# ELECTRICITY INDUSTRY PARTICIPATION CODE
# RECONCILIATION PARTICIPANT AUDIT REPORT

VERITEK

For

## ELECTRIC KIWI LIMITED

## NZBN: 9429041132524

Prepared by: Rebecca Elliot

Date audit commenced: 17 February 2023

Date audit report completed: 8 May 2023

Audit report due date: 16 May 2023

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## EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Electric Kiwi Limited (ELKI),** 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.

ELKI is a currently trading HHR only ICPs. A material change has been submitted and identified no risks for ELKI to commence trading NHH ICPs, but they have not commenced this as yet.

ELKI has been through a business restructure and the previous Australian-based compliance function has been replaced with a New Zealand team. Some operations continue to be supported by the Hyderabad based team. Changes in personnel during the audit period caused some minor delays in the audit completion as the team adjusted to their new roles and a different audit approach.

This audit found a decrease in compliance resulting in 31 non-compliances being found and a future risk rating score of 92 up from the 26 recorded in the last audit. The audit risk rating score has increased due to a number of factors:

- some non-compliances relate to a small number of ICPs and are one off issues, such as the one new connection completed by ELKI when new connections are not expected,
- system issues that are affecting the accuracy of information to the market and other participants, and
- identification of some non-compliances that may have been present for some time but were not identified in previous audits.

I make nine recommendations in the report that should assist in getting these issues corrected.

**Registry and Switching Management**

The registry discrepancy processes require review to ensure that they identify all possible discrepancies and that these are corrected.

The switching process is automated and generally working well but I did identify some incorrect information being sent in the AN and CS files that require investigation.

ELKI have been asking their customers the reason for them switching away. This was evident in one of the switch withdrawals examined and is also being investigated as a breach by the Electricity Authority. The survey has stopped being sent since February 2023, but I recommend that all customer facing staff are provided training to ensure they are complying with switch save protection requirements.

**Reading and Reconciliation**

ELKI trades only half hourly. Processes are generally working as expected but I did identify some system and process issues that I recommend are investigated:

- the estimation processes are not working as expected in all scenarios and some instances of estimation being based on the CS file, and ignoring more recent consumption history, and estimated data being overwritten with invalid zero actual data were found,
- corrections for inactive vacant consumption not submitted unless the period is for seven days or more; one example of this occurring of a sample of seven ICPs checked,
- the GR090 report is expected to be checked as part of the submission process but in this audit 1,543 ICPs missing from both the aggregate submissions and the registry for the same submissions, indicate that they may have been reported with different aggregation factors to what was expected based on the registry information; the sample checked identified an issue with the sign-up process which is causing the incorrect NSP to be recorded which wasn't being identified or corrected (the incorrect NSPs are expected to be within the same balancing area so the impact to reconciliation will be minor), and
- the AV120 report identified that in October and November 2022 the electricity billed file was incorrectly only including the volume billed for the calendar month and not the invoiced month resulting in submitted being 25% or more higher than billed.

ELKI is working hard to address the issues in the audit raised. The audit risk rating score of 92 indicates that the next audit be in three months' time. I have considered this in conjunction with:

- ELKI's comments,
- allowing sufficient time to undertake the planned improvements, and
- the Christmas period when business changes are not deployed.

I recommend that the next audit is in 12 months.

The matters raised are detailed 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 | Some inaccurate information is recorded on the registry.<br><br>Validations not picking NSP changes being made at time of sign up resulting in submission being allocated to the incorrect NSP for the 15 ICPs sampled of a potential 1,543 ICPs.<br><br>12 ICPs are confirmed to have distributed generation installed but generation has not been submitted or gifted.<br><br>Estimation process not calculating best estimates where a meter is removed, as the data is being estimated using the CS file average daily figure rather than being estimated from the recent consumption history, as identified in the two examples provided.<br><br>Over submission of 420kWh for ICP 0000193181TR57D due to the incorrect "active" status and volume estimated for the disconnected period.<br><br>Volumes for three bridged meters not submitted due to estimations being replaced with zero values.<br><br>Inactive consumption not submitted for one of a sample of seven ICPs checked due to ELKI only correcting volumes if for seven days or more.<br><br>Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate. | Weak | Low | 3 | Identified |
| Electrical Connection of Point of Connection | 2.11 | 10.33A | Four reconnections were not certified within five business days. | Strong | Low | 1 | Identified |
| Connecting ICPs then withdrawing switch | 2.14 | 10.33A(5) | Two ICPs reconnected by ELKI, and no withdrawal or NT ever sent to the registry and not disconnected. | Weak | Low | 3 | Identified |
| Meter bridging | 2.17 | 2A of Schedule 15.2 | Volumes for three bridged meters not submitted due to estimations being replaced with zero values. | Weak | Low | 3 | Identified |

| Subject | Section | Clause | Non-Compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Providing registry information | 3.2 | 11.7(2) | New connection electrically connected but not recorded on the registry. | Moderate | Low | 2 | Identified |
| Changes to registry information | 3.3 | 10 of Schedule 11.1 | 273 late updates to "active" status for reconnections.<br>108 late updates to "inactive" status.<br>180 late trader updates.<br>Eight late ANZSIC code updates. | Moderate | Low | 2 | Identified |
| Provision of information to the registry manager | 3.5 | 9 of Schedule 11.1 | ICP 0000053824WEF61 electrically connected but not "active" on the registry. | Moderate | Low | 2 | Cleared |
| ANZSIC codes | 3.6 | 9(1)(k) of Schedule 11.1 | All 20 sampled of a possible 277 ICPs with a construction ANZSIC code were confirmed to be incorrect.<br>Four of a sample of 50 ICPs found to have the incorrect ANZSIC code. | Moderate | Low | 2 | Identified |
| Management of "active" status | 3.8 | 18 of Schedule 11.1 | ICP 0000193181TR57D incorrectly recorded as "active" when it was "disconnected".<br>Five of a possible 962 ICPs "disconnected" but recorded as "active" on the registry. | Moderate | Low | 2 | Identified |
| Management of "inactive" status | 3.9 | 19 of Schedule 11.1 | ICP 0005987121RN8E3 incorrectly recorded as "disconnected" at the pole fuse instead of the meter due to human error.<br>ICP 0485040972LCBE2 status not corrected to "active" to account for consumption recorded between disconnection and switch out date. | Moderate | Low | 2 | Identified |
| Losing trader response to switch request and event dates - standard switch | 4.2 | 3 and 4 of Schedule 11.3 | 19 of 20 ICPs sampled of a possible 10,999 TR ANs sent with the switch response code "AA" where an advanced meter is indicated.<br>One TR AN sent with AA instead of PD.<br>One AN breach. | Weak | Low | 3 | Identified |
| Losing trader must provide final information - standard switch | 4.3 | 5 of Schedule 11.3 | Calculation of average kWh per day does not comply with Registry Functional Specification v22.38.<br>Incorrect average daily consumption sent for four ICPs with an incorrect | Weak | Low | 3 | Identified |

| Subject | Section | Clause | Non-Compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| | | | average daily kWh value greater than 200kWh.<br>All five sampled of a possible 70 CS files sent with the read incorrectly labelled as actual.<br>Incorrect final reads of zero sent for ICPs that have had no actual reads during the period of supply.<br>All five sampled of a possible nine CS files sent with the incorrect last read date. | | | | |
| Retailers must use same reading - standard switch | 4.4 | 6(1) and 6A Schedule 11.3 | One RR issued in error.<br>One RR breach. | Strong | Low | 1 | Identified |
| Losing trader provides information - switch move | 4.8 | 10(1) of Schedule 11.3 | 19 of 20 ICPs sampled of a possible 8,797 MI AN sent with the switch response code "AA" where an advanced meter is indicated.<br>Four E2 breaches.<br>Six ET breaches.<br>One T2 breach.<br>One WR breach. | Weak | Low | 3 | Identified |
| Losing trader must provide final information – switch move | 4.10 | 11 of Schedule 11.3 | Calculation of average kWh per day does not comply with Registry Functional Specification v22.38.<br>All five sampled of a possible 323 CS files sent with the read incorrectly labelled as actual.<br>Three CS files sent with the incorrect last read date. | Weak | Medium | 6 | Identified |
| Gaining trader changes to switch meter reading - switch move | 4.11 | 12 of Schedule 11.3 | Two RR breaches. | Strong | Low | 1 | Identified |
| Withdrawal of switch requests | 4.15 | 17 of Schedule 11.3 | 20 NA breaches.<br>11 SR breaches.<br>Two switch withdrawals requests incorrectly rejected. | Strong | Low | 1 | Identified |
| Metering information | 4.16 | 21 Schedule 11.3 | All five sampled of a possible 70 TR CS files sent with the read incorrectly labelled as actual. | Weak | Medium | 6 | Identified |

| Subject | Section | Clause | Non-Compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| | | | Incorrect final reads of zero sent for ICPs that have had no actual reads during period of supply.<br>All five sampled of a possible 323 MI CS files sent with the read incorrectly labelled as actual. | | | | |
| Switch saving protection | 4.17 | 17 and 18 Schedule 11.3 | Customers are being asked their reason for switching away. | Weak | Low | 3 | Identified |
| Electricity conveyed & notification by embedded generators | 6.1 | 10.13 & 15.2 | Energy is not metered and quantified according to the code for bridged meters, some ICPs with distributed generation, one ICP with no meter for a period and 12 ICPs with distributed generation present. | Weak | Low | 3 | Identified |
| NHH meter reading application | 6.7 | 6 Schedule 15.2 | All five sampled of a possible 70 TR CS files sent with the read incorrectly labelled as actual.<br>Incorrect final reads of zero sent for ICPs that have had no actual reads during period of supply.<br>All five sampled of a possible 323 MI CS files sent with the read incorrectly labelled as actual. | Weak | Medium | 6 | Identified |
| NHH meters 90% read rate | 6.10 | 9(3) Schedule 15.2 | No reporting of meter reading achievement provided to the Electricity Authority. | None | Low | 5 | Identified |
| Correction of HHR metering information | 8.2 | 19(2) of Schedule 15.2 | Estimations not calculated as expected where a meter is removed, as the data is being estimated using the CS file average daily figure, rather than being estimated from the recent consumption history as expected.<br>Volumes for three bridged meters not submitted due to estimations being replaced with zero values. | Weak | Low | 3 | Identified |
| Identification of readings | 9.1 | 3(3) Schedule 15.2 | All five sampled of a possible 70 TR CS files sent with the read incorrectly labelled as actual.<br>All five sampled of a possible 323 MI CS files sent with the read incorrectly labelled as actual. | Weak | Medium | 6 | Identified |
| Electricity supplied information provision to the reconciliation manager | 11.3 | 15.7 | AV120 reporting incorrect for the months of October and November 2022. | Weak | Low | 3 | Identified |

| Subject | Section | Clause | Non-Compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| HHR aggregates information provision to the reconciliation manager | 11.4 | 15.8 | The initial aggregates file submitted for July 2022 was missing volume due to a system error.<br>All 15 ICPs sampled of a possible 1,543 ICPs submitted against the incorrect NSP. | Weak | Low | 3 | Identified |
| Creation of submission information | 12.2 | 15.4 | Volumes for three bridged meters not submitted due to estimations being replaced with zero values.<br>Inactive consumption not submitted for one of a sample of seven ICPs checked.<br>12 ICPs are confirmed to have distributed generation installed but generation has not been submitted or gifted.<br>Alleged breach 2205ELKI1. | Weak | Low | 3 | Investigating – response doesn't address all issues raised. |
| Allocation of submission information | 12.3 | 15.5 | All 15 ICPs sampled of a possible 1,543 ICPs submitted against the incorrect NSP.<br>12 ICPs are confirmed to have distributed generation installed but generation has not been submitted or gifted. | Weak | Low | 3 | Identified |
| Accuracy of submission information | 12.7 | 15.12 | Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate.<br>Estimation process not calculating best estimates where a meter is removed, as the data is being estimated using the CS file average daily figure rather than being estimated from the recent consumption history as identified in the two examples provided.<br>Over submission of 420kWh for ICP 0000193181TR57D due to the incorrect "active" status and volume estimated for the disconnected period.<br>Volumes for three bridged meters not submitted due to estimations being replaced with zero values.<br>Inactive consumption not submitted for one of a sample of seven ICPs checked due to ELKI only correcting volumes if for seven days or more.<br>12 ICPs are confirmed to have distributed generation installed but | Weak | Low | 3 | Identified |

| Subject | Section | Clause | Non-Compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| | | | generation has not been submitted or gifted.<br>Validations not picking NSP changes being made at time of sign up resulting in submission being allocated to the incorrect NSP for the 15 ICPs sampled of a potential 1,543 ICPs. | | | | |
| Reconciliation participants to prepare information | 12.9 | 2 Schedule 15.3 | Two NHH certified metered ICPs submitted using HHR data volume. | Moderate | Low | 2 | Identified |
| Provision of submission information to the RM | 13.1 | 8 Schedule 15.3 | All 15 ICPs sampled of a possible 1,543 ICPs submitted against the incorrect NSP. | Weak | Low | 3 | Identified |
| Future Risk Rating | | | | | | 92 | |

| Future risk rating | 0 | 1-3 | 4-15 | 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 |
|---|---|---|---|
| Relevant information | 2.1 | Registry validation | Review validation processes to ensure that all discrepancies are identified and actioned. |
| | | Estimation processes | Estimation processes are reviewed to ensure they are calculated from the most recent available data and invalid actual data is not replacing estimated data. |
| ANZSIC codes | 3.6 | ANZSIC code accuracy | Review all ICPs with building construction ANZSIC codes to confirm if these are residential and put a process in place to manage these going forward. |
| Losing trader must provide final information. | 4.3 | CS file creation | Review automation to ensure that ICPs with no actual reads during the period of supply are sent with the last estimated read and not zero. |
| Losing trader must provide final information. | 4.10 | CS file creation | Review automation to ensure that estimated reads sent are labelled correctly. |
| Switch saving protection | 4.17 | Training | Train agents to comply with switch protection requirements. Confirmation that a switch has been requested is allowed but not asking why they are switching away. |
| Electricity conveyed & notification by embedded generators | 6.1 | Distributed generation | Review the management of distributed generation so that all sites with this present either have an import export meter installed or ELKI advise the RM that the any generation is gifted to the market. |

| Subject | Section | Description | Recommendation |
|---|---|---|---|
| Electricity supplied information provision to the reconciliation manager | 11.3 | Electricity supplied | Review reporting to ensure that the AV120 includes the invoice total and not just the portion that relates to the month being reported. |
| HHR aggregates information provision to the reconciliation manager | 11.4 | HHR aggregation | Review the GR090 process to ensure these are being reviewed and actioned as expected. |

