

ELECTRICITY INDUSTRY PARTICIPATION CODE  
RECONCILIATION PARTICIPANT AUDIT REPORT



For

KEA ENERGY LIMITED

Prepared by: Rebecca Elliot

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Audit report due date: 1 January 2021

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## EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Kea Energy Limited (Kea Energy)**, to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1.

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.2.

Kea Energy undertakes the switching and registry management functions inhouse and engages JC Consulting for the performance of submission activities. All of the relevant tasks conducted by JC Consulting were audited as part of this audit. EDM I read one meter for Kea Energy and their agent audit is expected to be submitted with this report.

Kea Energy is not taking on new customers for the foreseeable future and are focussing on increasing their generation capacity.

Eight non-compliances were identified, and no recommendations were made. The non-compliances found affected a very small number of ICPs and will have a very minor or no effect on other participants. In one instance the MEP's has caused Kea Energy to be non-compliant. Overall Kea Energy and JC Consulting have a high level of compliance.

The next audit frequency table indicates an audit risk rating of 11 indicating that the next audit be due in 18 months. I have considered this, along with the materiality of the non-compliances and I recommend that the next audit be completed in 24 months.

The matters raised are shown in the table below:

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	11.2 & 15.2	Four incorrect ANZSIC codes recorded.  Data provided by FCLM is rounded to two decimal places.  One correction not materially similar to the period with missing data.	Strong	Low	1	Disputed
Arrangements for metering equipment provision	2.13	10.36	No arrangement in place with Vector metering (AMS & ARC) when gaining ICPs with their metering on site.	Strong	Low	1	Disputed
ANZSIC codes	3.6	9 (1(k) of Schedule 11.1	Four incorrect ANZSIC codes recorded.	Strong	Low	1	Cleared
Correction of HHR metering information	8.2	19(2) of Schedule 15.2	Correction not materially similar to the period with missing data.	Moderate	Low	2	Disputed
Correction of HHR & NHH raw meter data	8.4	19(5) of Schedule 15.2	Correction journal missing technique used and reason for correction.	Strong	Low	1	Cleared
Meter data used to derive volume information	9.3	3(5) of schedule 15.2	Data provided by FCLM is rounded to two decimal places.	Moderate	Low	2	Identified
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information.	Strong	Low	1	Identified
Accuracy of submission accuracy	12.7	15.12	One correction not materially similar to the normal pattern of consumption.	Moderate	Low	2	Disputed
Future Risk Rating						11	

Future risk rating	0	1-3	4-14	16-40	41-55	55+
Indicative audit frequency	36 months	24 months	18 months	12 months	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

Current code exemptions were reviewed on the Electricity Authority website.

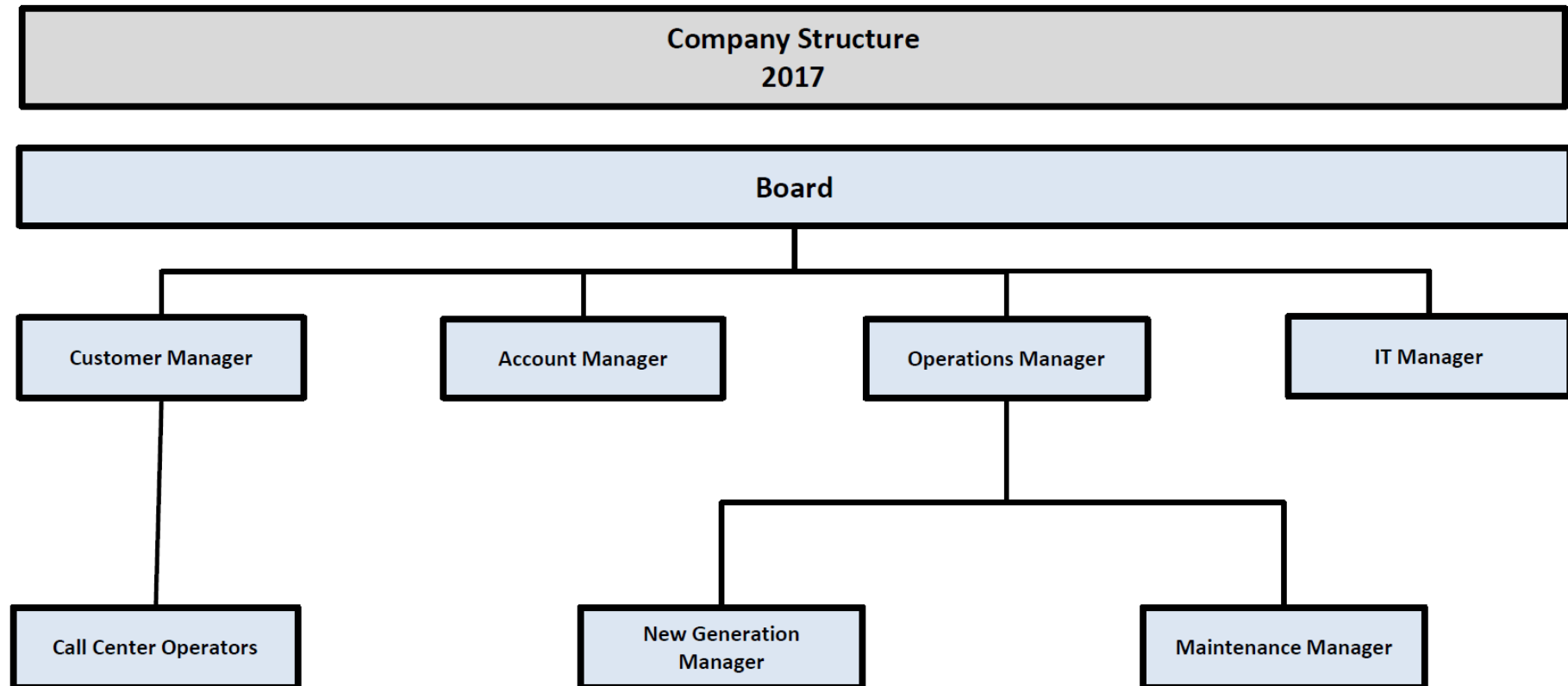
#### Audit commentary

There are no exemptions in place that are relevant to the scope of this audit.



## 1.2. Structure of Organisation

Kea Energy provided a copy of their structure:



### 1.3. Persons involved in this audit

Auditor:

Rebecca Elliot

**Veritek Limited**

**Electricity Authority Approved Auditor**

Personnel assisting with this audit:

Name	Title	Organisation
Campbell McMath	Director	Kea Energy
Naomi McMath	Director	Kea Energy
John Candy	Director	JC Consulting

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

#### Code reference

*Clause 15.34*

#### Code related audit information

*A reconciliation participant who uses an agent*

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

#### Audit observation

This area was examined by interview to confirm Kea Energy understands their obligations.

#### Audit commentary

Kea Energy engages JC Consulting for the performance of submission activities. All of the relevant tasks conducted by JC consulting were reviewed as part of this audit.

EDMI is used to read one meter. The EDMi agent audit is attached and confirms compliance in relation to the services carried out on behalf of Kea Energy.

### 1.5. Hardware and Software

The main systems are as follows:

- Access Database (RM Tool) provided and run by JC Consulting for NHH and HHR submission.
- Customers are managed in a OneNote database which is in the cloud. This is backed up to dropbox throughout the day. It is also stored on a laptop and once a month it is backed up to solid state hard drive.
- Registry population is conducted manually.

## 1.6. Breaches or Breach Allegations

There are no breach allegations recorded by the Electricity Authority during the audit period.

## 1.7. ICP Data

All active ICPs are summarised by metering category in the table below.

Metering Category	Sept 2020	Nov 2018	Nov 2017
1	25	18	5
2	5	6	1
3	1	1	1
4	-	-	-
5	-	-	-
9	-	-	-
Blank	-	-	-

All ICPs on the list file are summarised on the table below.

Status	Number of ICPs (Sept 2020)	Number of ICPs (Nov 2018)	Number of ICPs (Nov 2017)
Active (2,0)	31	24	7
Inactive – new connection in progress (1,12)	-	-	-
Inactive – electrically disconnected vacant property (1,4)	-	-	-
Inactive – electrically disconnected remotely by AMI meter (1,7)	-	-	-
Inactive – electrically disconnected at pole fuse (1,8)	-	-	-
Inactive – electrically disconnected due to meter disconnected (1,9)	-	-	-
Inactive – electrically disconnected at meter box fuse (1,10)	-	-	-
Inactive – electrically disconnected at meter box switch (1,11)	-	-	-
Inactive – electrically disconnected ready for decommissioning (1,6)	-	-	-
Inactive – reconciled elsewhere (1,5)	-	-	-
Decommissioned (3)	-	-	-

## 1.8. Authorisation Received

Kea Energy provided an email of authorisation.

## 1.9. Scope of Audit

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of Kea Energy, to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1.

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits version 7.2.

Some or part of the functions Kea Energy is certified for are conducted by agents, as shown in the table below.

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

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs Providing Data
(a) - Maintaining registry information and performing customer and embedded generator switching		
(b) – Gathering and storing raw meter data	EDMI – HHR data collection	FCLM
(c)(iii) - Creation and management of volume information	JC Consulting	
(d)(i) – Calculation of ICP days	JC Consulting	
(d)(ii) - delivery of electricity supplied information under clause 15.7	JC Consulting	
(d)(iii) - delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8	JC Consulting	
(e) – Provision of submission information for reconciliation	JC Consulting	

The functions performed by JC Consulting were audited at the same time as those conducted by Kea Energy, and the findings are documented in this report.

EDMI collected the data for ICP 0007131160RNBC9. They have been audited in accordance with the Guidelines for Reconciliation Participant Audits, and the agent audit report is expected to be submitted along with this report.

FCLM provide data as an MEP for the remaining 30 ICPs and are subject to a separate audit regime.

#### 1.10. Summary of previous audit

Kea Energy's previous audit was conducted on 27 December 2018 by Ewa Glowacka. The summary tables below show the status of the non-compliances raised in the previous audit. Further comment is made in the relevant sections of this report.

Subject	Section	Clause	Non-compliance	Status
Changes to registry information	3.3	10 of schedule 11.1	Four trader updates later than 5 business days	Cleared
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information.	Repeated in this audit as the code has not yet been updated.

## 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 process to find and correct incorrect information was examined. The registry list file as at 30/09/20 and the combined audit compliance reports covering the period from 01/11/18 to 10/10/20 were examined to confirm that information was correct and not misleading. The registry validation process was examined in detail in relation to the achievement of this requirement, and process documentation was reviewed.

#### Audit commentary

##### Registry Management:

Registry status and trader updates are completed manually using the registry interface once the correct event dates and event attributes are confirmed. As part of this process, the user confirms that the update was successful.

Kea Energy use an excel macro tool provided by JC Consulting for registry validation. This monitors any changes in the registry that could affect any of Kea Energy's ICPs. All changes are reviewed.

JC Consulting also monitors the registry for any changes to the registry that affect reconciliation. This includes monitoring unmetered load additions (Kea has none presently and doesn't plan to trade unmetered load).

