May'18 and found them to contain the same NSPs.

As described in **section 2.2.** for three ICPs (0000200269UND98, 0237891026LC7AF, and 0000141647UN9D6), volumes were submitted for incorrect NSPs. It was corrected through the revision process.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.3 With: 15.5 From: 11-May-18 To: 31-Oct-18	Incorrect NSP allocated to three ICPs for a period of time Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as strong. Electrica identified the problem before the audit and corrected it. Audit risk is recorded as low as impact on settlement outcomes is minor because of small number of ICPs		
Actions taken to resolve the issue		Completion date	Remedial action status
We've updated the data in our system to accurately reflect the ICP configuration changes.		November 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We've updated our validation system to properly track the changes in the ICP configuration.		November 2018	

12.4. Grid owner volumes information (Clause 15.9)

Code reference

Clause 15.9

Code related audit information

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

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

Audit observation

The LIS file was reviewed.

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

The LIS file was reviewed.

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

The LIS file was reviewed.

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

All relevant revisions were submitted on day 13 by Electrica. Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late.

Audit commentary

We reviewed GR170-NHH for the period Jan'18 to Nov'18. The difference between initial files and subsequent revisions were very small. Electrica trades a small number of ICPs and all of them are read remotely. If data is not received in time EnelSoft estimates, as describes in **section 9.4**. In a situation where actual data is subsequently provided, it overrides estimates.

As per **section 2.2** for three ICPs, volumes were submitted for incorrect NSPs and volumes for 0000199798UN31F were submitted for 2018/05 and 2018/06 with a delay.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.7 With: 15.12 From: 11-May-18 To: 31-Oct-18	Incorrect NSP allocated to three ICPs for a period of time and a delay to submit volumes for one ICP for two months Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as strong. Electrica identified the problem before the audit and corrected it. Audit risk is recorded as low as impact on settlement outcomes is minor because of small number of ICPs		
Actions taken to resolve the issue		Completion date	Remedial action status
We've updated the data in our system to accurately reflect the ICP configuration changes.		November 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We've updated our validation system to properly track the changes in the ICP configuration.		November 2018	

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

The compliance was assessed by analysis of the GR-170NHH.

Audit commentary

At the time of the audit Electrica submitted revision 14 file for Dec'16 to Sept'17. The volumes contained 100% historic estimates.

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:

(aa) must comprise all volume information for the ICP:

(a) must comprise half hour volume information for the total metered quantity of electricity for each category 3 or higher metering installation:

(ab) must not comprise half hour volume information for a non-half-hour metering installation:

(ac) must comprise either half hour volume information or non-half hour volume information for the total metered quantity of electricity for each metering installation that—

(i) is a category 1 metering installation or category 2 metering installation; and

(ii) is a half-hour metering installation:

(ad) must comprise non-half hour volume information calculated under clauses 4 to 6 (as applicable) for the total metered quantity of electricity for each metering installation that—

(i) is a category 1 metering installation or category 2 metering installation; and

(ii) contains only non-half-hour metering:

(ae) if a metering installation is a category 1 metering installation or category 2 metering installation, and the metering installation contains half-hour metering and non-half-hour metering, may comprise—

(i) a combination of—

- (A) half hour volume information for the half-hour metering; and*
- (B) non-half hour volume information calculated under clauses 4 to 6 (as applicable) for the non-half-hour metering; or*

(ii) non-half hour volume information for the total metered quantity of electricity for the metering installation:

(b) [Revoked]

(c) must include unmetered load quantities for each ICP that has unmetered load associated with it, which must be 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.

(2) To create non-half hour submission information, a reconciliation participant must only use information that is dependent on a control device if—

- (a) the certification of the control device is recorded in the registry; or*
- (b) the metering installation in which the control device is located is an interim certified metering installation.*

(3) To create submission information for a point of connection for which it is responsible, a reconciliation participant must use volume information from each metering installation for the point of connection.

(4) For the purposes of subclause (3), the reconciliation participant must calculate the volume information by applying to the raw meter data obtained from each metering installation—

- (a) for each ICP, the compensation factor recorded in the registry for the metering installation; or*
- (b) for each NSP, the compensation factor recorded in the metering installation's most recent certification report.*

Audit observation

Electrica provided submission files for the month of Aug'18 and Nov'18 which were reviewed, and compliance assessed.