## 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.*

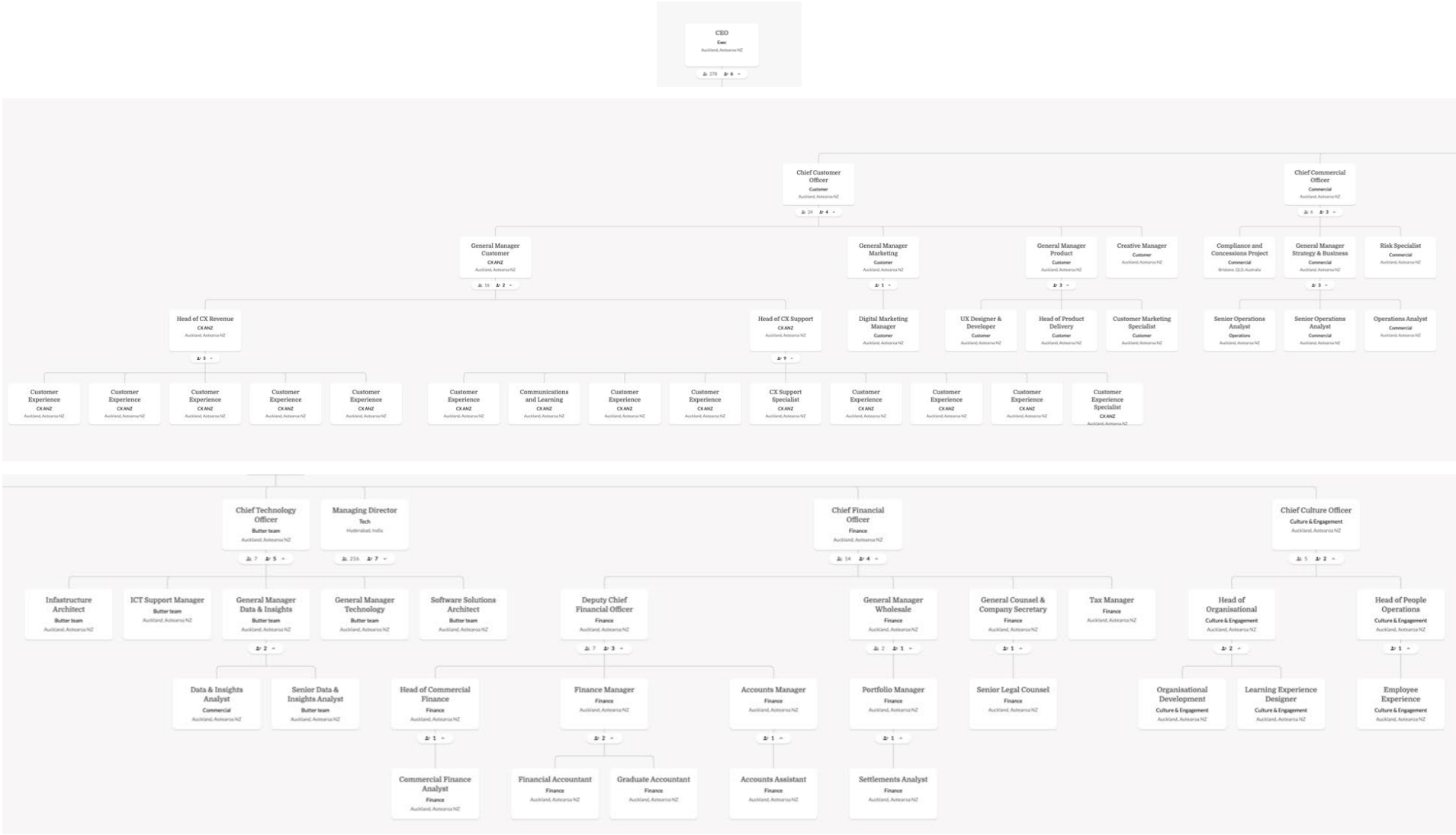
### Audit observation

The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

### Audit commentary

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

## 1.2. Structure of Organisation



## 1.3. Persons involved in this audit:

Auditors:

| Name | Company | Role |
|---|---|---|
| Rebecca Elliot | Veritek | Lead Auditor |
| Tara Gannon | Veritek | Supporting Auditor |

ELKI personnel assisting with this audit were:

| Name | Title |
|---|---|
| Andrew McKenzie | Senior Operations Analyst |
| Huia Burt | Chief Commercial Officer |
| Nalend Chandra | Customer Experience Specialist |

## 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

Use of agents was discussed with ELKI.

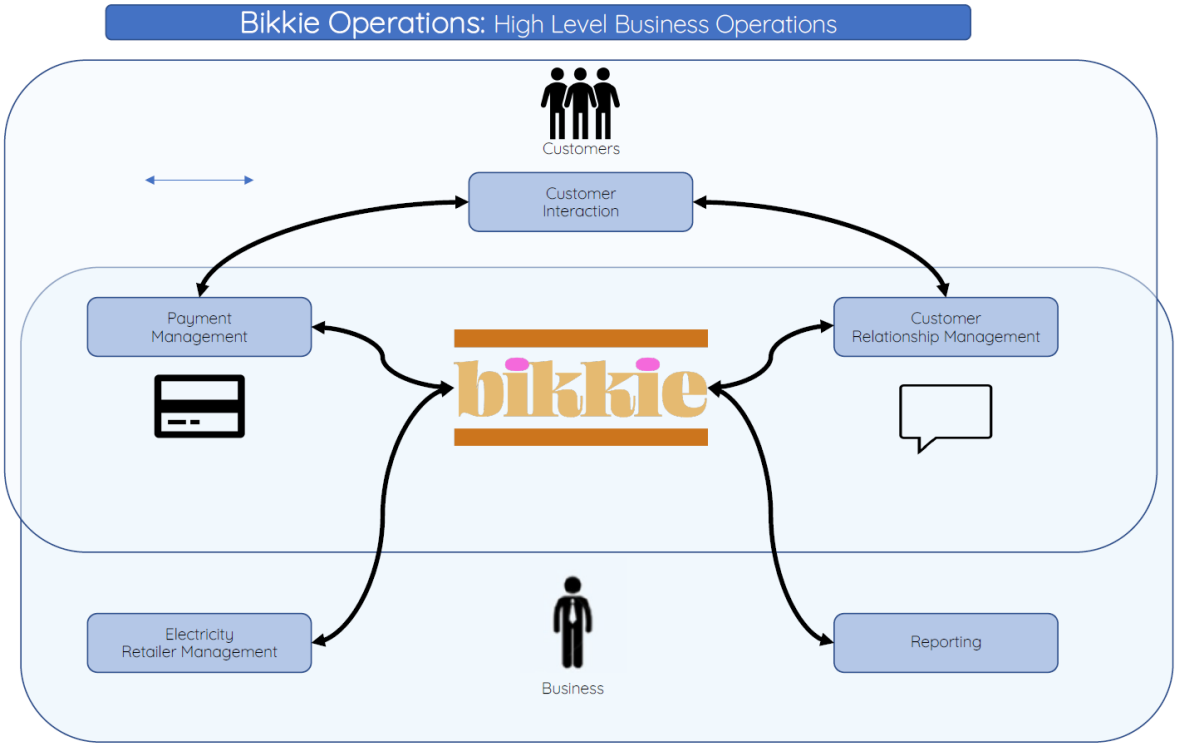
### Audit commentary

ELKI does not use any agents to meet its code obligations. HHR AMI data is provided by MEPs.

## 1.5. Hardware and Software

ELKI has moved from the "NEST" IT platform to a newer version called "Bikkie". This is an in-house system and is used to manage their day-to-day operations, reconciliation, and billing. A material change was not required as this was a platform change and not a system change.

This is a cloud-based system and is continuously backed up.




Access to systems is restricted using logins and passwords, through each user's network login.

## 1.6. Breaches or Breach Allegations

There have been two alleged breaches relevant to the scope of the audit during the audit period:

| Reference | Code section allegedly breached | Severity | Description | Status |
|---|---|---|---|---|
| 2205ELKI1 | Part 15 clause 15.4 (1) | Low | Electric Kiwi Limited (ELKI) failed to submit information to the RM by 1600 hours on the 4th business day of the reconciliation period.<br>The RM contacted the participant at 1530 through a phone call as no file had been received or even put through the file checker. The participant indicated that they were facing issues with their systems.<br>ELKI started checking their files through the file checker at 1532, where their AV-090 (HHRVOLS) file failed validation several times. They started uploading their actual files at 1557 and called the RM to seek assistance with the AV-090 as it was still getting rejected by the RM system. | Closed – declined to pursue without warning. |
| 2206ELKI2 | Part 11 clause 11.15AA<br>Part 11 clause 11.15AB | Low | A complaint was received from another retailer asking for the reason that the customer wanted to switch away, which the Authority has previously advised is not permitted by the Code in their saves and win-backs practice note. | Closed- declined to pursue as ELKI has amended its processes.<br>This is discussed further in **section 4.17.** |

## 1.7. ICP Data

Active ICPs are summarised by meter category in the table below. The "active" ICP with metering category 9 is discussed in **section 2.9**.

| Metering Category | 20 January 2023 | 9 April 2022 | 2021 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|---|
| 1 | 77,712 | 79,746 | 72,413 | 34,115 | 19,522 | 6,814 |
| 2 | 19 | 13 | 17 | 9 | 8 | 4 |
| 3 | - | - | - | - | - | - |
| 4 | - | - | - | - | - | - |
| 5 | - | - | - | - | - | - |
| 9 | 1 | - | 9 | 14 | 6 | - |

| Status | 20 January 2023 | 9 April 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|---|---|
| Active (2,0) | 77,732 | 79,759 | 72,430 | 48,735 | 33,858 | 19,141 | 6,675 |
| Inactive – new connection in progress (1,12) | - | - | - | - | - | - | - |
| Inactive – electrically disconnected vacant property (1,4) | 697 | 687 | 631 | 360 | 177 | 87 | 16 |
| Inactive – electrically disconnected remotely by AMI meter (1,7) | 49 | 43 | 44 | 61 | 65 | 289 | 125 |
| Inactive – electrically disconnected at pole fuse (1,8) | 3 | 3 | - | 1 | 1 | 2 | 1 |
| Inactive – electrically disconnected due to meter disconnected (1,9) | - | - | 1 | - | - | - | - |
| Inactive – electrically disconnected at meter box fuse (1,10) | 1 | 1 | 1 | 1 | - | 1 | - |
| Inactive – electrically disconnected at meter box switch (1,11) | - | - | - | 1 | - | - | 1 |
| Inactive – electrically disconnected ready for decommissioning (1,6) | 67 | 60 | 12 | 4 | 2 | 2 | - |
| Inactive – reconciled elsewhere (1,5) | - | - | - | - | - | - | - |
| Decommissioned (3) | 385 | 300 | 166 | 77 | 35 | 14 | 2 |

## 1.8. Authorisation Received

An authorisation letter was not required as ELKI provided all of the information requested.

## 1.9. Scope of Audit

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of ELKI, 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.

The audit was carried out on April 27th and 28th, 2023 at Electric Kiwi's offices in Auckland.

A registry list, event detail, and audit compliance reports for 1 April 2022 to 17 February 2023 and a registry list snapshot and meter event details report for 17 February 2023 were reviewed.

The table below shows the tasks under clause 15.38 of part 15, for which ELKI requires certification. This table also lists those agents who assist with these tasks:

| Tasks Requiring Certification Under Clause 15.38(1) of Part 15 | Agents Involved in Performance of Tasks | MEPs |
|---|---|---|
| (a) - Maintaining registry information and performing customer and embedded generator switching | | |
| (b) - Gathering and storing raw meter data | | AMS (NGCM and SMCO)<br>Arc Innovations (ARCS)<br>Influx (FCLM)<br>IntelliHUB (IHUB, MTRX and COUP)<br>Nova (BOPE) |
| (c)(iii) - Creation and management of HHR & NHH volume information | | |
| (d)(i) - Calculation of ICP days | | |
| (d)(ii) - delivery of electricity supplied information under clause 15.7 | | |
| (d)(iii) - delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8 | | |
| (e) - Provision of submission information for reconciliation | | |

The MEPs provide AMI data as MEPs not agents, and the MEPs are subject to their own audit regime.