The analysis of the list file and AC020 returned the following findings:

Item No.	Issue	Dec 2019	Comments
1	Status or status date mismatch between registry and Kea Energy	-	Compliant.
2	Active ICPs with blank MEP and no MEP nominated and UML = N	-	Compliant.
3	Incorrect submission flag	-	Compliant. Submission flags and profiles are consistent with the ICP metering information.

Item No.	Issue	Dec 2019	Comments
4	Active with blank ANZSIC codes	-	Compliant.
5	Active with ANZSIC "T999" not stated	-	Compliant.
6	Active with ANZSIC "T994" don't know	-	Compliant.
7	Active ICP with cat 9 and UML= N	-	Compliant.
8	ICPs with Distributor unmetered load populated but retail unmetered load is blank	-	Compliant. No active ICPs have unmetered load recorded.
9	ICPs with unmetered load flag Y but load is recorded as zero	-	Compliant. No active ICPs have unmetered load recorded.
10	ICPs with incorrect shared unmetered load	-	Compliant. No active ICPs have unmetered load recorded.
11	ICPs with Distributed Generation indicated but no DG profile	-	All ICPs with distributed generation indicated are settled as HHR. The meters are certified as HHR and the HHR profile is correctly assigned.
12	ICP at status "new connection in progress" (1,12) or "ready" (0,0) with an initial electrical connection date populated by the Distributor	-	Compliant. No ICPs have 1,12 or 0,0 status.
13	Active date variance with initial electrical connection date	1	Compliant.
14	Meter cat 3 or known commercial site with residential ANZSIC code	-	Compliant.

Four incorrect ANZSIC codes were identified. These were corrected during the audit and this is recorded as non-compliance below and in **section 3.6**.

### **Meter Reading**

Data provided by the FCLM is provided in the EIEP3 format which is rounded to two decimal places. This will have a very minor effect on submission accuracy. This is recorded as non-compliance below and in **section 9.3**.

### **Reconciliation**

One submission inaccuracy was identified. The correction applied for ICP 0000024604EAE80 for the period from 14/01/20 to 21/02/20 was not applied correctly. The volumes were estimated using a similar pattern of consumption up to 09/02/20. The meter removal read provided up to 21/02/20 indicated that the earlier estimation was high, so a flat pattern of consumption was used for remaining period from 10/02/20 to match to the meter removal read rather than re-estimating the whole period using the meter start and end reads using a similar pattern of usage from a similar day and period. JC Consulting have since updated the estimated period using the previous 7-day average over the entire period which has removed any similarity to the seven days prior to the correction which had

produced a flat pattern of consumption as it is based on averages. This is detailed in **section 8.2** and recorded as non-compliance below.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: 11.2 & 15.2  From: 16-Nov-19 To: 30-Sep-20	Four incorrect ANZSIC codes recorded. Data provided by FCLM is rounded to two decimal places. Correction not materially similar to the normal pattern of consumption. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong overall as processes are mapped and well documented. The audit risk rating is low as the materiality of the discrepancies found will have a very minor impact on reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
The estimation referred to was exactly correct in the volume being apportioned, and was apportioned differently in different periods because there was clear indication of a drop off in consumption for the latter part of the estimation, as indicated by the auditor, the volume was subsequently reprofiled resulting in a shift of ~37 Kwh, out of a total estimation of 400 Kwh in a total submission of 1.7 MWh for this NSP, it is hard to see how this can be considered a material difference, or how an even daily volume estimation (using the 7 day average shape) can be considered better or worse.			Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	
As mentioned above.			



## 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

Processes to provide information were reviewed and observed throughout the audit.

### Audit commentary

This area is discussed in several sections in this report. I saw evidence during the audit that discrepancies identified were promptly investigated and updated.

### Audit outcome

Compliant

## 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

Kea Energy receives meter readings from FCLM as an MEP, and one ICP is read by EDM I as an agent. Readings are provided via SFTP.

I traced a diverse sample of readings for seven ICPs from the source files to the RM Tool.

### Audit commentary

All data transmissions to JC Consulting on behalf of Kea Energy are via SFTP, which ensures the security and integrity of the data. Upon receipt, reading files are archived to a folder on the network.

I traced a diverse sample of readings for six ICPs for FCLM and a file for the one ICP that EDM I reads as an agent from the source files to the RM Tool and found the readings matched the source files.

### Audit outcome

Compliant

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

### Code reference

*Clause 21 Schedule 15.2*

### Code related audit information

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

*The audit trail must include details of information:*

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

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

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

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

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

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

### Audit observation

A complete audit trail was checked for all data gathering, validation and processing functions in the OneNote database. I viewed audit trails in the RM tool.

### Audit commentary

Audit trails include the activity identifier, date and time, and an operator identifier in both systems.

### 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

I reviewed Kea Energy's terms and conditions for electricity supply.

### Audit commentary

Kea Energy's standard terms and conditions with their customers includes consent to access for authorised parties for the duration of the contract.

### 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

I reviewed Kea Energy's terms and conditions for electricity supply and discussed compliance with these clauses.

### Audit commentary

Kea Energy's contract with their customers includes consent to access for authorised parties for the duration of the contract. Kea Energy confirmed that they have been able to arrange access for other parties when requested.

### 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:*

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

### Audit observation

The physical meter location point is not specifically mentioned in Kea Energy's terms and conditions for electricity supply, but the existing practices in the electrical industry achieve compliance. The registry list as at 20/10/20 was reviewed.

### Audit commentary

All of Kea Energy's active ICPs have an MEP recorded and metering category 1. Loss compensation is not required.

### 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**

I reviewed Kea Energy's terms and conditions for electricity supply.

#### **Audit commentary**

Kea Energy's terms and conditions contain the appropriate clauses to achieve compliance with this requirement. This is contained in Section 21 "Assignment and subcontracting".

#### **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 registry list file as at 20/10/20, event detail report, and the combined AC020 reports for 16/11/18 to 30/09/20 were analysed to confirm whether any new connections have occurred during the audit period.

#### **Audit commentary**

The design of the new connections process does not allow ICPs to be connected without authorisation by Kea Energy, or an arrangement with an MEP.

No new connections have been completed during the audit period. ICP 0002278347ML8EE is in the process of being electrically connected. Kea Energy have accepted responsibility for the ICP and claimed it on the registry. An MEP nomination has been issued by Kea Energy and accepted by FCLM as required by this clause. All of Kea Energy's active ICPs have an MEP recorded.

#### **Audit outcome**

Compliant

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

### Code reference

*Clause 10.33(1)*

### Code related audit information

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

- *for a point of connection to the grid – the grid owner has approved the connection*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection.*
- *for a point of connection that is an ICP, but is not as NSP:*
- *the reconciliation participant is recorded in the registry as the trader responsible for the ICP*
- *if the ICP has metered load, one or more certified metering installations are in place*
- *if the ICP has not previously been electrically connected, the relevant distributor has given written approval of the temporary electrical connection.*

### Audit observation

The new connection process was examined in detail, and process documentation was reviewed.

### Audit commentary

Kea Energy claims ICPs at 1,12 (“inactive new connection in progress”) status which helps to ensure that the trader is recorded on the registry if an ICP is temporarily electrically connected.

No new connections have been completed during the audit period and none have been temporarily electrically connected.

### Audit outcome

Compliant

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

### Code reference

*Clause 10.33A(1)*

### Code related audit information

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

- *for a point of connection to the grid – the grid owner has approved the connection*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection.*
- *for a point of connection that is an ICP, but is not as NSP:*
- *the reconciliation participant is recorded in the registry as the trader responsible for the ICP*
- *if the ICP has metered load, 1 or more certified metering installations are in place*
- *if the ICP has not previously been electrically connected, the relevant distributor has given written approval of the temporary electrical connection.*

### Audit observation

The new connection process was examined in detail to evaluate the strength of controls.

The AC020 report and event detail report for 16/11/18 to 30/09/20 were examined to confirm process compliance and that controls are functioning as expected.

### Audit commentary

All ICPs recorded as active with metering installed have an MEP recorded.

Review of the AC020 report and event detail report found that there have been no new connections completed during the audit period. The new connection process is robust, and Kea Energy are consulting with JC Consulting as each step occurs for the new connection that is in progress.

No bridged meters were identified during the audit period.

### Audit outcome

Compliant

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

### Code reference

*Clause 11.16*

### Code related audit information

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

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

### Audit observation

The process to ensure an arrangement is in place before trading commences on a network was examined.

### Audit commentary

Kea Energy confirmed there are arrangements in place with the three networks they trade on.

### 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

The process to ensure an arrangement is in place with the metering equipment provider before an ICP can be created or switched in was checked.

The registry list was reviewed to determine the MEPs for Kea Energy's ICPs.

## Audit commentary

Kea Energy uses FCLM as their MEP and there is an arrangement in place. However, at the time of switching for the seven ICPs another MEP's metering was present (AMS and ARC) and whilst most meters are replaced quickly there were two examples where the meters were not replaced for weeks or months. The code requires an arrangement to be in place so that access to metering can be arranged and disconnection of a meter is required by the MEP. There is no agreement with Vector Metering (AMS & ARC). This is recorded as non-compliance.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.13 With: 10.36  From: 12-Aug-19 To: 06-Mar-20	No arrangement in place with Vector metering (AMS & ARC) when gaining ICPs with their metering on site.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as strong, as Kea Energy have attempted to put an agreement in place with Vector Metering, but this has been unsuccessful to date. Kea Energy replace these meters at the earliest opportunity.  The audit risk rating is deemed to be low for two reasons: <ul style="list-style-type: none"> <li>• Kea Energy trades a very small number of ICPs in the market, and</li> <li>• they replace these meters as soon as possible.</li> </ul>		
Actions taken to resolve the issue		Completion date	Actions taken to resolve the issue
We have an arrangement with Vector, and have had multiple conversations with them advising we will be swapping out their meters at the earliest opportunity, which is what has happened. This was accepted at the previous two audits			Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	
[As mentioned above]			



### 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

New connections were discussed and the list file as at 20/10/20 was examined.

##### Audit commentary

This requirement is well understood and managed by Kea Energy. One new connection is in progress, and an ICP number has been obtained for this.

##### Audit outcome

Compliant

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

##### Code reference

Clause 11.7(2)

##### Code related audit information

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

### Audit observation

The new connection process was examined in detail. The registry list as at 20/10/20, event detail report, and the combined AC020 reports for 16/11/18 to 30/09/20 were analysed to evaluate the updating of the registry in relation to new connections. Process documentation for new connections was reviewed.

### Audit commentary

The new connection process is detailed in **sections 2.9** and **3.5**.

One new connection is in progress, and information has been populated as required by this clause.

### 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

The process to manage status changes is discussed in detail in **sections 3.8** and **3.9** below. The process to manage trader updates, including MEP nominations was reviewed.

The combined AC020 reports for 16/11/18 to 30/09/20 was reviewed to determine the timeliness of registry updates, and all late updates were reviewed.

Process documentation for registry updates was reviewed.