Audit commentary

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. We cross checked NHHVOLS (Aug'18 and Sept'18) against the detailed report for the same month. We confirm that volumes matched. No volumes were submitted for UML because Electrica does not trade UML ICPs.

Audit outcome

Compliant

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

Code reference

Clause 3 Schedule 15.3

Code related audit information

For each ICP that has a non-half hour metering installation, volume information derived from validated meter readings, estimated readings, or permanent estimates must be allocated to consumption periods using the following techniques to create historical estimates and forward estimates. (clause 3(1)) Each estimate that is a forward estimate or a historical estimate must clearly be identified as such. (clause 3(2))

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

Audit observation

We reviewed AV-080 for Aug’18 to Nov’18.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 4 and 5 Schedule 15.3

Code related audit information

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

If a seasonal adjustment shape is not available, the methodology for preparing an historical estimate of volume information for each ICP must be the same as in clause 4, except that the relevant quantities kWh_{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 a forward estimate, which will be replaced by an historic estimate once shape file provided by the reconciliation manager.

Audit commentary

All reads provided to Electrica come from remotely read meters. NHH register reads are received daily therefore a calculation of historic estimates does not occur often. We analysed reconciliation files submitted in the period covered by this audit which confirm the case. More details are in **section 13.3** For the assessment of compliance with this clause we provided Electrica with a set of scenarios to validate the accuracy of the calculation of historical and forward estimation for NHH ICPs. Only relevant scenarios were tested, and all of the calculations were correct. 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

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.	Compliant
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	Compliant
11	Meter change during month	Confirm estimation is calculated for both meters, and summed correctly	Compliant
13	Two reads in the same month	Confirm usage between two reads is 'Historic' even if no profile data is available	Compliant
14	ICP days for all HE scenarios above	Confirm ICP days calculations are correct	Compliant
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

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 forward estimates.

Audit commentary

Forward estimates are calculated if required using daily kWhs provided in the CS file. Using GR170NHH we checked variances between submission day 4 and day 13, the variances were negligible. By revision 3, as per note in **section 13.3**, forward estimates are replaced by historical estimates.

Audit outcome

Compliant

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

Code reference

Clause 7 Schedule 15.3

Code related audit information

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

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

Audit observation

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 process adopted by Electrica has not changed since the last audit. The only time Electrica changes the profile of an 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 Apr'18 to Nov'18.

Audit commentary

We reviewed files and confirm that the format of submission files is compliant. We reviewed HHRVOLS and HHRAGGR in **section 11.4**. NHHVOLS were discussed in **section 12.9**.

Audit outcome

Compliant

13.2. Reporting resolution (Clause 9 Schedule 15.3)

Code reference

Clause 9 Schedule 15.3

Code related audit information

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

If the unrounded digit to the right of the second decimal place is greater than or equal to 5, the second digit is rounded up, and

If the digit to the right of the second decimal place is less than 5, the second digit is unchanged.

Audit observation

We reviewed reconciliation files for Apr'18 to Nov'18.

Audit commentary

Submission information for NHH and HHR is rounded to two decimal places. It was discussed with the company as to how submission information was calculated, and Electrica confirm that submission volumes are rounded, using the method prescribed by this clause, at the end of calculations.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.3

Code related audit information

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

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

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

Audit observation

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 between Dec'16 and Sept'18 in our analysis of submissions uploaded to the reconciliation manager.

The analyses results are shown below:

Month	Number of NSP	R3	R7	R14
Dec-16	2	0%	100%	100%
Jan-17	2	0%	100%	100%
Feb-17	2	0%	100%	100%
Mar-17	2	100%	100%	100%
Apr-17	2	100%	100%	100%
May-17	3	100%	100%	100%
Jun-17	8	100%	100%	100%
Jul-17	8	100%	100%	100%
Aug-17	8	100%	100%	100%
Sep-17	8	100%	100%	100%
Oct-17	10	100%	100%	
Nov'17	10	100%	100%	
Dec'17	11	100%	100%	
Jan'18	11	100%	100%	
Feb'18	11	100%	100%	
Mar'18	11	100%	100%	
Apr'18	11	100%	100%	
May'18	13	100%	100%	
June'18	13	100%		
July'18	15	100%		
Aug'18	16	100%		
Sep-18	16	100%		

Audit commentary

Electrica met targets of historical estimates as set by this clause.

Audit outcome

Compliant

CONCLUSION

PARTICIPANT RESPONSE