## 1.10. Summary of previous audit

The report for the previous reconciliation participant audit completed in April 2022 by Ewa Glowacka of TEG & Associates was reviewed. The summary tables below indicate if the same clause has been breached in this audit. No recommendations or issues were raised.

### Table of Non-compliance

| Subject | Section | Clause | Non-compliance | Status |
|---|---|---|---|---|
| Relevant information | 2.1 | 11.2 & 15.2 | Incorrect information in the registry for small number of ICPs.<br>Volumes not submitted for three bridged meters. | Still existing |
| Electrical Connection of Point of Connection | 2.11 | 10.33A | Two reconnected metering installations with expired certification. | Still existing |
| Changes to registry information | 3.3 | 10 of Schedule 11.1 | Some late status and trader updates. | Still existing |
| Provision of information to the registry manager | 3.5 | 9 of Schedule 11.1 | ANZSIC code populated late for seven ICPs.<br>Profile and type of reconciliation for 12 ICPs incorrect in the registry. | ANZSIC code corrections are recorded in **section 3.3**.<br>Cleared |
| ANZSIC codes | 3.6 | 9(1)(k) of Schedule 11.1 | Five ICPs have incorrect ANZSIC code (sampling of 22 ICPs).<br>ANZSIC code "T30*" was assigned to premises where construction was possibly complete. | Still existing |
| Losing trader response to switch request and event dates - standard switch | 4.2 | 3 and 4 of Schedule 11.3 | One AN file late, incorrect use of the switch response code "AA". | Still existing |
| Losing trader must provide final information - standard switch | 4.3 | 5 of Schedule 11.3 | Calculation of average kWh per day does not comply with Registry Functional Specification v22.36.<br>Incorrect average daily consumption for one ICP.<br>Incorrect read type flag and incorrect switch event meter reading for three ICPs. | Still existing |
| Losing trader provides information - switch move | 4.8 | 10(1) of Schedule 11.3 | 161 AN files had a proposed transfer date earlier than the gaining trader's proposed date.<br>Incorrect use of the switch response code "AA". | Still existing |
| Losing trader determines a different date - switch move | 4.9 | 10(2) of Schedule 11.3 | Two late CS files. | Late CS files are recorded under **section 4.8** |

| Subject | Section | Clause | Non-compliance | Status |
|---|---|---|---|---|
| Losing trader must provide final information – switch move | 4.10 | 11 of Schedule 11.3 | Calculation of average kWh per day does not comply with Registry Functional Specification v22.36.<br>Incorrect read type flag and incorrect switch event meter reading for three ICPs. | Still existing |
| Gaining trader changes to switch meter reading - switch move | 4.11 | 12 of Schedule 11.3 | Four late RR which were sent after four calendar months. | Still existing |
| Withdrawal of switch requests | 4.15 | 17 of Schedule 11.3 | 32 late NW files (more than two months). | Still existing |
| Electricity conveyed & notification by embedded generators | 6.1 | 10.13 & 15.2 | Energy is not metered and quantified according to the Code where meters are bridged. | Still existing |
| Accuracy of submission information | 12.7 | 15.12 | Volumes for three bridged meters were not estimated and submitted to the reconciliation manager. | Still existing |

## 2. OPERATIONAL INFRASTRUCTURE

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

**Code reference**

*Clause 10.6, 11.2, 15.2*

**Code related audit information**

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

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

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

**Audit observation**

The processes to find and correct incorrect information were examined. The registry validation processes were examined in detail in relation to the achievement of this requirement.

The registry lists and AC020 reports were examined to identify any registry discrepancies, and to confirm that all information was correct and not misleading.

**Audit commentary**

The ELKI compliance function is executed through a cross-functional team of subject matter experts (SMEs) in the Auckland office led by the Chief Commercial Officer. Some operational tasks are undertaken by personnel in the Hyderabad office as required.

**Registry and static data accuracy**

Switching files are largely automated. Bikkie sends files to the registry via an API. Status and trader updates are entered manually by the operator. Registry notification files are not used instead an EDA file is uploaded to Bikkie daily to update records.

ELKI runs a daily Meter Management report via Flight Path. This is used to identify ICPs with:

- unmetered load - ELKI do not trade on ICPs with unmetered load so if this is identified the customer is requested to switch away,
- negative consumption,
- consecutive zero consumption,
- AMI flag set to N,
- switching in with a negative start read,
- an invalid MEP,
- a NHH meter - ELKI has approval to trade on NHH metered ICPs but hasn't commenced this as yet, and
- ICPs exporting but no export volume is expected.

In addition to this ELKI also reviews:

- the LIS file checker which is run weekly based on the LIS file provided by the registry,
- tech team monitors the live Logs for any exceptions which are reported daily and resolved via the Powerhouse prioritisation dashboard, and
- a comparison between Bikkie and the registry occurs twice per month to ensure status information is correct.

I identified one scenario where the validations processes are not picking up NSP changes. As detailed in **section 11.4**, I found 1,543 ICPs recorded on the GR090 reports as missing from both the aggregate submissions and the registry for the same submissions, indicating that they may have been reported with different aggregation factors to what was expected based on the registry information. I checked the 15 ICPs missing from the most submissions and found that they had been reported with a different NSP to what was expected on the registry. This was due to the NSP changing between the time the customer started signing up and completing their application. The validation checks are missing these changes. I recommend that ELKI review their validation processes. This is also expected to be picked up via the GR090 checks and I recommend this process is reviewed in **section 11.4**.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Registry validation | Review validation processes to ensure that all discrepancies are identified and actioned. | This issue was identified within 24 hours and the corrected data was resubmitted with the next revision. ELKI acknowledges that we should have notified the RM and resubmitted sooner.<br><br>We have immediately put into place a process to sync all ICP records within Bikkie to the Registry in the first 3 business days of the month to ensure all NSP data is correct (and all other Registry data recorded in Bikkie).<br><br>Further to this, we will implement further automated syncing of Bikkie and Registry data on key events. | Identified |

The analysis of the list file and AC020 report returned the following findings.

| Issue | 2023 Qty | 2022 Qty | 2021 Qty | 2020 Qty | Comments |
|---|---|---|---|---|---|
| ICP is at "ready" or "inactive - new connection in progress" status but is ICP is connected | 2 | - | 3 | - | See **section 3.5.** |
| Active date variance with Initial Electrical Connection Date | - | - | - | - | ELKI does not typically complete new connections. |
| Incorrect "active" date | 6 | - | - | - | See **section 3.8** |
| Active with no MEP and unmetered flag = N | - | - | - | - | Compliant. |
| Incorrect submission flag | - | 12 | - | - | Compliant. |
| Active with ANZSIC blank, "T999" not stated or "T994" don't know | - | - | 2 | - | Compliant. |
| Active with an incorrect ANZSIC code | 24 | | | | See **section 3.6**. |
| Category 9 but "active" with MEP and UML "N" | 1 | 4 | - | - | See **section 2.9**. |
| ICPs with distributor unmetered load populated but retail unmetered load is blank | - | - | - | - | Compliant, unmetered load is not supplied. |
| ICPs with unmetered load flag Y but load is recorded as zero | - | - | - | - | Compliant, unmetered load is not supplied. |
| ICPs with incorrect shared unmetered load | - | - | - | - | Compliant, unmetered load is not supplied. |
| ICPs with distributed Generation indicated but I flow metering | 29 | 28 | 19 | 2 | See section **6.1** |

**Volume data accuracy**

As detailed in **section 2.9**, ICP 0424577526LC98B was "active" with metering category 9 and no unmetered load recorded. The metering was removed on 27 October 2022 and the meter was moved inside but was not certified or providing data until 2 March 2023. Bikkie has estimated the volume for this period using the average daily consumption of 9 kWh per day from the CS file received on 22 November 2019, rather than using data from the removed meter which would have been an estimated 13 kWh per day. This will have resulted in an estimated under submission of 956 kWh.

ICP 0000193181TR57D was last read on 17 August 2022 and was disconnected on 18 August 2022 but the status was incorrectly recorded as "active" until the date of decommissioning 14 September 2023. The estimation process described would have expected Bikkie to calculate the estimation from the recent consumption history, but as with ICP 0424577526LC98B, it used the average daily read value from the CS file of 15 kWh to estimate this volume. This resulted in an estimated over submission of 420 kWh. The incorrect status is recorded as non-compliance in **section 3.8**, and the incorrect status and volume estimated is shown as non-compliance below and in **section 12.7**.

ELKI supplies 614 "active" ICPs with HHR settled Arc meters. There is an issue with ARC Innovations meters when used for HHR settlement. The on-site setup is that a meter pulses into a data storage device, which counts the pulses and "stores" them every 200 pulses which equals 0.1 kWh. There is only one decimal place, so the smallest increment of consumption is 0.1. Unfortunately for ELKI, this means the HHR data derived from ARC meters is not considered to be accurate in accordance with Clause 15.2. The total kWh per month will be accurate but if volumes are not recorded and reported against the correct trading period, ELKI may not be charged at the wholesale rate that applied during the trading period when the electricity was consumed. This is recorded as non-compliance below and **section 12.7**.

As detailed in **section 6.1**, 12 ICPs are confirmed to have distributed generation installed but generation has not been submitted or gifted.

Volume accuracy issues are identified in the validation processes described in detail in **section 9.6**. I checked a sample of HHR corrections as described in the table below:

| | |
|---|---|
| Defective meters | Low and zero consumption is monitored daily using the Meter Management report which includes any ICPs which have negative or consecutive zero consumption. Defective meters may also be identified through meter condition and event information reported by MEPs or customers.<br><br>When a stopped meter is detected, it is replaced. Volumes for the stopped period are expected to be calculated using the most recent consumption prior to the meter stopping, but as detailed below I recommend that this process is reviewed as it isn't doing this as expected in some scenarios.<br><br>I checked seven examples of stopped or faulty meters and confirmed that corrections were appropriately processed and flowed through to reconciliation. |
| Bridged meters | Bridged, stopped and faulty meters are identified by using the Meter Management report which includes any ICPs which have negative or consecutive zero consumption. Consumption during bridged, stopped, or faulty periods is captured by:<br><br>• if register reads are not available, the consumption is expected to be estimated based on consumption history for the ICP,<br>• if there is no read history available, then the average daily kWh figure from the CS file is used,<br>• if there is no profile history, the residual profile shape is used,<br>• if register reads are available, the intervals are estimated so that the total kWh matches the difference between register reads, and the profile for the intervals is the same as the same day of the previous week; however, if a meter has been bridged and the MEP provides the missing actual zero value data for the bridged period this overwrites the estimated value resulting in no volume being submitted for the bridged period (three examples are detailed below where this has occurred).<br><br>Each of the estimate methods takes into account HoP (Hour of Power), which is an hour of free power which each ELKI customer gets every day.<br><br>I checked six examples of bridged meters and found:<br><br>• that the estimated volumes were calculated as expected for three ICPs, and<br>• three ICPs (0833999239LCFD1, 0001452806UN056 and 0605335004LC76C) had estimations applied but these have subsequently been replaced with zero values provided by the MEP during the bridged period which is recorded as non-compliance below. |

| | |
|---|---|
| Consumption while inactive | ELKI monitors a flight path report that identifies any inactive vacant consumption. These are checked and sent for investigation with the MEP if the consumption is valid. I examined a sample of seven ICPs and found:<br>• six had switched from the account end date so the volume recorded was during the gaining trader's period of supply and not ELKI's; they had been recorded in the flight path report up to the date the CS file was sent, and<br>• ICP 0485040972LCBE2 had 40 kWh recorded from the date of disconnection 17 February 2023 to the switch event date of 25 February 2023; this hadn't been submitted as it was for less than seven days and ELKI will only correct if for more than seven days (this was corrected during the audit but is recorded as non-compliance below and in **sections 3.9** and **12.7**). |
| Incorrect multipliers | Multipliers are validated against the registry monthly, and no incorrect multipliers were identified during the audit period. The multiplier is recorded in Bikkie and this is validated via the LIS file checker. Where multiplier corrections or changes occur, the readings will be recalculated so that the correct value shows from the date of the change.<br>I checked a sample of five ICPs with a multiplier present and confirmed the volumes are calculated correctly. |

The five examples found (two where the estimation was calculated from the CS average daily kWh and the recent consumption was ignored and the three bridged meters where estimated data was incorrectly replaced zero consumption) are recorded as non-compliance below and in **sections 6.1, 8.2** and **12.7**. I recommend that the estimation processes are reviewed to ensure they are calculated from the most recent available data and invalid actual data is not replacing estimated data.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Estimation processes | Estimation processes are reviewed to ensure they are calculated from the most recent available data and invalid actual data is not replacing estimated data. | EKLI acknowledges that the estimation routines for bridged meters require updating. Our estimation routines have been designed to re-estimate missing data on receiving an actual read but this is not appropriate for bridged meters. Please note that we view bridged meters as an outlier case as these are relatively rare and hence the overall impact on reconciled volumes is low. | Identified |