### Audit commentary

Kea Energy make any changes to the registry via the registry interface. They have a good understanding of the requirements.

Examination of the event detail report identified 31 trader updates. Review of the AC020 report confirmed that all updates were made within the required timeframe.

### 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**

##### **Retailers Responsibility to Nominate and Record MEP in the Registry**

The registry list for 20/10/20 was examined to confirm whether all active ICPs have an MEP recorded. Process documentation for new connections was reviewed.

##### **ICP decommissioning**

The process for the decommissioning of ICPs was examined. The event detail report 16/11/18 to 30/09/20 was reviewed to identify all ICPs decommissioned during the period.

#### **Audit commentary**

##### **Retailers Responsibility to Nominate and Record MEP in the Registry**

Kea Energy's new connection process includes this step. The one new connection in progress confirmed this.

All active metered ICPs have an MEP recorded.

##### **ICP Decommissioning**

ICPs that are vacant and either active or inactive will still be maintained within Kea Energy's system and the RM tool. No ICPs have been decommissioned as yet, but they have a good understanding of the requirements and have a process mapped. This included all the expected steps.

#### **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

The new connection process was examined in detail. The event detail report and the AC020 report for 01/09/19 to 20/10/20 were reviewed. Kea Energy has yet to complete a new connection.

The accuracy of all status event dates for new connections was checked by comparing the earliest active date, meter certification date (if available) and initial electrical connection date (if available) using the AC020 report.

#### Audit commentary

The new connection process is described in detail in **section 2.9**. The MEP nomination is sent at the same time the ICP is claimed at the “inactive new connection in progress” status. Compliance is confirmed.

#### 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 process to capture and manage ANZSIC codes was examined.

The registry list file as at 20/10/20 and the combined AC020 reports for 16/11/18 to 30/09/20 were examined to check ANZSIC codes, including active ICPs with T99 series or blank ANZSIC codes.

To confirm the validity of the ANZSIC codes selected I checked all active ICPs.

#### Audit commentary

This is gathered as part of the new connection process but were assumed to be correctly recorded by the previous trader for the ICPs that switched in. The validity of ANZSIC codes was checked:

- no ICPs with blank or T99 series ANZSIC codes were recorded on the AC020, and
- four ICPs had the incorrect ANZSIC code recorded; these have been corrected.

Kea Energy will check ANZSIC codes when switching any future ICPs. The four incorrect codes are recorded as non-compliance below and in **section 2.1**.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.6 With: Clause 9 (1(k) of Schedule 11.1  From: 16-Nov-19 To: 30-Sep-20	Four incorrect ANZSIC codes recorded.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong going forward as Kea Energy will confirm the ANZSIC code with any new customers.  The audit risk rating is low as this has no direct impact on reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
These have been corrected		20/12/2020	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
For future ICP's we will be investigating their ANZSIC code to confirm it is correct.		Proposed or actual date	

### 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 process to manage unmetered load was examined. The registry list file as at 20/10/20 and AC020 report for combined AC020 reports for 16/11/18 to 30/09/20 were examined to identify any ICPs where unmetered load details were recorded, and/or there was a discrepancy between the distributor and trader unmetered load details.

#### Audit commentary

Distributor unmetered load details changes are monitored via the excel macro tool provided by JC Consulting. JC Consulting also monitor this as part of the reconciliation checks.

Review of the AC020 report and registry list found no active ICPs had trader or distributor unmetered load details recorded.

#### 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 one 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 new connection process was examined in detail as discussed in **sections 2.9** and **3.5**.

The process to manage unmetered load was examined. The registry list file as at registry list file as at 20/10/20 and AC020 report for combined AC020 reports for 16/11/18 to 30/09/20 were reviewed to determine compliance.

- The timeliness and accuracy of data for new connections is discussed in **section 3.5**.
- The timeliness of reconnections is assessed in **section 3.3**.

### Audit commentary

Review of the registry list confirmed that all active ICPs have an MEP recorded. Customer start and end dates are recorded for each ICP, so that the customer responsible for an ICP on any given day can be determined.

A check of the event detail report and the AC020 found that there have been no status changes for Kea Energy's ICPs. ICP status will be updated to active when a new connection is completed, or an ICP is reconnected on switching in.

### 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 registry list file as at 20/10/20, and the combined AC020 reports for 16/11/18 to 30/09/20 were analysed were reviewed to determine compliance.

The inactive status of "new connections in progress" is used for any new connections. The list file was examined to identify any ICPs that had been at the "inactive new connection in progress" with an initial energisation date populated, and any ICPs that had been at this status for more than 24 months.

The process to manage ICPs at the other inactive statuses was examined. The event detail and AC020 reports for the audit period were checked.

The findings in relation to the timeliness of updates to registry are recorded in **section 3.3**.

### Audit commentary

Kea Energy processes all status updates manually on the registry once paperwork is received.

There were no disconnections during the audit period.

### 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**

Whilst this is a Distributor's code obligation, I investigated whether any queries had been received from Distributors in relation to ICPs at the "new" or "ready" status for more than 24 months and what process is in place to manage and respond to such requests.

#### **Audit commentary**

Kea Energy uses the status "inactive new connection in progress" and changes the status once it is set to "ready". Analysis of the registry list found no ICPs were currently at "new" or "ready" status.

There have been no requests from distributors on ICPs which have been at "new" or "ready" status for more than two years but if these were received, they would be investigated and responded to when they are received.

#### **Audit outcome**

Compliant



## 4. PERFORMING CUSTOMER AND EMBEDDED GENERATOR SWITCHING

### 4.1. Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3)

#### Code reference

*Clause 2 Schedule 11.3*

#### Code related audit information

*The standard switch process applies where a trader and a customer or embedded generator enters into an arrangement in which the trader commences trading electricity with the customer or embedded generator at a non-half hour or unmetered ICP at which another trader supplies electricity, or the trader assumes responsibility for such an ICP.*

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

*A gaining trader must advise the registry manager of a switch no later than two business days after the arrangement comes into effect and include in its advice to the registry manager that the switch type is TR and one or more profile codes associated with that ICP.*

#### Audit observation

The switch gain process was examined to determine when Kea Energy deem all conditions to be met. A typical sample of five ICPs were checked to confirm that these were notified to the registry within two business days, and that the correct switch type was selected. Process documentation was reviewed.

#### Audit commentary

Kea Energy's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files are created using the registry web interface as soon as all pre-conditions are met. The withdrawal process is used if the customer changes their mind.

All Kea Energy's switches have been standard switches to date. They have a good understanding of when a switch move is to be applied. Information on whether the customer is transferring between retailers at their current address or moving into a new address is collected through the application process. Standard switch type is applied where a customer is transferring between retailers at an address.

Review of the event detail report found seven standard switch NTs were issued; all had metering category 1.

The five NT files checked were sent within two business days of pre-conditions being cleared, and the correct switch type was selected.

#### 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 three 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 five business days after the date of notification. The losing trader must then:*

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

*When establishing an event date for clause 4, the losing trader may disregard every event date established by the losing trader for an ICP for which when the losing trader received notice from the registry manager under clause 22(a) the losing trader had been responsible for less than two months.*

##### Audit observation

The event detail report for 16/11/18 to 30/09/20 was reviewed to identify ANs issued for standard switches. Process documentation was reviewed.

The switch breach report was examined for the audit period.

##### Audit commentary

Kea Energy has not lost any customers therefore they have not issued any AN files. They have a process mapped for when this occurs. ANs will be created manually on the registry once an NT file is received.

The switch breach report confirmed there were no late AN files issued.

##### 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 five 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 event detail report for 16/11/18 to 30/09/20 was reviewed to identify CS files issued by Kea Energy during the audit period and none were found as no switch losses have occurred.

Process documentation was reviewed including the process to manage the sending of the CS file within five business days of the event date and the calculation of the average daily consumption.

### Audit commentary

The process was reviewed and confirmed. CS files will be created manually on the registry and the average daily consumption figure will be provided along with the switch read by JC Consulting. There have been no switch losses.

### 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 four calendar months of the registry manager giving the gaining trader written notice of having received information about the switch completion, provide to the losing trader a changed switch event meter reading supported by two validated meter readings.*

- *the losing trader can choose not to accept the reading, however, must advise the gaining trader no later than five 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 process for the management of read change requests was examined, including review of process documentation.

The event detail report for 16/11/18 to 30/09/20 was reviewed to identify all read change requests and acknowledgements during the audit period.

I also checked for CS files with estimated readings provided by other traders where no RR was issued, to determine whether the correct readings were recorded.

The switch breach report for the audit period was reviewed.

### Audit commentary

When a high or low read is identified through the read validation process for a new switch in, the ICP is investigated to determine whether a read change is required. RRs are issued manually using the registry web interface.

One read change request was sent, and none were received during the audit period as there were no switch losses. An RR was sent for ICP 0007115461RNDC4 with the read from the meter register as there was a difference of 11,630 kWh from the actual read sent by Meridian in the CS file. This was rejected by Meridian as this is an ARC meter and only the reads sent from the MEP can be used as these are different to the register reads. I confirmed that the correct read had been applied in RM tool.

12 standard CS files with estimated reads where no RR were issued were identified and I confirmed that the estimated read had been applied in all instances.

The switch breach report did not record any late RR or AC files for standard switches.

### 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 five 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 event detail report for the period from 16/11/18 to 30/09/20 was reviewed to identify all read change requests and acknowledgements where clause 6(2) and (3) of schedule 11.3 applied.

### Audit commentary

Kea Energy did not issue or receive any read change requests where clause 6(2) and (3) of schedule 11.3 applied.

### 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

Disputes were discussed with Kea Energy.

##### Audit commentary

Kea Energy confirms that no disputes have needed to be resolved in accordance with this clause.

##### 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 two 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

The switch gain process was examined to determine when Kea Energy deem all conditions to be met.

No switch moves were issued or received during the audit period. Process documentation was reviewed.

### Audit commentary

Kea Energy's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. If a switch move was required an NT file would be created using the registry web interface as soon as all pre-conditions are met. The withdrawal process is used if the customer changes their mind.

Information on whether the customer is transferring between retailers at their current address or moving into a new address is collected through the application process. All of Kea's switches have been standard switches but a switch move would be applied where a new customer is moving into the address.

### Audit outcome

Compliant

## 4.8. Losing trader provides information - switch move (Clause 10(1) Schedule 11.3)

### Code reference

*Clause 10(1) Schedule 11.3*

### Code related audit information

*10(1) Within 5 business days after receiving notice of a switch move request from the registry manager—*

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

### Audit observation

The event detail report for 16/11/18 to 30/09/20 was reviewed was reviewed to identify all ANs issued for switch moves. Process documentation was reviewed.

The switch breach report was examined for the audit period to identify late AN and CS files for switch moves.

### Audit commentary

Kea Energy has not lost any customers therefore they have not issued any AN files. They have a process mapped for when this occurs. ANs will be created manually on the registry once an NT file is received.

The switch breach report confirmed there were no late AN files issued.