I re-checked data accuracy exceptions identified during the previous audit, and found they were cleared except for:

| Previous audit issue | Current audit findings | Report section |
|---|---|---|
| ICPs with building construction ANZSIC codes | There are 277 ICPs traded by ELKI with the code E30, E301*, and E302* assigned indicating building construction, a decrease from 312 at the time of the last audit. Because ELKI does not complete new connections it is expected that these ANZSIC codes are unlikely to be valid for ELKI customers. I checked a sample of 20 ICPs with these codes and found…. | 3.6 |

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 2.1<br>With: Clause 11.2 & 15.2<br><br>From: 01-Apr-22<br>To: 28-Apr-23 | Some inaccurate information is recorded on the registry.<br>Validations not picking NSP changes being made at time of sign up resulting in submission being allocated to the incorrect NSP for the 15 ICPs sampled of a potential 1,543 ICPs.<br>12 ICPs are confirmed to have distributed generation installed but generation has not been submitted or gifted.<br>Estimation process not calculating best estimates where a meter is removed, as the data is being estimated using the CS file average daily figure rather than being estimated from the recent consumption history, as identified in the two examples provided.<br>Over submission of 420kWh for ICP 0000193181TR57D due to the incorrect "active" status and volume estimated for the disconnected period.<br>Volumes for three bridged meters not submitted due to estimations being replaced with zero values.<br>Inactive consumption not submitted for one of a sample of seven ICPs checked due to ELKI only correcting volumes if for seven days or more.<br>Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: Twice previously<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as weak, and I have recommended some processes be reviewed as they are not mitigating risk effectively.<br>The audit risk rating has the potential to be medium due to the number of issues identified particularly in relation to the unknown number of incorrect estimations being applied but I have rated it as low based on the number of examples found. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |

| Preventative actions taken to ensure no further issues will occur | Completion date | |
|---|---|---|
| We will perform a manual sync on all new ICPs to ELKI within the first 3 business days of the month between Bikkie and the registry. This will be done before the EIEP and RM reports are created and uploaded.<br><br>A proposed automated fix will require a sync on ICPs when a CS file is received and triggers the ICP to be activated within Bikkie.<br><br>Regular monthly checking of LIS Files is being done and will continue. Switching improvements to automate Disco/Reco to update the Registry is to be scoped and deploy to reduce the human error associated.<br>Team training refresh on the requirement for accurate and timely Registry updates.<br>The initial plan is to have the internal data team create and run an automatic program to assist with semi-automation while automation is being built.<br><br>Putting in place a process to identify ICPs with solar but not on an I/E meter for resale to be looked at monthly and advising the Reconciliation Manager.<br><br>Bridged Meter specific routines when they come back online to use estimated data instead of actual '0' data. | Immediately put in place new ICP Sync and solar gifting process.<br><br>Bridge Meter routine to be created within 1 month.<br><br>Automation development 9 - 12 months. | |

## 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 a number of sections in this report and compliance is confirmed.

### 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

HHR data is provided by MEPs via SFTP.

### Audit commentary

Once metering data is downloaded from a MEPs server it is uploaded to Bikkie. Any transfer of data is fully automated.

We traced a sample of data for two ICPs per MEP from the source files to Bikkie to confirm the data transmission process. All volumes matched.

### 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. I reviewed audit trails for a small sample of events. Large samples were not necessary because audit trail fields are expected to be the same for every transaction of the same type.

### Audit commentary

Compliance with this clause has been demonstrated by the MEPs.

Bikkie has a built-in functionality to record a complete audit trail for all data gathering, validation, and processing data. Audit trails include the activity identifier, date and time, and an operator identifier.

### 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 the current terms and conditions.

### Audit commentary

The current terms and conditions include 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 the current terms and conditions, and discussed processes for where access cannot be obtained.

### Audit commentary

The current terms and conditions include consent to access for authorised parties for the duration of the contract.

ELKI will give at least 10 Business Days' notice if they or their representative or the network company need to construct, upgrade, repair, or maintain any equipment. A notice will be provided in writing, text message or email.

Access has not been able to be provided for five ICPs. ELKI demonstrated that best endeavours had been met to arrange access in all cases and they are continuing to attempt to get access arranged.

### Audit outcome

Compliant

## 2.7. Physical location of metering installations (Clause 10.35(1)&(2))

### Code reference

*Clause 10.35(1)&(2)*

### Code related audit information

*A reconciliation participant responsible for ensuring there is a category 1 metering installation or category 2 metering installation must ensure that the metering installation is located as physically close to a point of connection as practical in the circumstances.*

*A reconciliation participant responsible for ensuring there is a category 3 or higher metering installation must:*

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

### Audit observation

The registry list file was examined to confirm compliance. Loss compensation processes were discussed.

### Audit commentary

All ICPs supplied have metering category 1 or 2. There are no ICPs where loss compensation is 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 the current terms and conditions.

**Audit commentary**

The current terms and conditions include assignment by the Electricity Authority in the event of retailer default.

**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 one or more metering installations for the point of connection.*

**Audit observation**

The new connection process was discussed, and the registry list, event detail report and audit compliance report were reviewed to determine compliance.

**Audit commentary**

No new connections were identified on the registry list, event detail report or audit compliance report. ELKI does not usually complete new connections, and the new connection process is not documented. However, ICP 0000053824WEF61 was claimed as a new connection in progress and an MEP nomination was sent and accepted. Bikkie indicated metering was present, but no customer was registered. HHR readings were being provided but had stopped. ELKI has investigated this and confirmed this was an ICP deconsolidation. The ICP has since been made active from 20/01/2023 and the existing meter moved from the original ICP 0004104257WED65 to the new ICP for that date. Submission is correct. This is recorded as non-compliance in **sections 2.1, 3.2, 3.5** and **3.9**.

The audit compliance report recorded that ICP 0424577526LC98B was "active" with metering category 9 and no unmetered load recorded. The metering was removed on 27 October 2022. The meter was moved inside but was not certified until 2 March 2023. No data was received for this site from 27 October 2022 to 2 March 2023. Bikkie has estimated the volume for this period using the average daily consumption from the CS file received on 22 November 2019, rather than from the consumption history from the removed meter as expected. This is discussed further in **section 2.1** and **12.7**. Compliance is confirmed for this clause as ELKI had an arrangement with an MEP to provide metering.

**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 discussed, and the registry list, event detail report and audit compliance report were reviewed to determine compliance.

### Audit commentary

No new temporary or permanent connections were made during the audit period.

### 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 trader is recorded in the registry as the trader responsible for the ICP or has an arrangement with the customer and initiates a switch within 2 business days of electrical connection,*
    - *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 electrical connection.*

### Audit observation

The connection processes were examined in detail to evaluate the strength of controls, and the registry lists and audit compliance report were examined to confirm process compliance.

### Audit commentary

**Active ICPs without metering**

The audit compliance report recorded that ICP 0424577526LC98B was "active" with metering category 9 and no unmetered load recorded. The metering was removed on 27 October 2022. The meter was moved inside but was not certified until 2 March 2023. No data was received for this site from 27 October 2022 to 2 March 2023. Bikkie has estimated the volume for this period using the average daily consumption from the CS file received on 22 November 2019, rather than use the removed meter. This is discussed further in **section 2.1** and **12.7**. Compliance is confirmed in this section as the ICP has been continually connected.

**Meter certification on connection**

ELKI does not undertake new connections and no new connections were completed during the audit period.

ELKI has a flight path report that identifies active ICPs with expired meters. These are reviewed by the team in India and any issues identified result in a notification to the MEP.

Four ICPs were reconnected with expired meter certification, no notification was provided to the MEP. These all occurred prior to the report being put in place and there have been no further instances since 12/04/2022.

Seven ICPs had bridged meters during the audit period. Six of these have been un-bridged and the meters were replaced and certified, or existing meters were recertified on un-bridging. ICP 0000545160NR7C0 was bridged on 18 January 2023 and is in the process of being un-bridged but has been delayed due to delays in the field in Northland following the adverse weather events.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 2.11<br>With: Clause 10.33A<br><br><br>From: 22-Jan-22<br>To: 12-Apr-22 | Four reconnections were not certified within five business days.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Twice<br>Controls: Strong<br>Breach risk rating: 1 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The audit risk rating is assessed to be strong as reporting is in place to identify any ICPs reconnected with uncertified meters and notify the MEP.<br>The audit risk rating is assessed to be low as there have been only four instances of uncertified meters reconnected during the audit period. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Refresh team training on timely monitoring of the 'Expired Meters' report | Immediately | |

## 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. The registry lists were reviewed to identify any new networks that ELKI began trading on during the audit period.

### Audit commentary

Previous audits confirmed that there are arrangements in place with all the existing networks ELKI trades on. ELKI did not begin trading on any new networks during the audit period.

As part of the online customer sign up process, the customer's ICP information is checked against the registry to confirm its attributes, and then cross checked against approved values. If an ICP does not meet the requirements to be supplied by ELKI (including being connected to a network where an arrangement is in place) the application is declined and the customer receives a message that their ICP cannot be supplied.

### 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 MEP before an ICP can be created or switched in was checked. The registry lists were reviewed to identify any new MEPs that EKLKI began using during the audit period.

### Audit commentary

Previous audits confirmed that there are arrangements in place with all the existing MEPs ELKI uses. ELKI did not begin using any new networks during the audit period.

As part of the online customer sign up process, the customer's ICP information is checked against the registry to confirm its attributes, and then cross checked against approved values. If an ICP does not meet the requirements to be supplied by ELKI (including the metering being provided by an MEP where an arrangement is in place) the application is declined and the customer receives a message that their ICP cannot be supplied.

### Audit outcome

Compliant

## 2.14. Connecting ICPs then withdrawing switch (Clause 10.33A(5))

### Code reference

*Clause 10.33B*

### Code related audit information

*If a trader connects an ICP it is in the process of switching and the switch does not proceed or is withdrawn the trader must:*

- *restore the disconnection, including removing any bypass and disconnecting using the same method the losing trader used,*
- *reimburse the losing trader for any direct costs incurred.*

### Audit observation

The process for reconnecting ICPs in the process of switching in was examined. Traders are only able to update ICP status for event dates where they are responsible for the ICP on the registry.

### Audit commentary

ELKI's process is that a switch must be in progress before arranging reconnection. If an ICP was reconnected as part of the switching process and the switch was later withdrawn, ELKI should restore the disconnection and reimburse the losing trader for any direct costs incurred, if requested.

Two ICPs were identified where this didn't occur:

- ICP 0000019217DE5C8 was reconnected by bridging the meter on 9 November 2022 but no NT was sent to the registry and the application was subsequently withdrawn; the ICP was not disconnected and is still at a "disconnected" status on the registry with the existing trader so potentially this is consuming and not being billed - I have notified the existing trader to investigate.
- ICP 0000670816TUCFC was reconnected by ELKI on 16 November 2021 but no NT was sent to the registry and the application subsequently failed the credit check; the ICP was not disconnected and subsequently switched to another trader on 15 December 2021 which will have resulted in the trader at the time (FOGY) purchasing the consumption for the period from 16 November 2021 to 15 December 2021.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 2.14<br>With: Clause 10.33A(5)<br><br>From: 16-Nov-21<br>To: 01-May-23 | Two ICPs reconnected by ELKI, and no withdrawal or NT ever sent to the registry and not disconnected.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The audit risk rating is assessed to be weak as the expected process wasn't followed and no reporting in place to identify such instances.<br>The audit risk rating has the potential to be medium but is assessed to be low as there is no visibility of how many ICPs are affected. This will have resulted in other traders purchasing volume attributable to ELKI or the volume is missing from submission. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Refresh training for switching team on reconnecting ICPs with emphasis that an NT is required to be sent. | Immediately | |

## 2.15. Electrical disconnection of ICPs (Clause 10.33B)

### Code reference

*Clause 10.33B*

### Code related audit information

*Unless the trader is recorded in the registry or is meeting its obligation under 10.33A(5) it must not disconnect or electrically disconnect the ICP or authorise the metering equipment provider to disconnect or electrically disconnect the ICP.*

### Audit observation

The disconnection process was examined. Traders are only able to update ICP status for event dates where they are responsible for the ICP on the registry.

### Audit commentary

ELKI checks that they are listed as the current trader in the registry before initiating a disconnection.

### Audit outcome

Compliant

## 2.16. Removal or breakage of seals (Clause 48(1C), 48 (1D), 48 (1E), 48 (1F) of Schedule 10.7)

### Code reference

*Clause 48(1C), 48 (1D), 48 (1E), 48 (1F) of Schedule 10.7*

### Code related audit information

*A trader can remove or break a seal without authorisation from the MEP to:*

- *reset a load control switch, bridge or un-bridge a load control switch – if the load control switch does not control a tome block meter channel,*
- *electrically connect load or generation, of the load or generation has been disconnected at the meter,*
- *electrically disconnect load or generation, if the trader has exhausted all other appropriate methods of electrical disconnection,*
- *bridge the meter.*

*A trader that removes or breaks a seal in this way must:*

- *ensure personal are qualified to remove the seal and perform the permitted work and they replace the seal in accordance with the Code,*
- *replace the seal with its own seal,*
- *have a process for tracing the new seal to the personnel,*
- *update the registry (if the profile code has changed)*
- *notify the metering equipment provider.*

### Audit observation

Policies and processes for removal and breakage of seals were reviewed. A sample of disconnections, reconnections, additions of export metering, and bridged meters were checked for compliance.

### Audit commentary

All activities which could result in seals being removed or broken are completed the MEP, or subcontractors to the MEP.

Disconnections and reconnections are normally completed remotely, and any metering changes or addition of distributed generation is completed by the MEP. Service orders are monitored using Bikkie which includes the service order number, date raised, party raised to, description, and target date and time.

A sample of disconnections, reconnections, bridged meters, and additions of distributed generation were checked. I found that the MEP had completed the work where the seals were confirmed to be removed or broken.

### Audit outcome

Compliant

## 2.17. Meter bridging (Clause 10.33C and 2A of Schedule 15.2)

### Code reference

*Clause 10.33C and 2A of Schedule 15.2*

### Code related audit information

*A trader, or a distributor or MEP which has been authorised by the trader, may only electrically connect an ICP in a way that bypasses a meter that is in place ("bridging") if, despite best endeavours:*

- *the MEP is unable to remotely electrically connect the ICP,*
- *the MEP cannot repair a fault with the meter due to safety concerns,*
- *the consumer will likely be without electricity for a period which would cause significant disadvantage to the consumer.*

*If the trader bridges a meter, the trader must:*

- *determine the quantity of electricity conveyed through the ICP for the period of time the meter was bridged,*
- *submit that estimated quantity of electricity to the reconciliation manager,*
- *within one business day of being advised that the meter is bridged, notify the MEP that they are required to reinstate the meter so that all electricity flows through a certified metering installation.*

*The trader must determine meter readings as follows:*

- *by substituting data from an installed check meter or data storage device*
- *if a check meter or data storage device is not installed, by using half hour data from another period where the trader considers the pattern of consumption is materially similar to the period during which the meter was bridged,*
- *if half hour data is not available, a non-half hour estimated reading that the trader considers is the best estimate during the bridging period must be used.*

### Audit observation

The process for bridging meters was discussed.

### Audit commentary

Bridging occurred because the customer urgently required electricity and a remote reconnection was unable to be completed. In all cases the MEP was notified.

Consumption during bridged, stopped, or faulty periods is calculated using the following methodologies:

- if register reads are not available, the consumption is expected to be estimated based on consumption history for the ICP; however, as detailed in **section 2.9**, for ICP 0424577526LC98B, Bikkie ignored the recent consumption history from the removed meter and used the CS file average kWh value resulting in estimated under submission which is recorded as non-compliance in **sections 2.1,6.1,8.2** and **12.7**,
- if there is no read history available, then the average daily kWh figure from the CS file is used,
- if there is no profile history, the residual profile shape is used, and
- if register reads are available, the intervals are estimated so that the total kWh matches the difference between register reads, and the profile for the intervals is the same as the same day of the previous week; however, if a meter has been bridged and the MEP provides the missing actual zero value data for the bridged period then this overwrites the estimated value resulting in no volume being submitted for the bridged period (three examples are detailed below of this occurring).

Each of estimation methods takes into account the HoP (Hour of Power), which is an hour of free power which each ELKI customer gets every day.

I recommend in **section 2.1**, that the estimation processes are reviewed to ensure they are calculated from the most recent available data and invalid actual data is not replacing estimated data to ensure submission data is a complete and accurate as possible.

ELKI provided a list of seven ICPs which were indicated to be bridged during the audit period. Six of these have been un-bridged and the meters were replaced and certified, or existing meters were recertified on un-bridging. ICP 0000545160NR7C0 was bridged on 18 January 2023 and is in the process of being un-bridged but this has not been able to be completed due to delays in the field in Northland following the recent adverse weather events. Volumes for this ICP are being estimated using consumption based on recent consumption.

I checked the six bridged corrections that have been unbridged and found:

- three had been calculated as expected, and
- three (ICPs 0833999239LCFD1, 0001452806UN056 and 0605335004LC76C) had estimations applied but these have subsequently been replaced with zero values from the catch-up data provided by the MEP for the bridged period.

### Audit outcome

Non-compliant

<table>
<tr><th>Non-compliance</th><th colspan="3">Description</th></tr>
<tr><td>Audit Ref: 2.17<br>With: Clause 2A of Schedule 15.2<br><br><br><br>From: 01-Apr-22<br>To: 28-Apr-23</td><td colspan="3">Volumes for three bridged meters not submitted due to estimations being replaced with zero values.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3</td></tr>
<tr><th>Audit risk rating</th><th colspan="3">Rationale for audit risk rating</th></tr>
<tr><td>Low</td><td colspan="3">The controls are recorded as weak as the estimation process is not estimating data as expected in some scenarios and some estimations are being replaced with invalid zero data.<br>The number of bridged meters is small so the impact on settlement and participants is expected to be small; therefore, the audit risk rating is low.</td></tr>
<tr><th colspan="2">Actions taken to resolve the issue</th><th>Completion date</th><th>Remedial action status</th></tr>
<tr><td colspan="2"></td><td></td><td rowspan="3">Identified</td></tr>
<tr><th colspan="2">Preventative actions taken to ensure no further issues will occur</th><th>Completion date</th></tr>
<tr><td colspan="2">Bridged Meter specific routine to be created when they come back online to use estimated data instead of actual ‘0’ data.</td><td>1 month</td></tr>
</table>

## 2.18. Use of ICP identifiers on invoices (Clause 11.30)

### Code reference

*Clause 11.30*

### Code related audit information

*Each trader must ensure the relevant ICP identifier is printed on every invoice or document relating to the sale of electricity.*

### Audit observation

The process to ensure that the ICP identifier is printed on every invoice or document relating to the sale of electricity was discussed, and invoices for each brand were reviewed.

### Audit commentary

Invoices and communications relating to the sale of electricity include the ICP number.

### Audit outcome

Compliant

## 2.19. Provision of information on dispute resolution scheme (Clause 11.30A)

### Code reference

*Clause 11.30A*

### Code related audit information

*A retailer must provide clear and prominent information about Utilities Disputes:*

- *on their website*
- *when responding to queries from consumers*
- *in directed outbound communications to consumers about electricity services and bills.*

*If there are a series of related communications between the retailer and consumer, the retailer needs to provide this information in at least one communication in that series.*

### Audit observation

The process to ensure that information on Utilities Disputes is provided to customers was discussed. I checked whether clear and prominent information on Utilities Disputes is displayed on the website, invoices, in response to customer queries, and in terms and conditions.

### Audit commentary

Clear and prominent information on Utilities Disputes is provided:

- on invoices,
- on ELKI's website,
- in ELKI's terms and conditions,
- in the footer of outbound emails,
- in the footer of outbound letters,
- as part of live chat when the conversation is emailed to the customer post the conversation,
- as part of ELKI's Facebook there are links to their website and this information is provided as part of customer interactions, and
- as part of the ELKI outsourced fault service, utilities dispute information is expected to be provided as required.

### Audit outcome

Compliant

## 2.20. Provision of information on electricity plan comparison site (Clause 11.30B)

### Code reference

*Clause 11.30B*

### Code related audit information

*A retailer that trades at an ICP recorded on the registry must provide clear and prominent information about Powerswitch:*

- *on their website*
- *in outbound communications to residential consumers about price and service changes*
- *to residential consumers on an annual basis*
- *in directed outbound communications about the consumer's bill.*

*If there are a series of related communications between the retailer and consumer, the retailer needs to provide this information in at least one communication in that series.*

### Audit observation

The process to ensure that information on Powerswitch is provided to customers with residential ANZSIC codes was discussed. I checked whether clear and prominent information on Powerswitch is displayed on the website, in response to customer queries, and in the terms and conditions.

### Audit commentary

Clear and prominent information on Powerswitch is provided:

- on invoices,
- on ELKI's website,
- in ELKI's terms and conditions,
- in the footer of outbound emails, and
- in the footer of outbound letters.

Provision of information on Powerswitch on letters ensures that customers are advised about Powerswitch regularly.

### Audit outcome

Compliant

# 3. MAINTAINING REGISTRY INFORMATION

## 3.1. Obtaining ICP identifiers (Clause 11.3)

### Code reference

*Clause 11.3*

### Code related audit information

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

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

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

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

### Audit observation

The new connection process was discussed, and the registry list, event detail report and audit compliance report were reviewed to determine compliance.

### Audit commentary

No new connections were identified on the registry list, event detail report or audit compliance report. ELKI does not usually complete new connections, and the new connection process is not documented. However, ICP 0000053824WEF61 has been claimed as a new connection in progress by ELKI. This is discussed in **section 2.9.**

### Audit outcome

Compliant

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

### Code reference

*Clause 11.7(2)*

### Code related audit information

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

### Audit observation

The new connection process was discussed, and the registry list, event detail report and audit compliance report were reviewed to determine compliance.

### Audit commentary

No new connections were identified on the registry list, event detail report or audit compliance report. ELKI does not usually complete new connections, and the new connection process is not documented. However, ICP 0000053824WEF61 was claimed as a new connection in progress and an MEP nomination was sent and accepted. Bikkie indicated metering was present, but no customer was registered. HHR readings were being provided but had stopped. ELKI has investigated this and confirmed this was an ICP deconsolidation. The ICP has since been made active from 20/01/2023 and the existing meter moved from the original ICP 0004104257WED65 to the new ICP for that date. Submission is correct. This is recorded as non-compliance with below and **sections 2.1, 3.5** and **3.9**.

ELKI's processes ensure that information is populated as required by this clause and late updates are discussed in **section 3.3** below for changes made to ICPs.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.2<br>With: Clause 11.7(2)<br><br>From: 06-Dec-22<br>To: 28-Apr-23 | New connection electrically connected but not recorded on the registry.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Moderate<br>Breach risk rating: 2 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as moderate overall but are none for new connections as ELKI doesn't undertake them and has no documented process to mitigate risk.<br>The audit risk rating is assessed to be low as only one newly connected ICP is not recorded as "active" where submission is not occurring. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Electric Kiwi do not normally take on 'New Connections', this was part of the de-merging of an ICP. This will remain a manual process if a similar situation arises in the future, and Operations team training will be refreshed on the process required. | Immediately | |

## 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 processes to manage status changes, MEP nominations and trader updates were discussed.

The registry lists and audit compliance reports were examined and a sample of late status updates, trader updates, and MEP nominations were checked as described in the audit commentary.

### Audit commentary

**Status updates**

Bikkie does not write these events to the registry, so all status updates are made manually in the registry.

The timeliness of status updates to "active" (for reconnections) is set out on the table below.

| Update type | Review period end | ICPs notified greater than 5 days | Percentage on time | Average Business Days between Status Event and Status Input Dates |
|---|---|---|---|---|
| Active | 2022 | 262 | 93.57% | 1.95 |
| | **Jan 2023** | **273** | **85.33%** | **3.26** |

136 of the late updates were within ten business days of the event date, 253 were within 30 business days of the event date, and all were within 66 business days after the event date. I checked the ten latest updates and found all related to backdated switches.

The timeliness of status updates to "inactive" is set out on the table below.

| Update type | Review period end | ICPs notified greater than 5 days | Percentage on time | Average Business Days between Status Event and Status Input Dates |
|---|---|---|---|---|
| Inactive | 2022 | 101 | 98.82% | 0.70 |
| | **Jan 2023** | **108** | **95.71%** | **3.39** |

46 of the late updates were within ten business days of the event date, 82 were within 30 business days of the event date, 96 were within 100 business days of the event date. The latest update was 280 business days after the event date. I checked the five latest (or all late) updates (13 in total) to each status reason code and found:

- eight were due to corrections to the disconnection reason or the event date,
- four updates were missed in the first instance due to human error and were eventually aligned with Bikkie; it was unclear as to why these took so long to be corrected, and
- one was delayed due to a backdated switch.

**Trader updates**

Bikkie does not write these events to the registry, so all trader updates are made manually in the registry.

The timeliness of trader updates is set out on the table below.

| Update type | Review period end | ICPs notified greater than 5 days | Percentage on time | Average Business Days between Status Event and Status Input Dates |
|---|---|---|---|---|
| Trader | 2022 | 226 | 93.95% | 1.75 |
| | **Jan 2023** | **180** | **86.9%** | **3.94** |

84 of the late updates were within ten business days of the event date, 145 were within 30 business days of the event date, 167 were within 100 business days of the event date. The latest update was 243 business days after the event date. All updates which had the fields changed listed on the report were MEP nominations. I checked the 20 latest updates and found:

- 11 were due to the submission type and flag incorrectly being changed as part of an MEP nomination due to human error; these were identified by TEG Associates during the last site audit and were corrected but this created backdated trader events,
- eight were due to ARC meter replacements where the original MEP nomination had to be reversed and a new nomination sent for the actual date of replacement, and
- An MEP nomination nominating IHUB from MTRX was sent in error for ICP 1000011093BPE59.