### Audit outcome

Compliant

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

##### Code reference

Clause 10(2) Schedule 11.3

##### Code related audit information

*If the losing trader determines a different date, then within 10 business days of receiving notice the losing trader must also complete the switch by providing to the registry manager as described in subclause (1)(a):*

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

##### Audit observation

An event detail report for 16/11/18 to 30/09/20 was reviewed to identify AN files issued by Kea Energy during the audit period, and assess compliance with the setting of event dates requirements.

##### Audit commentary

No AN files were issued during the audit period. The process was discussed, and Kea Energy has a good understanding of the requirement.

##### 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

The event detail report for 16/11/18 to 30/09/20 was reviewed to identify any CS files issued by Kea Energy during the audit period and none have been sent.

Process documentation was reviewed including the process to manage the sending of the CS file for switch moves and the calculation of the average daily consumption.

##### Audit commentary

The process was reviewed and confirmed. CS files will be created manually on the registry and the average daily consumption figure will be provided along with the switch read by JC Consulting. There have been no switch losses.

## 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 four calendar months of the date the registry manager gives the gaining trader written notice of having received information about the switch completion, must provide to the losing trader a changed validated meter reading or a permanent estimate supported by two validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):*
- *advise the gaining trader if it does not accept the switch event meter reading and the losing trader and the gaining trader must resolve the dispute in accordance with the disputes procedure in clause 15.29 (with all necessary amendments) (clause 12(3)(a)); or*
- *if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader (clause 12(3)(b)).*

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

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

#### Audit observation

The process for the management of read change requests was examined, including review of process documentation.

The event detail report for 16/11/18 to 30/09/20 was reviewed to identify all read change requests and acknowledgements during the audit period and none were sent or received.

The switch breach report for the audit period was reviewed.

#### Audit commentary

When a high or low read is identified through the read validation process for a new switch in, the ICP is investigated to determine whether a read change is required. RRs are issued manually using the registry web interface.



There have been no switch moves during the audit period and therefore there were no read change requests were sent or received during the audit period.

The switch breach report did not record any late RR or AC files for switch moves.

#### Audit outcome

Compliant

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

##### Code reference

Clause 14 Schedule 11.3

##### Code related audit information

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

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

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

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

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

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

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

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

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

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

##### Audit observation

The event detail report for 16/11/18 to 30/09/20 was reviewed to identify gaining trader switches requested by Kea Energy.

### Audit commentary

No gaining trader switches were requested by Kea Energy.

All ICPs requested as standard switches had a metering category of 1.

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

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

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

### Audit observation

The event detail report for 16/11/18 to 30/09/20 was analysed to identify HH AN files issued by Kea Energy during the audit period.

The switch breach report was examined.

### Audit commentary

The event detail report did not record any HH AN files issued by Kea Energy.

The switch breach report did not record any late AN files for HH switches.

### 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 five business days after the metering installation is electrically disconnected or removed, advise the losing trader of the results and metering component numbers for each data channel in the metering installation.*

### Audit observation

The event detail report for 16/11/18 to 30/09/20 was analysed to identify HH CS files issued by Kea Energy during the audit period.

The switch breach report was examined.

### Audit commentary

The event detail report did not record any HH CS files issued by Kea Energy.

The switch breach report did not record any late CS files for HH switches.

### 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 two 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 two 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 event detail report for 16/11/18 to 30/09/20 was reviewed to identify all switch withdrawals or acknowledgements during the audit period.

The switch breach report was checked for any late switch withdrawal requests or acknowledgements.

### Audit commentary

There have been switch withdrawals. Kea Energy have a process in place for this. Withdrawals will be processed manually on the registry, and the withdrawal code will be chosen by the user based on the information available.

## 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

The meter reading process in relation to meter reads for switching purposes was examined.

#### Audit commentary

Kea Energy have only requested seven standard switches during the audit period. The reads applied in switching files were examined in **section 4.3** for standard switches, and **sections 4.4** for read changes. The meter readings used in the switching process are validated meter readings or permanent estimates.

Kea Energy's policy regarding the management of meter reading expenses is compliant.

## Audit outcome

Compliant

### 4.17. Switch protection (Clause 11.15AA to 11.15AC)

#### Code reference

*Clause 11.15AA to 11.15AC*

#### Code related audit information

*A losing retailer (including any party acting on behalf of the retailer) must not initiate contact to save or win back any customer who is switching away or has switched away for 180 days from the date of the switch.*

*The losing retailer may contact the customer for certain administrative reasons and may make a counteroffer only if the customer initiated contact with the losing retailer and invited the losing retailer to make a counteroffer.*

*The losing retailer must not use the customer contact details to enable any other retailer (other than the gaining retailer) to contact the customer.*

#### **Audit observation**

Win-back activity was discussed. The event detail report for 16/11/18 to 30/09/20 was analysed to identify all withdrawn switches with a CX code applied prior to the switch event date for any switch save protected retailer up to 31/03/20, or within 180 days of switch completion after 31/03/20.

#### **Audit commentary**

Kea Energy was not a switch save protected retailer and has never lost a customer. If a switch request were to be received Kea Energy would make contact to confirm the switch request is authorised and then process it.

#### **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 process to manage unmetered load was examined. The registry list file as at 20/10/20 and the combined AC020 reports for 16/11/18 to 30/09/20 were examined to identify any ICPs where shared unmetered load details were recorded.

#### Audit commentary

Kea Energy does not supply any ICPs with shared unmetered load. Processes to monitor ICPs for additions and changes to unmetered load details are discussed in **section 3.7**.

#### 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 registry list file as at 20/10/20 and the combined AC020 reports for 16/11/18 to 30/09/20 were examined to identify any unmetered load over 3,000 kWh per annum.

### Audit commentary

Kea Energy does not intend to supply any ICPs with unmetered load and none were found.

### Audit outcome

Compliant

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

### Code reference

*Clause 10.14 (5)*

### Code related audit information

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

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

### Audit observation

The registry list file as at 20/10/20 and the combined AC020 reports for 16/11/18 to 30/09/20 were examined to identify any unmetered load over 3,000 kWh per annum.

### Audit commentary

Kea Energy does not intend to supply any ICPs with unmetered load and none were found.

### Audit outcome

Compliant

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

##### Code reference

*Clause 11 Schedule 15.3, Clause 15.37B*

##### Code related audit information

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

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

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

##### Audit observation

The registry list file as at 20/10/20 and the combined AC020 reports for 16/11/18 to 30/09/20 were examined to identify any unmetered load over 3,000 kWh per annum.

##### Audit commentary

Kea Energy does not intend to supply any ICPs with unmetered load and none were found.

##### Audit outcome

Compliant



## 6. GATHERING RAW METER DATA

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

#### Code reference

*Clause 10.13, Clause 10.24 and Clause 15.13*

#### Code related audit information

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

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

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

- *there is one 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 registry list file as at 20/10/20, the combined AC020 reports for 16/11/18 to 30/09/20 were analysed, and meter event details report were reviewed to determine compliance. Processes for distributed generation were reviewed.

#### Audit commentary

##### **Metering installations installed**

All active metered ICPs have an MEP, and at least one meter channel.

Kea Energy's new connection process includes a check that metering is installed before electrical connection occurs.

No ICPs have submission information determined by subtraction.

##### **Distributed generation**

Kea Energy supplies 14 active ICPs with distributed generation recorded by the distributor. All ICPs with distributed generation indicated are settled as HHR and have EG registers. The meters are certified as HHR, and the HHR profile is correctly assigned.

Distributed generation changes are monitored by JC Consulting weekly and referred to Kea Energy to confirm the correct trader values and take any action required.

##### **Bridged meters**

No bridged meters were identified during the audit period.

#### 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 three months for the grid owner to review and comment on the design*
- *respond within three business days of receipt to any request from the grid owner for additional details or changes to the design*
- *ensure any reasonable changes from the grid owner are carried out.*

*The participant responsible for the metering installation must:*

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

### Audit observation

The NSP table was reviewed.

### Audit commentary

Review of the NSP table confirmed that Kea Energy is not responsible for any GIPs.

### 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 registry list file as at 20/10/20 and the combined AC020 reports for 16/11/18 to 30/09/20 were reviewed to determine compliance.

### Audit commentary

Kea Energy has only used the HHR and RPS profiles, and control devices are not used for reconciliation purposes.

## Audit outcome

Compliant

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

#### Code reference

*Clause 10.43(2) and (3)*

#### Code related audit information

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

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

#### Audit observation

Processes relating to defective metering were examined. No examples of defective meters were identified during the audit period.

#### Audit commentary

Any defective meters would be identified through the meter reading validation process, or from information provided by the meter read provider.

Upon identifying a possible defective meter, Kea Energy will raise a field services job to investigate. No defective meters were identified during the audit period, so it was not possible to review examples of this process.

## 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**

Kea Energy receives meter readings from FCLM as an MEP, and from EDM I for one ICP as an agent. Clock synchronisation processes for EDM I and FCLM were reviewed as part of their agent and MEP audits. EDM I and FCLM are to advise Kea Energy of clock synchronisation discrepancies and adjustments.

I traced a diverse sample of readings for seven ICPs from the source files to the RM Tool.

#### **Audit commentary**

All information used to determine volume information is collected from the services interface or the metering installation by FCLM or EDM I. Fulfilment of the interrogation systems requirements, and clock synchronisation was examined as part of the MEP and agent audits.

I reviewed the method to receive meter reading data from each MEP and agent. I traced a diverse sample of readings for seven ICPs from the source files to RM tool including readings supplied by FCLM and EDM I. All readings checked were recorded and labelled correctly.

FCLM advise Kea Energy of clock synchronisation events. No examples of clock synchronisation events have been received during the audit period.

#### **Audit outcome**

Compliant

### **6.6. Derivation of meter readings (Clause 3(1), 3(2) and 5 Schedule 15.2)**

#### **Code reference**

*Clause 3(1), 3(2) and 5 Schedule 15.2*

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

*All meter readings must in accordance with the participants certified processes and procedures and using its certified facilities be sourced directly from raw meter data and, if appropriate, be derived and calculated from financial records.*

*All validated meter readings must be derived from meter readings.*

*A meter reading provided by a consumer may be used as a validated meter reading only if another set of validated meter readings not provided by the consumer are used during the validation process.*

*During the manual interrogation of each NHH metering installation the reconciliation participant must:*

- a) *obtain the meter register*
- b) *ensure seals are present and intact*
- c) *check for phase failure (if supported by the meter)*

- d) *check for signs of tampering and damage*
- e) *check for electrically unsafe situations.*

*If the relevant parts of the metering installation are visible and it is safe to do so.*

#### **Audit observation**

The data collection process was examined for ICPs switching in on a non-FCLM meter.

Processes to provide meter condition information were reviewed as part of EDMl's agent audit. Kea Energy's processes to manage meter condition information were reviewed.

Processes for customer and photo reads were reviewed.

#### **Audit commentary**

All current Kea Energy ICPs have HHR metering installed and receive electronic readings from FCLM as an MEP and EDMl for ICP 0007131160RNBC9.

#### **Manual reading**

For all ICPs that switched in Kea Energy undertook a manual meter reading. This was used to validate the switch read sent in the CS file. I confirmed that Kea Energy confirmed that all relevant checks were undertaken as part of this process. The meter reading is also captured on a time date stamped photo and this is retained in the database and sent through to JC Consulting. All meters are changed to an FCLM as soon as possible post switching in.

#### **EDMI reading**

Compliance is recorded in EDMl's July 2020 audit report. I checked the readings for one of meter readings for the one ICP read by EDMl and confirmed that they are loaded into the RM Tool as actual readings and are validated.

#### **Customer and customer photo readings**

No customer or photo reads were used during the audit period. All meters are HHR metered ICPs and therefore no customer and photo reads are expected to be used.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 6 Schedule 15.2*

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

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

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

#### **Audit observation**

The process of the application of meter readings was examined.

### Audit commentary

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 except in the case of a switch event meter reading which applies to the end of the day prior to the event date for the losing trader and the start of the event date for the gaining trader as required by this clause.

All AMI systems have a clock synchronisation function, which ensures correct time stamping. Manual readings taken by Kea Energy are applied correctly.

Application of reads was reviewed as part of the historic estimate checks in **section 12.11** and found to be compliant.

There have been no switch losses during the audit period, but I confirmed that Kea Energy's processes will meet the read application requirements for switching.

### Audit outcome

Compliant

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

### Code reference

*Clause 7(1) and (2) Schedule 15.2*

### Code related audit information

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

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

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

### Audit observation

The process to manage missed reads was reviewed. Reporting on ICPs not read during the period of supply was examined.

### Audit commentary

A validated meter reading must be obtained in respect of every meter register for every NHH metered ICP for which the participant is responsible, at least once during the period of supply to the ICP by the reconciliation participant, unless exceptional circumstances prevent this from occurring. This may be a validated meter reading at the time the ICP is switched to, or from, the reconciliation participant.

The NHH meter reading frequency guidelines published by the Electricity Authority define "Exceptional circumstances" as meaning "circumstances in which access to the relevant meter is not achieved despite the reconciliation participant's best endeavours". "Best endeavours" is defined as:

"Where a reconciliation participant failed to interrogate an ICP as a result of access issues, the reconciliation participant had made a minimum of three attempts to contact the customer, by using at least two methods of communication".

All but one current Kea Energy ICPs have category 1 or 2 HHR metering installed and receive electronic readings from the MEP. ICP 0007131160RNBC9 is a category 3 meter and is read by EDM I on behalf of Kea Energy.

JC Consulting would advise Kea Energy of any ICPs where a read has not been received in the previous four months, so that action can be taken to obtain a reading. Where the period of supply is less than four months, it is likely that no action will be taken to obtain readings but as all customers have HHR metering this has not been required.

There have been no switch losses during the audit period.

#### **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**

The meter reading process was examined. Monthly reports for the audit period from November 2018 to September 2020 were provided and reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2, and whether the meter reading attainment threshold was met.

#### **Audit commentary**

Review of the meter reading frequency reports found that no ICPs were reconciled NHH for a period of 12 months. All ICPs are moved to HHR once the meter change has taken place.

As discussed in **section 6.8**, there are processes in place to monitor read attainment, and attempt to resolve issues preventing read attainment.

#### **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 months, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every four 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**

The meter reading process was examined. Monthly reports for the audit period from November 2018 to September 2020 were provided and reviewed

#### **Audit commentary**

The monthly meter reading reports provided were reviewed and confirmed that all ICPs were read within the 4-month period.

As discussed in **section 6.8**, there are processes in place to monitor read attainment, and attempt to resolve issues preventing read attainment.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 10 Schedule 15.2*

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

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

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

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

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

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

#### **Audit observation**

NHH data is collected by Kea Energy until the meter can be changed to a FCLM HHR meter.

#### **Audit commentary**

The meter reading process was discussed with Kea Energy. This process is undertaken until the meter can be replaced. Customer photo reads have not been used. Compliance is confirmed.

#### **Audit outcome**

Compliant



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

### Code reference

*Clause 11(1) Schedule 15.2*

### Code related audit information

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

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

### Audit observation

All but one current Kea Energy ICPs have category 1 or 2 HHR metering installed and receive electronic readings from the MEP. ICP 0007131160RNBC9 is a category 3 meter and is read by EDM I on behalf of Kea Energy.

### Audit commentary

HHR data is collected by FCLM from the services access interface for all but one ICP.

EDMI read the HHR meter for ICP 0007131160RNBC9 as an agent and provide the data file directly to JC Consulting via an SFTP.

### Audit outcome

Compliant

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

### Code reference

*Clause 11(2) Schedule 15.2*

### Code related audit information

*The following information is collected during each interrogation:*

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

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

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

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

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

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

### Audit observation

All but one current Kea Energy ICPs have category 1 or 2 HHR metering installed and receive electronic readings from the MEP. ICP 0007131160RNBC9 is a category 3 meter and is read by EDM I on behalf of Kea Energy.

### Audit commentary

All but one ICP HHR data is collected by FCLM. EDM I's audit report was reviewed for the one ICP that they collect the data for. Compliance is confirmed for Kea Energy.

### 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

All but one current Kea Energy ICPs have category 1 or 2 HHR metering installed and receive electronic readings from the MEP. ICP 0007131160RNBC9 is a category 3 meter and is read by EDM I on behalf of Kea Energy.

### Audit commentary

All but one ICP HHR data is collected by FCLM. EDM I's audit report was reviewed for the one ICP that they collect the data for. Compliance is confirmed for Kea Energy.

### Audit outcome

Compliant

## 7. STORING RAW METER DATA

### 7.1. Trading period duration (Clause 13 Schedule 15.2)

#### Code reference

*Clause 13 Schedule 15.2*

#### Code related audit information

*The trading period duration, normally 30 minutes, must be within  $\pm 0.1\%$  ( $\pm 2$  seconds).*

#### Audit observation

All Kea Energy's ICPs are settled as the RPS, RPS PV1 or the HHR profile using AMI data provided by FCLM and EDM I in one instance.

#### Audit commentary

All but one ICP has HHR data collected by FCLM. EDM I collect the data for the one category 3 ICP. Compliance with this clause has been demonstrated by the FCLM as an MEP and EDM I as an agent. This is discussed in their audit reports.

#### 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

Processes to archive and store raw meter data were reviewed. The oldest raw meter data available was viewed, to confirm it is retained. Audit trails were reviewed in **section 2.4**.

#### Audit commentary

Compliance is recorded in EDM I's June 2020 audit report.

All raw reading files are retained by JC Consulting indefinitely, and during the audit I viewed files from when Kea Energy began trading in 2017.

Review of audit trails in **section 2.4** confirmed that reads cannot be modified without an audit trail being created.

#### 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

Processes to record non-metering information were discussed.

#### Audit commentary

External control equipment logs are not used by Kea Energy.

#### Audit outcome

Compliant

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

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

#### Code reference

*Clause 19(1) Schedule 15.2*

#### Code related audit information

*If a reconciliation participant detects errors while validating non-half hour meter readings, the reconciliation participant must:*

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

*19(1)(b) - replace the original meter reading the second meter reading (even if the second meter reading is at a different date)*

*19(1A) if a reconciliation participant detects errors while validating non half hour meter readings, but the reconciliation participant cannot confirm the original meter reading or replace it with a meter reading from another interrogation, the reconciliation participant must:*

- *substitute the original meter reading with an estimated reading that is marked as an estimate;*
- and*
- *subsequently replace the estimated reading in accordance with clause 4(2)*

#### Audit observation

Processes for the correction of NHH meter readings were reviewed.

#### Audit commentary

NHH corrections are processed by JC Consulting as Kea Energy's agent. The process documentation contains appropriate processes which achieve compliance. No NHH corrections have been required during the audit period.

#### Defective meters

Defective meters are typically identified through the meter reading validation process, or from information provided by the meter read provider. No defective meters were identified during the audit period.

#### Multiplier corrections

No incorrect multipliers were identified during the audit period, and there have been no multiplier corrections.

#### Bridged meter corrections

No bridged meters were identified during the audit period.

#### Inactive ICPs with consumption

The validation process identifies any ICPs with consumption during an inactive period. The registry status records are corrected to active for the affected period, and all consumption is submitted.

No ICPs have been in an inactive status during the audit period.

#### Audit outcome

Compliant

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

### Code reference

Clause 19(2) Schedule 15.2

### Code related audit information

*If a reconciliation participant detects errors while validating half hour meter readings, the reconciliation participant must correct the meter readings as follows:*

*19(2)(a) - if the relevant metering installation has a check meter or data storage device, substitute the original meter reading with data from the check meter or data storage device; or*

*19(2)(b) - if the relevant metering installation does not have a check meter or data storage device, substitute the original meter reading with data from another period provided:*

- (i) The total of all substituted intervals matches the total consumption recorded on a meter, if available; and*
- (ii) The reconciliation participant considers the pattern of consumption to be materially similar to the period in error*

### Audit observation

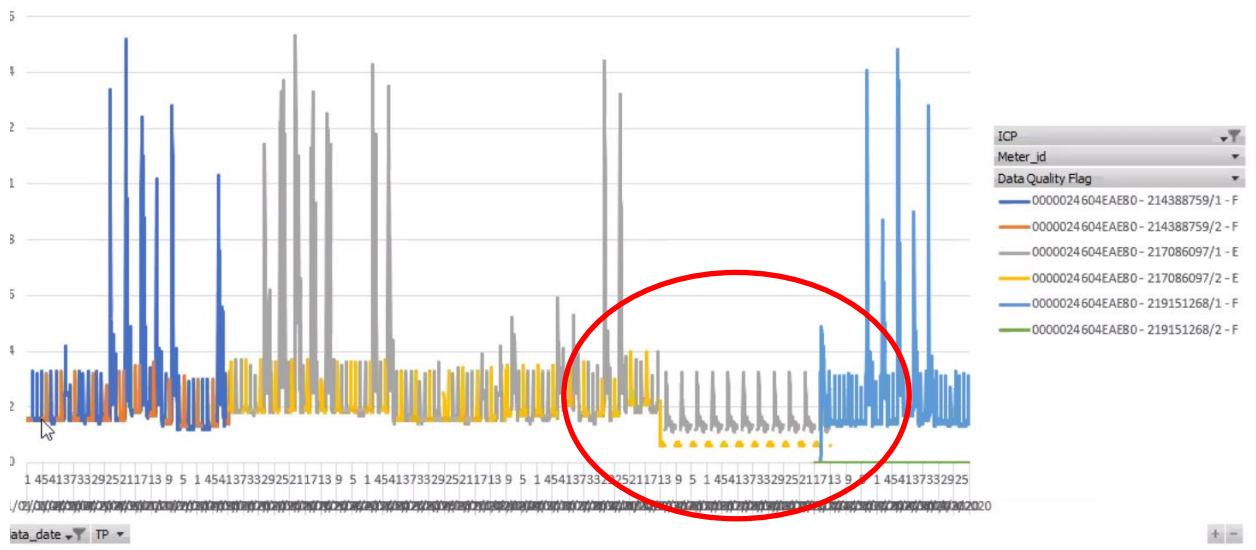
Processes for the correction of HHR meter readings were reviewed.