**ANZSIC code updates**

The code requires the trader to update the ANZSIC code within 20 business days of trading at the ICP commencing. Eight ANZSIC codes were populated more than 20 business days after trading commenced. Four were delayed because of backdated switches in, and the other four were due to corrections once the customer had replied to the email sent by ELKI requesting confirmation of the property use.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.3<br>With: Clause 10 Schedule 11.1<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | 273 late updates to “active” status for reconnections.<br>108 late updates to “inactive” status.<br>180 late trader updates.<br>Eight late ANZSIC code updates.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Multiple times<br>Controls: Moderate<br>Breach risk rating: 2 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as moderate as the process is manual and open to human error.<br>The audit risk rating is recorded as low as overall the level of timeliness is high. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Regular monthly checking of LIS Files is being done and will continue.<br>Team training refresh on the requirement for accurate and timely Registry updates.<br>Switching improvements to automate Disco/Reco to update the Registry is to be scoped and deployed to reduce the human error associated.<br>The initial plan is to have the internal data team create and run an automatic program to assist with semi-automation while automation is being built. | Team training refresh to be conducted immediately.<br>9 - 12 months for automation update | |

## 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)):*
    - *arrange for a final interrogation to take place prior to or upon meter removal (clause 11.18(3)(a)); and*
    - *advise the MEP responsible for the metering installation of the decommissioning (clause 11.18(3)(b)).*

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

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

### Audit observation

The new connection, MEP nomination and decommissioning processes were discussed, and the registry list and audit compliance reports were examined to confirm process compliance.

A sample of MEP nomination rejections and decommissioned ICPs were examined.

### Audit commentary

**Retailers' responsibility to nominate and record the MEP in the registry**

No new connections were identified on the registry list, event detail report or audit compliance report. ELKI does not usually complete new connections, and the new connection process is not documented. However, ICP 0000053824WEF61 was claimed as a new connection in progress and an MEP nomination was sent and accepted. Bikkie indicated metering was present, but no customer was registered. HHR readings were being provided but had stopped. ELKI has investigated this and confirmed this was an ICP deconsolidation. The ICP has since been made active from 20/01/2023 and the existing meter moved from the original ICP 0004104257WED65 to the new ICP for that date. Submission is correct. This is discussed in **section 2.9.**

The audit compliance report recorded that ICP 0424577526LC98B was "active" with metering category 9 and no unmetered load recorded. The metering was removed on 27 October 2022. The meter was moved inside but was not certified until 2 March 2023. No data was received for this site from 27 October 2022 to 2 March 2023. Bikkie has estimated the volume for this period using the average daily consumption of 9 kWh per day from the CS file received on 22 November 2019, rather than using data from the removed meter which would have been an estimated 13 kWh per day. This will have resulted in an estimated under submission of 956 kWh. This is recorded as non-compliance in **sections 2.1,8.2** and **12.7**. Compliance is confirmed for this clause as an MEP was recorded in the registry.

ELKI nominates the MEP based on the notification of meter changes received by the relevant MEP. Arc Innovation meters are continuing to be replaced by NGCM smart meters. ELKI is always asked to nominate a new MEP after the meter is replaced.

Notification files from the registry aren't used so any rejected MEP nominations wouldn't be identified. However, all open service requests are monitored, and any rejections would be identified by looking at the registry. All of the 1,463 MEP nominations made during the audit period were accepted by the MEP.

**ICP decommissioning**

ICPs that are vacant and either "active" or "inactive" are still maintained in Bikkie. If there is no customer registered, then Bikkie holds these in an "admin account" so that any "active" vacant consumption is submitted to the market.

As part of the decommissioning process, a field services job is raised for the MEP to remove their meter which serves as notification of decommissioning. ELKI attempts to obtain a meter removal or disconnection reading to ensure that all consumption up to the point of decommissioning is captured and reported.

I checked a diverse sample of ten ICPs decommissioned during the audit period by various networks. The MEP was notified in all instances. Seven had final readings obtained. Two had the volumes estimated from the last actual read gained to the date of disconnection. ICP 0000193181TR57D was last read on 17 August 2022 and was disconnected on 18 August 2022 but the status was incorrectly recorded as "active" until the date of decommissioning on 14 September 2022. This resulted in an estimated over submission of 420 kWh. This is recorded as non-compliance in **sections 2.1, 3.8** and **12.7**.

### 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 five 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 discussed, and the registry list, event detail report and audit compliance report were reviewed to determine compliance.

### Audit commentary

No new connections were identified on the registry list, event detail report or audit compliance report. ELKI does not usually complete new connections, and the new connection process is not documented.

The audit compliance report recorded two ICPs with "ready" status where the distributor had populated an initial electrical connection date:

- ICP 0000053824WEF61 has been claimed as a new connection in progress and an MEP nomination was sent and accepted. Bikkie indicated metering was present, but no customer was registered. HHR readings were being provided but had stopped. ELKI has investigated this and confirmed this was an ICP deconsolidation. The ICP has since been made active from 20/01/2023 and the existing meter moved from the original ICP 0004104257WED65 to the new ICP for that date. Submission is correct. This is recorded as non-compliance with below and **sections 2.1,3.2** and **3.9**.
- ICP 0000012855EA82A is on the Electricity Ashburton network. This ICP has been created as part of Electricity Ashburton's ICP deconsolidation project. ELKI has been nominated as the proposed trader as they are the trader for the original ICP 0000011327EAC1C. This is a paperwork only new connection as the meter associated with the new ICP is currently being reconciled against the original ICP and will be moved to the new ICP once the new connection is complete. ELKI intend to work with the network and the customer to get this ICP made active.

The process to manage ANZSIC codes is described in **section 3.6** as ELKI doesn't carry out new connections all ICPs had an ANZSIC code populated at the time of switching in. The accuracy of these codes is detailed in **section 3.6**.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.5<br>With: Clause 9 Schedule 11.1<br><br>From: 06-Dec-22<br>To: 28-Apr-23 | ICP 0000053824WEF61 electrically connected but not "active" on the registry.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Twice previously<br>Controls: Moderate<br>Breach risk rating: 2 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as moderate overall but are none for new connections as ELKI doesn't undertake them and has no documented process to mitigate risk.<br>The audit risk rating is assessed to be low as only one newly connected ICP is not recorded as "active" where submission is not occurring. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Cleared |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Regular monthly checking of LIS Files is being done and will continue.<br>Team training refresh on the requirement for accurate and timely Registry updates.<br>Switching improvements to automate Disco/Reco to update the Registry is to be scoped and deploy to reduce the human error associated.<br>The initial plan is to have the internal data team create and run an automatic program to assist with semi-automation while automation is being built. | Team training refresh to be conducted immediately.<br>9 - 12 months for automation update | |

## 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 ANZISC codes was examined. The registry lists and AC020 report were reviewed, and ANZSIC codes were checked for a sample of ICPs to determine compliance.

### Audit commentary

97.69% of "active" ELKI ICPs have residential ANZSIC codes assigned. ANZSIC codes are checked when ICPs switch in with a specific emphasis on non-residential codes. Emails are sent to customers if there is doubt about the accuracy of the ANZSIC code. Customers do not always respond to these emails.

There are 277 ICPs traded by ELKI with the code E30, E301*, and E302* assigned indicating building construction, a decrease from 312 at the time of the last audit. Because ELKI does not complete new connections it is expected that these ANZSIC codes are unlikely to be valid for ELKI customers. I checked a sample of 20 ICPs with these codes and found:

- 19 were residential customers and hadn't been updated, and
- ICP 1000593131PCA81 was confirmed as a business but this update was missed.

I recommend that ELKI review all ICPs with these codes to confirm if they are residential and put a process in place to manage these going forward.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| ANZSIC codes | Review all ICPs with building construction ANZSIC codes to confirm if these are residential and put a process in place to manage these going forward. | The 277 building construction ICPs have been updated. Controls are in place as we do ask the customer via email but we do not follow up with the customer multiple times to confirm]. Going forward we will manually review ANSZIC codes on a monthly basis | Identified |

The validity of ANZSIC codes was checked using the audit compliance report and this identified five ICPs had meter category 2 and residential ANZSIC codes. All were confirmed to be residential.

I checked assigned ANZSIC codes against registry property information and Google Maps images for a sample of 50 ICPs assigned to the ten frequently applied ANZSIC codes. Where the codes could not be validated further information on the customer industry was provided by ELKI. All but four of the codes were correctly assigned. All had been sent emails to request they confirm the ANZSIC code was correct. All have since been corrected to be residential.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.6<br>With: 9(1)(k) of Schedule 11.1<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | All 20 sampled of a possible 277 ICPs with a construction ANZSIC code were confirmed to be incorrect.<br>Four of a sample of 50 ICPs found to have the incorrect ANZSIC code.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Once previously<br>Controls: Moderate<br>Breach risk rating: 2 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.<br>The audit risk rating is assessed to be low as this has no impact on reconciliation. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| All switches that do not have an ANZSIC code of 000000 - Residential generate a ticket notification within Bikkie, the team will reach out to the customer and update accordingly when a reply is received.<br>A Flight Path report is currently in place for 'Active ICP with incorrect ANZSIC codes', this report is populated with an ICP when an ICP returns a code such as T994, we will arrange to have all of the 'Construction Codes' added to this list so that they can be investigated more thoroughly. | 1 month | |

## 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 processes to manage unmetered load was examined. The audit compliance report and registry were examined to identify any ICPs where:

- unmetered load is identified by the distributor, but none is recorded by ELKI, and
- ELKI's daily unmetered kWh does not match with the distributor's unmetered load kWh within ± 0.1 kWh per day, where the distributor is using the Authority's recommended format for their unmetered load details.

### Audit commentary

ELKI runs a daily Meter Management report via Flight Path. This is used to identify ICPs with unmetered load. ELKI do not trade on ICPs with unmetered load so if this is identified the customer is requested to switch away. All ICPs supplied by ELKI are HHR settled and do not have unmetered load connected. No ICPs have unmetered load recorded by the distributor or trader.

The audit compliance report recorded that ICP 0424577526LC98B was "active" with metering category 9 and no unmetered load recorded. The metering was removed on 27 October 2022. The meter was moved inside but was not certified until 2 March 2023. No data was received for this site from 27 October 2022 to 2 March 2023. Bikkie has estimated the volume for this period using the average daily consumption from the CS file received on 22 November 2019, rather than from the consumption history from the removed meter as expected. This is discussed further in **section 2.1**.

### 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 connection process was examined, and compliance was determined using the audit compliance report, event detail report and registry lists with history.

ELKI does not complete new connections. The timeliness of data for reconnections is assessed in **section 3.3**, and a sample of ten updates were checked for accuracy.

### Audit commentary

ELKI changes the status of an ICP to "active" once confirmation has been received from the MEP. All status updates to Bikkie and the registry are manually entered. ELKI monitors all reconnection jobs, and the contractor is followed up if the job is not closed out as expected.

Before being given an "active" status the trader is required to ensure that the ICP has only one customer, embedded generator, or direct purchaser; and that the electricity consumed is quantified by a metering installation(s) or other Authority approved method of calculation. Bikkie only allows one customer per ICP.

The audit compliance report recorded two ICPs with "ready" status where the distributor had populated an initial electrical connection date:

- ICP 0000053824WEF61 was claimed as a new connection in progress and an MEP nomination was sent and accepted. Bikkie indicated metering was present, but no customer was registered. HHR readings were being provided but had stopped. ELKI has investigated this and confirmed this was an ICP deconsolidation. The ICP has since been made active from 20/01/2023 and the existing meter moved from the original ICP 0004104257WED65 to the new ICP for that date. Submission is correct. This is recorded as non-compliance in **sections 2.1, 3.2, 3.5** and **3.9**.
- ICP 0000012855EA82A is on the Electricity Ashburton network. This ICP has been created as part of the ICP deconsolidation project which requires that each point of connection has its own ICP. ELKI has been nominated as the proposed trader as they hold the original ICP 0000011327EAC1C. This is a paperwork only new connection as the meter associated with the new ICP is being reconciled against the original. ELKI intend to work with the network and the customer to get this ICP made active.

A sample of ten reconnection updates were checked and confirmed to be correct.

As detailed in **section 3.4**, ICP 0000193181TR57D was last read on 17 August 2022 and was disconnected on 18 August 2022 but the status was incorrectly recorded as "active" until the date of decommissioning on 14 September 2022. This resulted in an estimated over submission of 420 kWh. This is recorded as non-compliance below and in **sections 2.1** and **12.7**.

As detailed in **section 4.8**, 2,439 of the 3,450 ANs with the PD (premises electrically disconnected) code were correct. 982 showed that the latest status record on the registry list was "active". I checked a sample of 25 and found five were never disconnected, but the update to the registry was missed due to a resource constraint. This is recorded as non-compliance below.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.8<br>With: 18 of Schedule 11.1<br><br>From: 18-Aug-22<br>To: 14-Sep-22 | ICP 0000193181TR57D incorrectly recorded as “active” when it was “disconnected”.<br>Five of a possible 962 ICPs “disconnected” but recorded as “active” on the registry.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Moderate<br>Breach risk rating: 2 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as moderate with room for improvement as these updates are manual and therefore more open to human error.<br>The audit risk rating is assessed to be low as the number of errors found vs the sample checked indicate that the accuracy is high and therefore the impact on settlement and participants is low. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Regular monthly checking of LIS Files is being done and will continue.<br>Team training refresh on the requirement for accurate and timely Registry updates.<br>Switching improvements to automate Disco/Reco to update the Registry are to be scoped and deployed to reduce the human error associated.<br>The initial plan is to have the internal data team create and run an automatic program to assist with semi-automation while automation is being built. | Team training refresh to be conducted immediately<br>9 - 12 months for automation update | |

## 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 disconnection process was examined using the audit compliance report, event detail report and registry lists with history. The timeliness of data for disconnections is assessed in **section 3.3**, and a sample of updates were checked for accuracy.

### Audit commentary

**Management of inactive status**

ELKI changes the status of an ICP to "inactive" once confirmation has been received from the MEP. All status updates to Bikkie and the registry are manually entered. ELKI monitors all disconnection jobs, and the contractor is followed up if the job is not closed out as expected.

Review of a sample of at least five (or all) "inactive" status updates per status reason code confirmed that the correct statuses and dates were applied for the records checked except for ICP 0005987121RN8E3. This was recorded incorrectly as "disconnected at the pole fuse" instead of at the meter due to human error. This is recorded as non-compliance below.

12 ICPs are at 1,7 "electrically disconnected remotely by AMI meter" status with the current AMI flag set to no. All 12 had their AMI flag set to yes and/or HHR metering at the time of disconnection.

As detailed in **section 3.4**, ICP 0000193181TR57D was last read on 17 August 2022 and was disconnected on 18 August 2022 but the status was incorrectly recorded as "active" until the date of decommissioning on 14 September 2022. This resulted in an estimated over submission of 420 kWh. This is recorded as non-compliance in **sections 2.1, 3.8** and **12.7**.

**Inactive new connection in progress status**

ELKI does not complete new connections. The audit compliance report recorded two ICPs with "ready" status where the distributor had populated an initial electrical connection date:

- ICP 0000053824WEF61 was claimed as a new connection in progress and an MEP nomination was sent and accepted. Bikkie indicated metering was present, but no customer was registered. HHR readings were being provided but had stopped. ELKI has investigated this and confirmed this was an ICP deconsolidation. The ICP has since been made active from 20/01/2023 and the existing meter moved from the original ICP 0004104257WED65 to the new ICP for that date. Submission is correct. This is recorded as non-compliance below and in **sections 2.1,3.2** and **3.5**.
- ICP 0000012855EA82A is on the Electricity Ashburton network. This ICP has been created as part of the ICP deconsolidation project which requires that each point of connection has its own ICP. ELKI has been nominated as the proposed trader as they hold the original ICP 0000011327EAC1C. This is a paperwork only new connection as the meter associated with the new ICP is being reconciled against the original. ELKI intend to work with the network and the customer to get this ICP made active.

**ICPs with inactive consumption**

ELKI monitors a flight path report that identifies any inactive vacant consumption. These are checked and sent for investigation with the MEP if the consumption is valid. I examined a sample of seven and found:

- six had switched from the account end date so the volume recorded was during the gaining trader's period of supply and not ELKI's; they had been recorded in the flight path report up to the date the CS file was sent, and
- ICP 0485040972LCBE2 had 40 kWh recorded from the date of disconnection 17 February 2023 to the switch event date of 25 February 2023; this hadn't been submitted as it was for less than seven days and ELKI will only correct for seven days or longer (this was corrected during the audit but is recorded as non-compliance below and in **sections 2.1** and **12.7**).

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.9<br>With: 19 of Schedule 11.1<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | ICP 0005987121RN8E3 incorrectly recorded as “disconnected at the pole fuse” instead of the meter due to human error.<br>ICP 0485040972LCBE2 status not corrected to “active” to account for consumption recorded between disconnection and switch out date.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Moderate<br>Breach risk rating: 2 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as moderate as updates to registry are manual and therefore more open to human error.<br>The audit risk rating is assessed to be moderate as the impact on reconciliation and other participants is expected to be minor. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Regular monthly checking of LIS Files is being done and will continue.<br>Team training refresh on the requirement for accurate and timely Registry updates.<br>Switching improvements to automate Disco/Reco to update the Registry are to be scoped and deployed to reduce the human error associated.<br>The initial plan is to have the internal data team create and run an automatic program to assist with semi-automation while automation is being built. | Team training refresh to be conducted immediately<br>9 - 12 months for automation update | |

## 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.

I analysed a registry list of ICPs with "new" or "ready" status and ELKI as the proposed trader, and reviewed processes to monitor new connections.

### Audit commentary

ELKI does not typically complete new connections. No ICPs are at "new" status, and two ICPs are currently at "ready" status:

| ICP | ICP creation date | Comment |
|---|---|---|
| 0000053824WEF61 | 29 September 2000 | This ICP was claimed as a new connection in progress. Bikkie indicated metering was present, but no customer was registered. HHR readings were being provided but had stopped. ELKI has investigated this and confirmed this was an ICP deconsolidation. The ICP has since been made active from 20/01/2023 and the existing meter moved from the original ICP 0004104257WED65 to the new ICP for that date. Submission is correct. |
| 0000054561HB7AD | 25 January 2023 | This ICP has been created as part of the ICP deconsolidation project which requires that each point of connection has its own ICP. ELKI has been nominated as the proposed trader as they hold the original ICP 0000011327EAC1C. This is a paperwork only new connection as the meter associated with the new ICP is being reconciled against the original. ELKI intend to work with the network and the customer to get this ICP made active. |

This is a distributor responsibility, so compliance is recorded for ELKI.

### 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 ELKI deem all conditions to be met. A sample of NTs were checked to confirm that these were notified to the registry within two business days, and that the correct switch type was selected.

**Audit commentary**

Customers sign into ELKI via the website. The website does a preliminary assessment of customers from the point of view of the metering installed at their premises. Only installations for which consumption is measured by remotely read smart meters are accepted.

ELKI's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files are sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind.

The applicant is asked to indicate if they are moving into a new property or switching from another trader as part of the sign up.

I checked the metering category for the 7,093 transfer switch NT ICPs where this information was available on the registry list with history or meter event details report, and found none had metering categories of three or above. I checked the seven most backdated transfer switch NTs and found the switch type was correct and the NT was sent within two business days of pre-conditions being cleared.

**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 and registry information were reviewed to:

- identify AN files issued by ELKI during the audit period,
- assess compliance with the requirement to meet the setting of event dates requirement, and
- a diverse sample ANs were checked to determine whether the codes had been correctly applied.

The switch breach history report was examined for the audit period.

### Audit commentary

**AN content**

The exchange of data with the registry is performed via SFTP server. Switching files are downloaded automatically to Bikkie.

The date the NT is sent is set as the event date for transfer switches. 11,114 ANs were issued for transfer switches. 99.9% had proposed event dates within five business days of NT receipt, and all had proposed event dates within ten business days of NT receipt.

Response codes are predetermined by a hierarchy. As recorded in the last audit, the AA code should only be used if no other code applies but the AA code is being applied to ICPs with advanced metering. This was expected to be corrected post the last audit but has not been as noted from the sample checked below.

I compared the response codes applied to registry's status, unmetered load, and metering information for all 11,082 transfer switch AN files where a match was found on the registry list:

- all 10 ANs with the PD (premises electrically disconnected) code were correct,
- 73 of the 11,104 ANs with the AA (acknowledge and accept) were correct but 10,999 had the AMI flag set to yes and/or had "inactive" status and were expected to have a different code applied; I checked a sample of 20 and found:
    - 19 should have been sent with the code AD not AA, and
    - ICP 0000019431TR7C3 was electrically disconnected remotely so should have been sent as PD.

I recommend that the AN code hierarchy is reviewed to align with the correct codes as detailed in the memo provided to the industry dated 5 August 2016 by the Electricity Authority. The incorrect AN codes being sent are recorded as non-compliance below.

**AN timeliness**

ELKI uses the daily switch breach report to monitor timeliness.

The switch breach history report recorded one AN breach for a TR switch. The automated AN file did not send as expected. This has happened only twice (one transfer switch and one move switch). An exception ticket is now created to flag if there are further any instances of this occurring.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 4.2<br>With: 3 and 4 of Schedule 11.1<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | 19 of 20 ICPs sampled of a possible 10,999 TR ANs sent with the switch response code "AA" where an advanced meter is indicated.<br>One TR AN sent with AA instead of PD.<br>One AN breach.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Twice<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as weak as the change to the AN codes expected to be made post the last audit has not progressed and the incorrect AA code has continued to be sent for 10,999 switches with advanced metering present.<br>The audit risk rating is assessed to be low as the registry details indicate to a gaining trader whether an ICP has an advanced meter or not. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Change to the automated AN response code within Bikkie where we currently send 'AA' to 'AD'. | 1 - 2 months | |

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

#### Code reference

*Clause 5 Schedule 11.3*

#### Code related audit information

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

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

#### Audit observation

The event detail report and registry information were reviewed to identify CS files issued by ELKI during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of records. The content checked included:

- correct identification of meter readings and correct date of last meter reading,
- accuracy of meter readings, and
- accuracy of average daily consumption.

CS files with average daily kWh that was negative, zero, or over 200 kWh were identified. A sample of these CS files were checked to determine whether the average daily consumption was correct.

The process to manage the sending of the CS file within five business days of the event date was examined, and the switch breach history report for the audit period was reviewed to identify late CS files.

#### Audit commentary

**CS timeliness**

ELKI uses the daily switch breach report to monitor timeliness.

The switch breach history report did not record any CS breaches for transfer switches.

**CS content**

CS files are automatically generated out of Bikkie and sent to the registry.

CS average daily consumption is expected to be based on the volume between the last two actual readings but as ELKI receives daily reads they calculate the average daily consumption from the last billing period. This will produce a more accurate figure but is non-compliant with the code.

I checked the average daily kWh for CS files on the event detail report and found 21 CS files with zero recorded as the average daily consumption and four with daily kWh consumption over 200 kWh. The sample checked sent with zero consumption were confirmed to be correct. The four sent with over 200 kWh were not accurate. This was because if ELKI has billed the customer on estimates and then catch-up data is provided, rather than reverse and rebill the customer, ELKI pushes the missing volume into the customer's next bill causing the average daily consumption to be overstated. This is recorded as non-compliance below.

I compared switch event read types to the last actual read date for the 10,957 transfer CS files issued, and found:

- no CS files with last actual read dates the same as or after the switch event date,
- no CS files with missing CSMETERINSTALL, CSMETERCOMP or CSMETERCHANNEL rows,
- nine CS files with a last actual read date one day before the switch event date and an estimated switch event reading; a sample of five files were checked and found that all had the incorrect last read date of the day before the event date and not the last actual read date, which is recorded as non-compliance below, and
- 70 CS files with a last actual read date more than one day before the switch event date and an actual switch event reading; a sample of five files were checked and found:
    - all were incorrectly labelled as actuals, and
    - two of these were incorrectly sent with a read value of zero as both ICPs (0000165518CK633 and 0000052489WE589) had no actual reads received during the period of supply and were being estimated, but Bikkie ignored the last estimated read and sent a zero read labelled as an actual (no RRs were received for these ICPs, and the new trader is reconciling these as NHH so they will have over submitted volumes based incorrectly on the zero start read), so I recommend below that ELKI review the automation for this scenario to ensure that estimated reads are sent.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Losing trader must provide final information. | Review automation to ensure that ICPs with no actual reads during the period of supply are sent with the last estimated read and not zero. | Acknowledge that shouldn't have been labelled as actual in this case. We have sent and received RRs agreed with the other retailer | Investigating |

I checked the content of a random sample of a further five transfer CS files and found the content was correct.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 4.3<br>With: 5 of Schedule 11.3<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | Calculation of average kWh per day does not comply with Registry Functional Specification v22.38.<br>Incorrect average daily consumption sent for four ICPs with an incorrect average daily kWh value greater than 200kWh.<br>All five sampled of a possible 70 CS files sent with the read incorrectly labelled as actual.<br>Incorrect final reads of zero sent for ICPs that have had no actual reads during the period of supply.<br>All five sampled of a possible nine CS files sent with the incorrect last read date.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: Three times previously<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as weak as the CS file generation is not working correctly for all scenarios.<br>The audit risk rating is potentially medium, but I have rated this as low based on the number identified as incorrect from the sample checked. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Update the automated logic when sending CS notifications to look at the read from the event date and unless it is an Actual read from that date, update the code to 'E'. | 3 - 6 months | |

### 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.

The event detail report and registry information were analysed to identify all read change requests and acknowledgements during the audit period. A sample of RR and AC files issued for transfer switches were checked to confirm that the content was correct, and Bikkie reflected the outcome of the RR process.

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 history report for the audit period was reviewed.

### Audit commentary

**RR**

The RR process is automated in Bikkie. It is initiated if the AMI data is different to the switch read. If an AMI midnight read is not available, then it is derived by deducting the sum of the trading periods for that day to determine the expected start read. This produces a ticket which is reviewed before being sent to the registry.

The returned AC files are processed manually.

704 RR files were issued for transfer switches. 129 (18.3%) were rejected and 575 (81.7%) were accepted. I checked a sample of five accepted and five rejected RRs. In nine cases there was a genuine reason for ELKI's RR, and the files were supported by two validated actual reads and the reads recorded reflected the outcome of the RR process. The RR sent for ICP 0010000512TE90E was sent in error. The reads matched and the losing trader was asked to reject it.

The switch breach history report recorded one RR breach. This was due to a delay as this was in a chain of read amendments and this delayed the RR in being sent.

**AC**

The AC files are processed manually with each being reviewed on a case-by-case basis.