### Audit commentary

HHR corrections are processed by JC Consulting as Kea Energy's agent. Corrections are expected to be created based on the best information available. Where readings are available, they are used in conjunction with a profile to back fill missing data, and where readings are unavailable an estimate is created based on historic information.

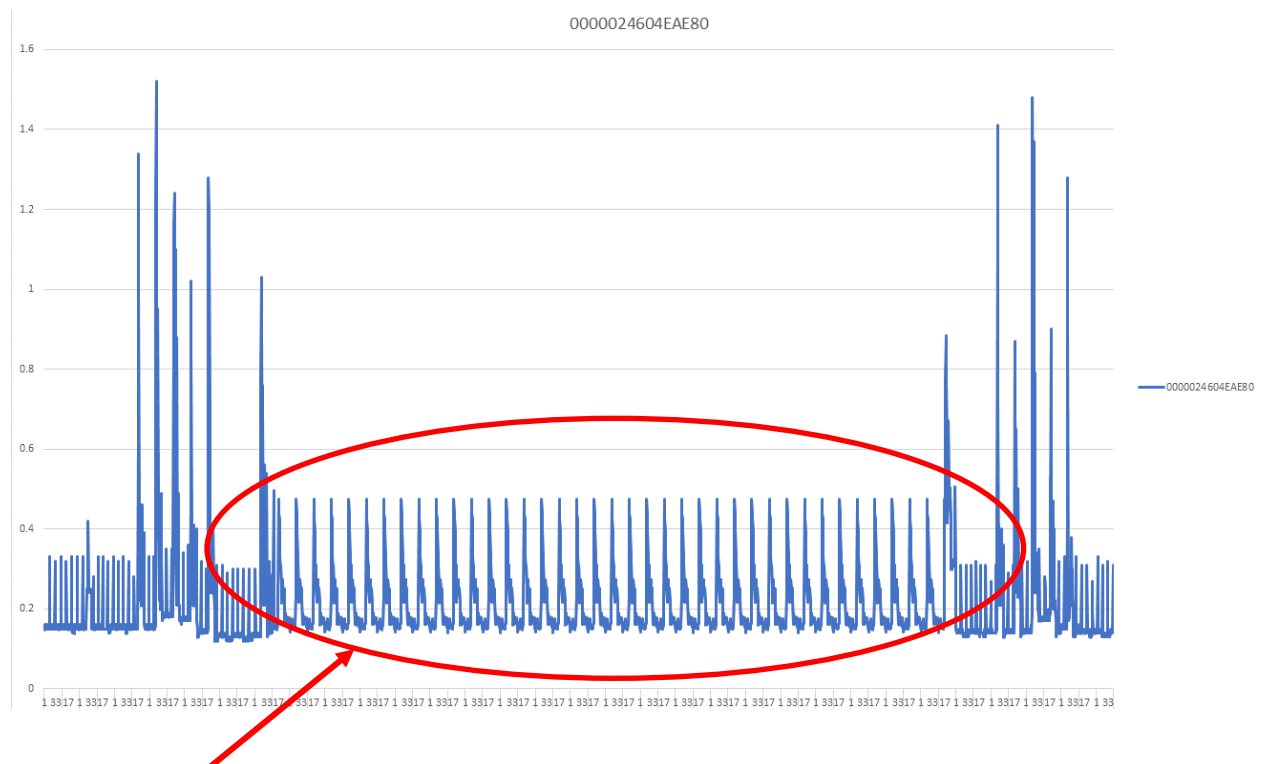
If HHR data is missing for a period, JC Consulting attempts to obtain NHH reads and utilise the Gap filling (HHR estimation) process that is built into the recon database. If this is not possible the estimates are created in an Excel tool, then imported into the RM tool. Both are labelled as "E" for estimated. The RM tool contains a record of file name, date, and time. Estimates are recorded at trading period level not daily level.

JC Consulting provided 13 HHR corrections that have been processed during the audit period. These were examined and all were confirmed as compliant with the exception of the correction applied for ICP 0000024604EAE80 for the period from 14/01/20 to 21/02/20. The volumes were estimated using a similar pattern of consumption up to 09/02/20. The meter removal read provided up to 21/02/20 indicated that the earlier estimation was high, so a flat pattern of consumption was used for remaining period from 10/02/20 to match to the meter removal read rather than re-estimating the whole period using the meter start and end reads using a similar pattern of usage from a similar day and period. This is visible in the picture below:



The code requires that the estimation to be a pattern of consumption to be materially similar to the period in error. The flat interval pattern is not materially similar.

JC Consulting have since updated the entire estimated period using the same profile for each day based on the average for each interval over the 7-day period prior to the estimation period. Whilst the total kWh is correct, the profile is not materially similar to the consumption prior to the period of estimation. The corrected period is shown below.



Revised estimated period.

The normal process is to remove the earlier estimation and using a similar time period e.g. previous pattern of consumption for same day and time of week apply the known start and end reads across the affected period. This is recorded as non-compliance.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 8.2 With: 19(2) of Schedule 15.2 From: 10-Feb-20 To: 21-Feb-20	Correction not materially similar to the normal pattern of consumption. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate as whilst the process of estimation works well it appears that corrections are not always revised when subsequent data is received indicating that an earlier estimate was too high or low. The audit risk rating is low as only a small number of ICPs are traded and all other corrections were applied correctly.		
Actions taken to resolve the issue		Completion date	Remedial action status
While not visually similar, A seven day average is materially similar to the previous consumption, and is an established estimation process, as it takes into account the variability of peaks and troughs, It would be interesting to hear the EA's opinion on what is required for an estimation to more materially similar, the reason for the second period being left as lower than the earlier period is that there was evidence of a drop off in consumption in the first part of Feb, and therefore a lower estimation volume was expected. It might be instructive to observe the KWH scale of the graphs above.			Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	
As mentioned above.			

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

#### Code reference

Clause 19(3) Schedule 15.2

#### Code related audit information

*A reconciliation participant may use error compensation and loss compensation as part of the process of determining accurate data. Whichever methodology is used, the reconciliation participant must document the compensation process and comply with audit trail requirements set out in the Code.*



### Audit observation

The physical meter location point is not specifically mentioned in Kea Energy's terms and conditions for electricity supply, but the existing practices in the electrical industry achieve compliance.

The registry list as at 20/10/20 was reviewed.

### Audit commentary

All of Kea Energy's active ICPs have an MEP recorded. Loss compensation is not required.

### Audit outcome

Compliant

## 8.4. Correction of HHR and NHH raw meter data (Clause 19(4) and (5) Schedule 15.2)

### Code reference

*Clause 19(4) and (5) Schedule 15.2*

### Code related audit information

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

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

*19(5)(a)- the date of the correction or alteration*

*19(5)(b)- the time of the correction or alteration*

*19(5)(c)- the operator identifier for the person within the reconciliation participant who made the correction or alteration*

*19(5)(d)- the half-hour metering data or the non-half hour metering data corrected or altered, and the total difference in volume of such corrected or altered data*

*19(5)(e)- the technique used to arrive at the corrected data*

*19(5)(f)- the reason for the correction or alteration.*

### Audit observation

Corrections are discussed in **sections 8.1** and **8.2**, which confirmed that raw meter data is not overwritten as part of the correction process. Audit trails are discussed in **section 2.4**.

Raw meter data retention for FCLM and EDM I was reviewed as part of their own audits.

### Audit commentary

Raw meter data is held by the FCLM and EDM I. Compliance was confirmed as part of the FCLM audit and in the EDM I agent report.

JC Consulting only corrects working data. The audit trail was examined and found all details required were captured with the exception of:

- the technique used to arrive at the corrected date, and
- the reason for the correction.

This is recorded as non-compliance. JC Consulting have since updated the journal to include these details hence the non-compliance is cleared.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 8.4 With: 19(5) of Schedule 15.2  From: 16-Nov-18 To: 30-Sep-20	Correction journal missing technique used and reason for correction.  Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as strong as the missing details have now been added and proof of this was provided on the same day as the audit.  The audit risk rating is low as only a small number of ICPs are traded and a small number of corrections are made.		
Actions taken to resolve the issue		Completion date	Remedial action status
Journal previously recorded estimation date, time and method, it just did not record the estimation reason, journal has been updated to prompt for an estimation reason		9/12/20	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	

## 9. ESTIMATING AND VALIDATING VOLUME INFORMATION

### 9.1. Identification of readings (Clause 3(3) Schedule 15.2)

#### Code reference

*Clause 3(3) Schedule 15.2*

#### Code related audit information

*All estimated readings and permanent estimates must be clearly identified as an estimate at source and in any exchange of metering data or volume information between participants.*

#### Audit observation

A sample of reads and volumes were traced from the source files to Kea Energy's systems in **section 2.3**.

There have been no switch losses during the audit period, so no switch reads have been sent. The estimated switch reads received from other traders for switch ins were examined.

Correct identification of estimated reads, and review of the estimation process was completed in **sections 8.1, 8.2 and 9.4**.

#### Audit commentary

Estimated readings are clearly identified as required by this clause.

#### 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

A sample of submission data was reviewed in **section 12**, to confirm that volume was based on readings as required.

#### Audit commentary

Review of submission data confirmed that it is based on readings as required by this clause.

#### 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

A sample of submission data was reviewed in **section 12**, to confirm that volume was based on readings as required.

I traced a sample of meter data from the source files to JC Consulting's RM tool as discussed in **section 2.3**, to confirm whether readings were rounded or truncated on import.

#### Audit commentary

The EDM data retains raw, unrounded data. Compliance was demonstrated in the EDM during their agent audit.

Data provided by the FCLM is provided in the EIEP3 format which is rounded to two decimal places. This is recorded as non-compliance below.

Submission data is rounded to two decimal places.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 9.3 With: 3(5) of schedule 15.2  From: 16-Nov-19 To: 30-Sep-20	Data provided by FCLM is rounded to two decimal places.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate as they relied on raw data being provided by the MEP but have only just been made aware as a result of this audit that the data is being rounded.  The audit risk rating is low as this will have only a minor effect on reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
FCLM has been requested to remove rounding		1/10/20	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We can do no more			

#### 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

Processes for the estimation of HHR meter readings were reviewed.

##### Audit commentary

Estimates are created based on the best information available. Where readings are available, they are used in conjunction with a profile to back fill missing data, and where readings are unavailable an estimate is created based on historic information.

The estimates are created in an Excel tool then imported into the RM tool and labelled as "E" for estimated. The RM tool contains a record of file name, date and time. Estimates are recorded at trading period level not daily level.

There were no temporary estimates provided. All estimates examples were corrections as no data was received to replace these. The accuracy of corrections is discussed in **section 8.2**.

#### 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

I conducted a walkthrough of the validation processes. The JC Consulting RM Submission Process documentation and Submission Checklist were reviewed.

All current Kea Energy ICPs are settled half hourly. NHH submission will occur when an ICP switches in until the meter can be changed to an FCLM meter.

#### Audit commentary

All NHH reads are captured by Kea Energy themselves and then sent to JC Consulting.

Points “a” and “b” above are conducted by JC Consulting when data is loaded into the RM tool. Loading cannot occur unless there is an ICP, meter, register and date match. The RM tool also identifies missing start and end reads.

Point “c” above is managed by Kea Energy where they manually check each invoice before it is sent to ensure it is reasonable.

Point “d” is conducted in the RM Tool where excessive, negative, and zero consumption examples are identified and reported to Kea Energy. I checked the most recent zero consumption report. The report was blank, which indicated that no ICPs with zero consumption were found.

#### 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 zero 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**

I reviewed the HHR and AMI data validation processes, including meter event logs and validation checks.

#### **Audit commentary**

JC Consulting check for missing data, invalid dates and times; and unexpected zeros and register readings are compared to the sum of intervals. There is also an invoice review by Kea Energy to ensure there are no unexpected changes to the consumption patterns.

Event files are provided by FCLM as detailed in their MEP audit. None have been received as yet as there have been no events for Kea Energy. Any events received by JC Consulting are reviewed and the relevant action taken.

Compliance is recorded because no events requiring further action were identified during the audit period.

#### **Audit outcome**

Compliant

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

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

#### Code reference

Clause 13.136

#### Code related audit information

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

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

#### Audit observation

The NSP table on the registry was reviewed.

#### Audit commentary

Kea Energy is not responsible for any NSPs. No information is provided to the grid owner in accordance with this clause.

#### Audit outcome

Not applicable

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

#### Code reference

Clause 13.137

#### Code related audit information

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

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

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

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

#### Audit observation

The NSP table on the registry was reviewed.

#### Audit commentary

Kea Energy is not responsible for any NSPs. No information is provided to the grid owner in accordance with this clause.



#### 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

The NSP table on the registry was reviewed.

#### Audit commentary

Kea Energy is not responsible for any NSPs. No information is provided to the grid owner in accordance with this clause.

#### Audit outcome

Not applicable

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

#### Code reference

*Clause 13.140*

#### Code related audit information

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

#### Audit observation

The NSP table on the registry was reviewed.

#### Audit commentary

Kea Energy is not responsible for any NSPs. No information is provided to the grid owner in accordance with this clause.

#### 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 registry list file 01/11/18 to 10/10/20 was reviewed to identify the profiles used during the audit period.

#### Audit commentary

Kea Energy used the RPS, PV1 and HHR profiles during the audit period. 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

ICP days submissions are completed by JC Consulting as an agent. The process for the calculation of ICP days was examined by checking all NSPs on the NHH and HHR AV110 submissions for September 2020.

I reviewed GR100 reports from November 2018 to September 2020 to identify any NSP level ICP days differences and investigate why the difference had occurred.

### Audit commentary

The process for the calculation of ICP days was examined by checking all NSPs on the NHH and HHR AV110 submissions for September 2020. The ICP days calculation was confirmed to be correct.

The check of the GR100 confirmed that there were no ICP day differences.

Breach information provided by the Electricity Authority did not identify any late ICP days submissions.

### 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

Electricity supplied submissions are completed by JC Consulting as an agent.

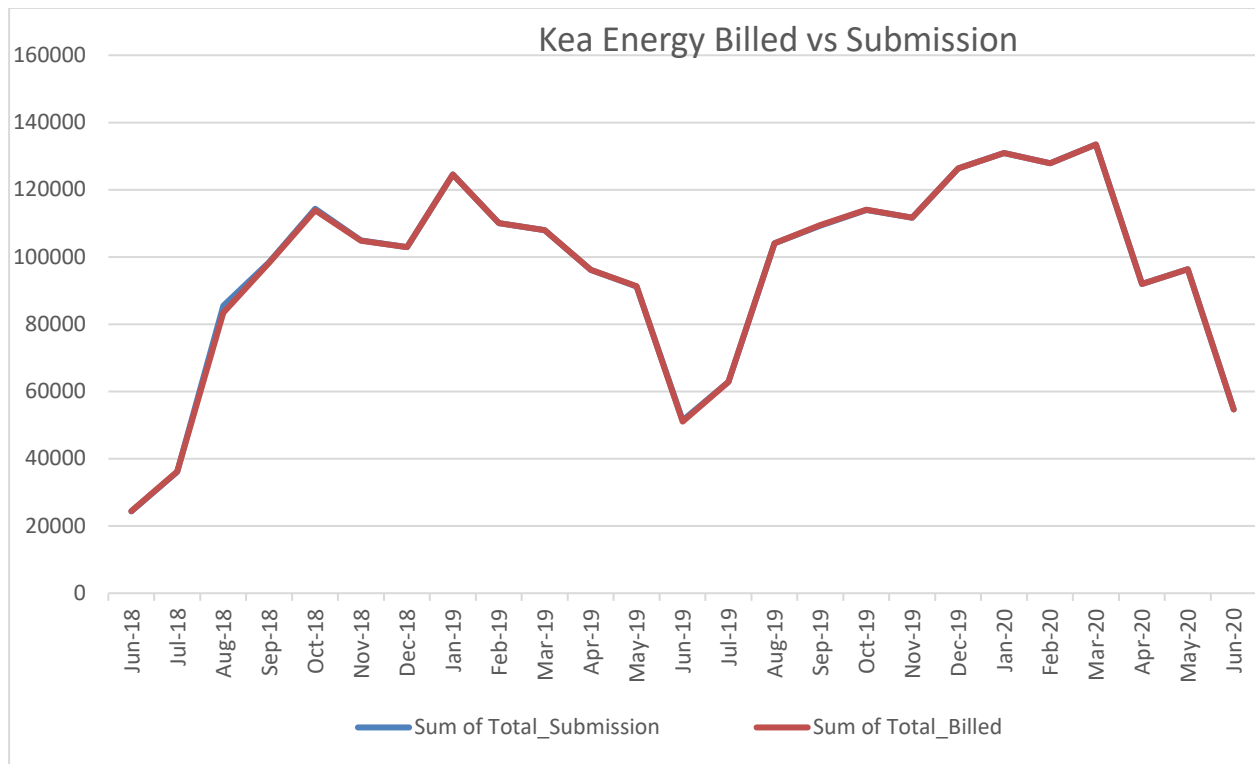
The process for the calculation of as billed volumes was examined by checking the AV120 submission volumes against billed data for November 2019 to January 2020 to confirm the AV120 calculation was correct.

GR130 reports from June 2018 were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

### Audit commentary

The process for the calculation of as billed volumes was examined by checking the AV120 submission volumes against billed data for November 2019 to January 2020. The AV120 calculations were confirmed to be correct.

I also checked the difference between submission and electricity supplied information for a 24-month period, and the results are shown in the chart below. The total difference for the aligned data is -0.4% for the year ended June 2020 (billed lower than submission). The difference appears reasonable.



### Audit outcome

Compliant

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

### Code reference

Clause 15.8

### Code related audit information

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

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

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

### Audit observation

HHR aggregated and volumes submissions are completed by JC Consulting as an agent.

I confirmed that the process for the calculation and aggregation of HHR data is correct, by comparing the HHR VOLS against the HHR AGGS files for the months of May 2019, December 2019, April 2020, July 2020 and September 2020 for all revisions.

The GR090 ICP Missing files were examined for November 2018 to September 2020.

### Audit commentary

The HHR aggregates report contains submission information, not electricity supplied information as specified under clause 15.8. Although the reports JC Consulting produces are consistent with the Reconciliation Manager Functional Specification, this is recorded as a technical non-compliance below.

I checked the process for aggregation of HHR data is correct, by matching HHR aggregates information to the volumes for the months of May 2019, December 2019, April 2020, July 2020 and September 2020. Aggregation was correct.

The GR090 ICP Missing files were examined for November 2018 to September 2020. No ICPs were missing from the registry or aggregates files.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.4 With: Clause 15.8 of part 15  From: 01-Nov-19 To: 30-Sep-20	Aggregates file contains submission information.  Potential impact: None  Actual impact: None  Audit history: Once  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as strong because the aggregates file is correct compared to the functional specification.  There is no impact on settlement because the aggregates file is only used for reporting, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
KEAE bills directly from the reconciliation volumes, and there is no other place where volumes are recorded, so in this respect KEAE complies with the rule requirement, this was accepted in previous audits.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above			

## 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 one of the techniques set out in clause 15.36(3) specified by the Authority.*

#### Audit observation

Daylight saving adjustment is conducted by JC Consulting in a compliant manner.

#### Audit commentary

Daylight saving adjustment is conducted by JC Consulting in a compliant manner. I checked HHR volumes files for the beginning (05/04/20) and end (27/09/20) of daylight savings and confirmed that the correct number of trading periods 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

Submissions information is created by JC Consulting as an agent.

Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late.

#### Audit commentary

No alleged breaches for late provision of submission information occurred during the audit period.

Submissions are reviewed prior to submission, and these checks are discussed in **section 9.6**.

HHR submission was reviewed in **section 11.4**.

#### Audit outcome

Compliant

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

### Code reference

Clause 15.5

### Code related audit information

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

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

### Audit observation

Processes to ensure that information used to aggregate the reconciliation reports is consistent with the registry were reviewed in **section 2.1**.

#### NHH

The process for aggregating the AV080 was examined by checking the total submitted against detailed ICP level information for August 2019. The GR170 to AV080 files for six revision submissions were compared, to confirm zeroing occurs.

#### HHR

HHR aggregation was reviewed in **section 11.4**.

### Audit commentary

#### NHH

The process for aggregating the AV080 was examined by checking the total submitted against detailed ICP level information for August 2019. NHH volume calculation was confirmed to be correct.

GR170 and AV080 files for six revision submissions were compared, and found to contain the same NSPs, confirming that zeroing is occurring as required.

Other consumption validation checks are discussed in **section 9.5**.

#### HHR

HHR aggregation was reviewed in **section 11.4** and found to be compliant.

### Audit outcome

Compliant

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

### Code reference

Clause 15.9

### Code related audit information

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

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

### Audit observation

Review of the NSP table confirmed that Kea Energy is not a grid owner.

### Audit commentary

Kea Energy is not a grid owner.

### 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 registry list and NSP table were reviewed.

### Audit commentary

Kea Energy does not own any local or embedded networks and is not required to provide NSP submission information.

### 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 registry list and NSP table were reviewed.

### Audit commentary

Kea Energy is not a grid connected generator.

### 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

Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late. Corrections were reviewed in **sections 8.1** and **8.2**.

### Audit commentary

Review of submissions confirmed revisions were submitted as expected. Evidence was observed of revised consumption information where changes were made.

As discussed in **section 8.2**, One submission inaccuracy was identified. The correction applied for ICP 0000024604EAE80 for the period from 14/01/20-21/02/20 was not applied correctly. The volumes were estimated using a similar pattern of consumption up to 09/02/20. The meter removal read provided up to 21/02/20 indicated that the earlier estimation was high, so a flat pattern of consumption was used for remaining period from 10/02/20 to match to the meter removal read, rather than re-estimating the whole period using the meter start and end reads using a similar pattern of usage from a similar day and period. JC Consulting have since updated the estimated period using the previous 7-day average over the entire period which has removed any similarity to the seven days prior to the correction which has produced a flat pattern of consumption as it is based on averages. This is detailed in **section 8.2** and recorded as non-compliance below.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.7 With: Clause 15.12  From: 10-Feb-20 To: 21-Feb-20	One correction not materially similar to the normal pattern of consumption. 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 rated as moderate as whilst the process of estimation works well it appears that corrections are not always revised when subsequent data is received indicating that an earlier estimate was too high or low.  The audit risk rating is low as only a small number of ICPs are traded and all other corrections were applied correctly.		
Actions taken to resolve the issue		Completion date	Remedial action status
This a repeat of the same issue mentioned previously, no energy volume was submitted incorrectly and there is a total of ~37 Kwh that the placement is debated (out of ~1.7 Mwh on that NSP).			Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	

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

#### Code reference

Clause 4 Schedule 15.2

#### Code related audit information

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

*The relevant reconciliation participant must, at the earliest opportunity, and no later than the month 14 revision cycle, replace volume information created using estimated readings with volume information created using validated meter readings.*

*If, despite having used reasonable endeavours for at least 12 months, a reconciliation participant has been unable to obtain a validated meter reading, the reconciliation participant must replace volume information created using an estimated reading with volume information created using a permanent estimate in place of a validated meter reading.*

### Audit observation

NHH volumes 14-month revisions were reviewed for November and December 2018 to identify any forward estimate still existing.

### Audit commentary

HE was 100% for all 14-month revision files reviewed.

### 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 for each ICP must comprise the following:*

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

### Audit observation

Aggregation and content of reconciliation submissions was reviewed.

### Audit commentary

Compliance with this clause was assessed:

- all ICPs have metering category 1 and are submitted as NHH or HHR (HHR submission is only applied where the metering is HHR certified),
- there are no ICPs with unmetered load,
- no profiles requiring a certified control device are used,
- no loss or compensation arrangements are required,
- aggregation of the AV080, AV090 and AV140 reports is compliant.

## 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

I reviewed all AV080 submissions for revisions 1 to 14, to confirm that historic estimates are included and identified.

Permanence of meter readings is reviewed in **section 12.8**. The methodology to create forward estimates is reviewed in **section 12.12**.

#### Audit commentary

I reviewed all AV080 submissions and confirm that forward and historic estimates are included and identified as such.

## Audit outcome

Compliant

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

#### Code reference

*Clause 4 and 5 Schedule 15.3*

#### Code related audit information

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

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

### Audit observation

I reviewed the ICP list for 01/12/18 to 30/09/20 to identify ICPs where the scenarios listed below applied, and then requested submission data and seasonal adjusted daily shape values for the corresponding submissions. In addition to this, I have checked all the NHH reconciliation files back to September 2017 to identify as many HE scenarios as possible. I used this information to manually recalculate the submission information and confirm submission calculations are correct.

### Audit commentary

The table below shows that all scenarios which have occurred since Kea started trading (to capture as many scenarios as possible) are calculating as expected and correct SASV (seasonal adjusted shape values) are applied.

Test	Scenario	Test Expectation	Result
a	ICP becomes Active part way through a month	Consumption is only calculated for the Active portion of the month.	Has not occurred
b	ICP becomes Inactive part way through a month.	Consumption is only calculated for the Active portion of the month.	Has not occurred
c	ICP become Inactive then Active again within a month.	Consumption is only calculated for the Active portion of the month.	Has not occurred
d	ICP switches in part way through a month on an estimated switch reading	Consumption is calculated to include the 1st day of responsibility.	Compliant
e	ICP switches out part way through a month on an estimated switch reading	Consumption is calculated to include the last day of responsibility.	Has not occurred
f	ICP switches out then back in within a month	Consumption is calculated for each day of responsibility.	Has not occurred
g	Continuous ICP with a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Compliant
h	Continuous ICP without a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Compliant
i	Rollover Reads	Consumption is calculated correctly in the instance of meter rollovers.	Has not occurred
j	Unmetered load for a full month	Consumption is calculating based on daily unmetered kWh for full month.	Kea Energy does not have any unmetered load
k	Unmetered load for a part month	Consumption is calculating based on daily unmetered kWh for active days of the month.	Kea Energy does not have any unmetered load
l	Network/GXP/Connection (POC) alters partway through a month.	Consumption is separated and calculated for the separate portions of where it is to be reconciled to.	Compliant

Test	Scenario	Test Expectation	Result
m	ICP with a customer read during the month	Customer reads are not used to calculate historic estimate, unless they are validated against a set of actual reads not provided by the customer.	Has not occurred
n	ICP with a photo read during the month	Photo reads are not used to calculate historic estimate, unless they are validated against a set of actual reads not provided by the customer.	Has not occurred
o	ICP has a meter with a multiplier greater than 1	The multiplier is applied correctly	Has not occurred

All of Kea Energy's customer have a HHR meter installed so NHH submission only occurs until the new meter is installed, hence some of the scenarios have not occurred and are not expected to occur.

#### 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

The process to create forward estimates was reviewed. Forward estimates were checked for accuracy by analysing the GR170 file for variances between revisions for all six months where NHH submission occurred.

#### Audit commentary

The forward estimate process is based on historic consumption or the average daily consumption from the losing trader's CS file is used. As a last resort a forward default estimate can be used.

The accuracy of the initial submission, in comparison to each subsequent revision is required to be within  $\pm 15\%$  and within  $\pm 100,000\text{kWh}$ . The target was met for all balancing areas and revisions reviewed.

### Quantity of balancing areas with differences over 15% and 100,000 kWh

Month	Revision 1	Revision 3	Revision 7	Revision 14	Total Balancing Areas
Nov 2018	0	0	0	0	3
Dec 2018	0	0	0	0	1
May 2019	0	0	0	-	1
Jun-2019	0	0	0	-	1
Jul 2019	0	0	0	-	1
Aug 2019	0	0	0	-	2

The total variation between revisions at an aggregate level is shown below.

Month	Revision 1	Revision 3	Revision 7	Revision 14
Nov 2018	-0.75%	-0.96%	-0.96%	-0.96%
Dec 2018	0.62%	0.63%	0.63%	0.62%
May 2019	-0.09%	1.69%	1.69%	-
Jun-2019	-1.00%	-0.78%	-0.79%	-
Jul 2019	0.00%	-0.25%	-0.25%	-

All were within the expected thresholds.

### 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**

The event detail report for 16/11/18 to 30/09/20 was reviewed to identify any ICPs which have had profile changes.

#### **Audit commentary**

All profile changes had a validated meter read applied as the profile change coincided with a meter change.

#### **Audit outcome**

Compliant



## 13. SUBMISSION FORMAT AND TIMING

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

#### Code reference

*Clause 8 Schedule 15.3*

#### Code related audit information

*For each category 3 of higher metering installation, a reconciliation participant must provide half hour submission information to the reconciliation manager.*

*For each category 1 or category 2 metering installation, a reconciliation participant must provide to the reconciliation manager:*

- *Half hour submission information; or*
- *Non half hour submission information; or*
- *A combination of half hour submission information and non-half hour submission information*

*However, a reconciliation participant may instead use a profile if:*

- *The reconciliation participant is using a profile approved in accordance with clause Schedule 15.5; and*
- *The approved profile allows the reconciliation participant to provide half hour submission information from a no- half hour metering installation; and*
- *The reconciliation participant provides submission information that complies with the requirements set out in the approved profile.*

*Half hour submission information provided to the reconciliation manager must be aggregated to the following levels:*

- *NSP code*
- *reconciliation type*
- *profile*
- *loss category code*
- *flow direction*
- *dedicated NSP*
- *trading period*

*The non-half hour submission information that a reconciliation participant submits must be aggregated to the following levels:*

- *NSP code*
- *reconciliation type*
- *profile*
- *loss category code*
- *flow direction*
- *dedicated NSP*
- *consumption period or day*

#### Audit observation

Processes to ensure that information used to aggregate the reconciliation reports is consistent with the registry were reviewed in **section 2.1**.

Aggregation of NHH volumes is discussed in **section 12.3**, and aggregation of HHR volumes is discussed in **section 11.4**.

### Audit commentary

Submission information is provided to the reconciliation manager in the appropriate format and is aggregated to the following level:

- NSP code,
- reconciliation type,
- profile,
- loss category code,
- flow direction,
- dedicated NSP, and
- consumption period.

NHH volumes and HHR volumes aggregation was confirmed to be compliant.

### 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 two 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

I reviewed the rounding of data on the AV080, AV090 and AV140 reports as part of the aggregation checks.

### Audit commentary

Submissions are correctly rounded to two decimal places.

### Audit outcome

Compliant

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

#### Code reference

Clause 10 Schedule 15.3

#### Code related audit information

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

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

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

#### Audit observation

The timeliness of submissions of historic estimate was reviewed in **section 12.2**. I reviewed all AV080 reports to determine whether historic estimate requirements were met.

#### Audit commentary

The quantity of historical estimates is contained in the submission file and is not a separate report. The proportion of HE in the revision files was checked for 14 months, and the table below shows that compliance has been achieved in all instances.

#### Quantity of NSPs where revision targets were met

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Nov 2018			2	2
Dec 2018			1	1
May 2019		1		1
Jun-2019		1		1
Jul 2019		1		1
Aug 2019		1		1

The table below shows that the percentage HE at a summary level for all NSPs is at or above the required targets for all submissions checked.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Nov 2018	-	-	100.00%
Dec 2018	-	-	100.00%
May 2019	-	100.00%	-
Jun-2019	-	100.00%	-
Jul 2019	-	100.00%	-
Aug 2019		100.00%	-

#### Audit outcome

Compliant

## CONCLUSION

Kea Energy undertakes the switching and registry management functions inhouse and engages JC Consulting for the performance of submission activities. All of the relevant tasks conducted by JC Consulting were reviewed as part of this audit. EDM I read one meter for Kea Energy and their agent audit is expected to be submitted with this report.

Kea Energy is not taking on new customers for the foreseeable future and are focussing on increasing their generation capacity.

Eight non-compliances were identified, and no recommendations were made. The non-compliances found affected a very small number of ICPs and will have a very minor or no effect on other participants. In one instance the MEP has caused Kea Energy to be non-compliant. Overall Kea Energy and JC Consulting have a high level of compliance.

The next audit frequency table indicates an audit risk rating of 11 indicating that the next audit be due in 18 months. I have considered this, along with the materiality of the non-compliances and I recommend that the next audit be completed in 24 months.

## PARTICIPANT RESPONSE

We thank Veritek for their audit, but note that one disputed item relating to one 400 Kwh estimation has contributed to the majority of the audit scores, and several non compliances are disputed as they were recorded as compliant previously. It is hard to understand that with a “high level of compliance” and a total of less than 40 icps, and no expectation of significant growth, what market risk KEAE poses to not warrant a 24 month audit renewal.

Thank you again Rebecca for completing the audit.