62 AC files were issued for transfer switches. 17 (27.4%) were rejected and 45 (72.6%) were accepted. I checked a sample of five accepted and five rejected RRs. I found the reads in Bikkie reflected the outcome of the RR process, and there were valid reasons for RR rejections.

The switch breach history report did not record any AC breaches.

**Incoming CS files with estimated switch event readings**

Where an actual start read can be determined and is different to the CS provided read an RR is sent. All start reads are treated as actuals.

Review of five transfer CS files with estimated reads where no RR was issued, confirmed that the correct readings were recorded, and all consumption was captured for submission.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 4.4<br>With: 6(1) and 6A Schedule 11.3<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | One RR issued in error.<br>One RR breach.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Strong<br>Breach risk rating: 1 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as strong as the system identifies where an RR is needed to be sent and then these are managed on a case-by-case basis by an operator.<br>The audit risk rating is assessed to be low as only one late RR was sent during the audit period. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will continue to ensure our current strong processes and controls are executed in an accurate and timely manner.<br>For the late RR, this was somewhat unavoidable due to the delay in receiving the correct switch read but in future we will ensure the other party is better aware of the strict timeline we are working to.<br>For the RR issued in error, this was human error but we will ask that training is refreshed. | Immediately | |

### 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 process for the management of read requests was examined. The event detail report was analysed to identify read change requests issued and received under Clause 6(2) and (3) Schedule 11.3 and determine compliance.

### Audit commentary

ELKI is a HHR only trader, and other traders cannot issue read change requests to ELKI under Clause 6(2) and (3) Schedule 11.3.

### 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

I confirmed with ELKI whether any disputes have needed to be resolved in accordance with this clause.

### Audit commentary

ELKI confirmed 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 ELKI deem all conditions to be met. A sample of NTs were checked to confirm that these were notified to the registry within two business days, and that the correct switch type was selected.

**Audit commentary**

Customers sign into ELKI via the website. The website does a preliminary assessment of customers from the point of view of the metering installed at their premises. Only installations for which consumption is measured by remotely read smart meters are accepted.

ELKI's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files are sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind.

The applicant is asked to indicate if they are moving into a new property or switching from another trader as part of the sign up.

I checked the metering category for the 13,094 switch move NT ICPs where this information was available on the registry list with history or meter event details report, and found none had metering categories of three or above. I checked the ten most backdated switch move NTs and found the switch type was correct and the NT was sent within two business days of pre-conditions being cleared.

**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 five 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:*
  - *confirmation of the switch event date; and*
  - *a valid switch response code; and*
  - *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—*
  - *is not earlier than the gaining trader's proposed event date, and*
  - *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 and registry information were reviewed to:

- identify AN files issued by ELKI during the audit period,
- assess compliance with the requirement to meet the setting of event dates requirement, and
- a diverse sample ANs were checked to determine whether the codes had been correctly applied.

The switch breach history report was examined for the audit period.

### Audit commentary

**AN Content**

The exchange of data with the registry is performed via SFTP server. Switching files are downloaded automatically.

Response codes are predetermined by a hierarchy. As recorded in the last audit, the AA code should only be used if no other code applies but the AA code is being applied to ICPs with advanced metering. This was expected to be corrected post the last audit but has not been as noted from the sample checked below.

I compared the response codes applied to registry's status, unmetered load, and metering information for all 12,173 switch move AN files where a match was found on the registry list.

- 2,439 of the 3,450 ANs with the PD (premises electrically disconnected) code were correct but 982 showed that the latest status record on the registry list was "active". I checked a sample of 25 and found five were never updated to be "disconnected". These were confirmed to be "disconnected" but the update in the registry was missed due to a resource constraint. The incorrect status is recorded as non-compliance in **section 3.8**.
- 2,630 ANs had the OC (occupied premises) and I could not confirm whether the code was correctly applied from the registry list information. I checked a sample of five during the site audit and confirmed all were correct.
- 110 of the 8,797 ANs with the AA (acknowledge and accept) were correct but 8,642 had the AMI flag set to yes and/or had "inactive" status and were expected to have a different code applied. I checked a sample of 20:
    - 18 should have been sent with the code AD not AA, and
    - two were electrically disconnected for vacancy so should have been sent as PD.

**AN and CS timeliness**

The proposed event date from the NT is used or if a move out date has been provided by the customer this is used as the event date for move switches. 14,877 ANs were issued for switch moves.

ELKI uses the daily switch breach report to monitor timeliness.

The switch breach history report recorded the following switch move AN and CS breaches:

- four E2 breaches; all were completed for a date earlier than requested due to human error and training has been provided,
- six ET breaches:
    - three AN files were sent with a proposed date earlier than requested due to human error; training has been provided,
    - two AN files were sent with an event date later than ten business days as the customer had indicated a move out date more than ten days in advance of the NT receipt date; ELKI did not expect the system to send these but instead to flag an exception for these to be examined and they are investigating why they were released (a DF withdrawal was sent the day after the AN was sent in both instances),
    - ICP 0005865239RN908 had an AN sent with a proposed event date one day earlier than requested which was due to a one-off system error that has been fixed,
- one T2 breach where the automated AN file did not send as expected; this has happened only twice (one transfer switch and one move switch) and an exception ticket is now created to flag if there are further any instances of this occurring, and
- one WR breach which was completed on the day expected but outside of the registry open hours making it one day late.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 4.8<br>With: 10(1) of Schedule 11.1<br><br>From: 19-Apr-22<br>To: 19-Dec-22 | All 20 ICPs sampled of a possible 8,797 MI AN sent with the incorrect switch response code of "AA" where an advanced meter is indicated.<br>Four E2 breaches.<br>Six ET breaches.<br>One T2 breach.<br>One WR breach.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Twice previously<br>Controls: Weak<br>Breach risk rating:3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as weak as the change to the AN codes expected to be made post the last audit has not progressed and the incorrect AA code has continued to be sent for 8,797 switches with advanced metering present.<br>The audit risk rating is assessed to be low as the registry details indicate to a gaining trader whether an ICP has an advanced meter or not. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Change to the automated AN response code within Bikkie where we currently send 'AA' to 'AD'. | 1 - 2 Months | |

### 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

The event detail report and registry information was reviewed to identify switch move AN files issued by ELKI during the audit period, and assess compliance with the requirement to meet the setting of event dates requirement.

### Audit commentary

14,877 ANs were issued for switch moves.

12,080 ANs (82%) had the gaining trader's requested event date applied.

2,797 ANs had a different event date applied. 2,791 of these ANs had compliant proposed event dates. Two ANs had event dates more than ten business days after NT receipt, and four had event dates before the gaining trader's requested date and are recorded as non-compliant in **section 4.8**.

Switches were completed as required by this clause.

### 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 and registry information were reviewed to identify CS files issued by ELKI during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of records. The content checked included:

- correct identification of meter readings and correct date of last meter reading,
- accuracy of meter readings, and
- accuracy of average daily consumption.

CS files with average daily kWh that was negative, zero, or over 200 kWh were identified. A sample of these CS files were checked to determine whether the average daily consumption was correct.

### Audit commentary

CS files are automatically generated out of Bikkie and sent to the registry.

CS average daily consumption is expected to be based on the volume between the last two actual readings but as ELKI receives daily reads they calculate the average daily consumption from the last billing period. This will produce a more accurate figure but is non-compliant with the code.

I checked the average daily kWh for CS files on the event detail report and found 532 CS files with zero average daily consumption and one with consumption over 200 kWh. All five sampled with zero average daily consumption and the one with consumption over 200 kWh were confirmed to be correct.

I compared switch event read types to the last actual read date for the 14,588 switch move CS files issued, and found:

- no CS files with last actual read dates the same as or after the switch event date,
- no CS files with missing CSMETERINSTALL, CSMETERCOMP or CSMETERCHANNEL rows,
- three CS files with a last actual read date one day before the switch event date and an estimated switch event reading; all three were checked and found all had the incorrect last read date of the day before the event date and not the last actual read date, which is recorded as non-compliance below, and
- 323 CS files with a last actual read date more than one day before the switch event date and an actual switch event reading; a sample of five files were checked and found all were incorrectly labelled as actuals:
    - two of the sample had received an RR that was accepted and in both cases the reads were higher than the reads sent indicating that 4,304 kWh would have been pushed to the gaining trader if an RR was not sent (the code doesn't allow a gaining trader to send an RR to a HHR losing trader if an actual read is provided so this may be why only two of the five files sampled had an RR) and I recommend that ELKI review the automation to ensure that reads are correctly labelled.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Losing trader must provide final information. | Review automation to ensure that estimated reads sent are labelled correctly. | Acknowledge that shouldn't have been labelled as actual in this case. We have sent and received RRs agreed with the other retailer | Investigating |

I checked the content of a random sample of a further five switch move CS files and found the content was correct.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 4.10<br>With: 11 of Schedule 11.3<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | Calculation of average kWh per day does not comply with Registry Functional Specification v22.38.<br>All five sampled of a possible 323 CS files sent with the read incorrectly labelled as actual.<br>Three CS files sent with the incorrect last read date.<br>Potential impact: Medium<br>Actual impact: Medium<br>Audit history: Three times previously<br>Controls: Weak<br>Breach risk rating: 6 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Medium** | The controls are recorded as weak as the automation of CS files is not working correctly for all scenarios.<br>The audit risk rating is assessed to be medium as the code doesn't allow gaining traders to send a RR file if an actual read has been sent by a HHR trader. 323 estimated reads have been sent as actuals which for those being traded as NHH will have resulted in volume being pushed to the gaining trader as indicated by the two CS files that did receive an RR to correct these. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Update the automated logic when sending CS notifications to look at the read from the event date and unless it is an Actual read from that date, update the code to 'E'. | 3 - 6 Months | |

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

### Code reference

*Clause 12 Schedule 11.3*

### Code related audit information

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

- *if the switch meter reading established by the gaining trader differs by less than 200 kWh from that provided by the losing trader, both traders must use the switch event meter reading provided by the gaining trader (clause 12(2)(a)); or*
- *if the switch event meter reading provided by the losing trader differs by 200 kWh or more from a value established by the gaining trader, the gaining trader may dispute the switch meter reading. In this case, the gaining trader, within 4 calendar months of the 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 2 validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):*
- *advise the gaining trader if it does not accept the switch event meter reading and the losing trader and the gaining trader must resolve the dispute in accordance with the dispute 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 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 (clause 12(2B)).*

### Audit observation

The process for the management of read change requests was examined.

The event detail report and registry information were analysed to identify all read change requests and acknowledgements during the audit period. A sample of RR and AC files issued for transfer switches were checked to confirm that the content was correct and Bikkie reflected the outcome of the RR process.

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 history report for the audit period was reviewed.

### Audit commentary

**RR**

The RR process is automated in Bikkie. It is initiated if the actual AMI data is different to the switch read. If an AMI midnight read is not available, then it is derived by deducting the sum of the trading periods for that day to determine the expected start read. This produces a ticket which is reviewed before being sent to the registry.

The returned AC files are processed manually.

3,468 RR files were issued for switch moves. 129 (11.6%) were rejected and 3,066 (88.4%) were accepted. I checked a sample of five accepted and five rejected RRs. I found there was a genuine reason for the RRs, they were supported by at least two validated readings and the reads recorded in Bikkie reflected the outcome of the RR process.

The switch breach history report recorded two RR breaches. These were sent late due to the delay in getting AMI data.

**AC**

The AC files are processed manually with each being reviewed on a case-by-case basis.

62 AC files were issued for switch moves. 38 (61.3%) were rejected and 24 (38.7%) were accepted. I checked a sample of five accepted and five rejected RRs. I found the reads in Bikkie reflected the outcome of the RR process, and there were valid reasons for RR rejections.

The switch breach history report did not record any AC breaches.

**Incoming CS files with estimated switch event readings**

Where an actual start read is able to be determined and is different to the CS provided read an RR is sent. All start reads are treated as actuals.

Review of five switch move CS files with estimated reads where no RR was issued, confirmed that the correct readings were recorded, and all consumption was captured for submission.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 4.11<br>With: 6(1) and 6A Schedule 11.3<br><br>From: 12-Sep-22<br>To: 16-Sep-22 | Two RR breaches.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Strong<br>Breach risk rating: 1 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as strong as the system identifies where an RR is needed to be sent and then these are managed on a case-by-case basis by an operator.<br>The audit risk rating is assessed to be low as only two late RRs were sent during the audit period. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| See our response to Audit Ref 4.4 | | |

### 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 anon-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**

I reviewed the event detail report to determine whether any HH NTs were issued during the audit period.

**Audit commentary**

No ICPs with metering category 3 or higher are supplied, and no HH NTs were issued during the audit period.

**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**

I reviewed the event detail report to determine whether any HH ANs were issued during the audit period. The switch breach history report was reviewed.

**Audit commentary**

No ICPs with metering category 3 or higher are supplied, and no HH ANs were issued during the audit period. There were no breaches relating to HH switching recorded on the switch breach history report.

**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 three 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

I reviewed the event detail report to determine whether any HH ANs were issued during the audit period. The switch breach history report was reviewed.

### Audit commentary

No ICPs with metering category 3 or higher are supplied, and no HH CS files were issued during the audit period. There were no breaches relating to HH switching recorded on the switch breach history report.

### 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)):*
  - *the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and*
  - *the withdrawal advisory code published by the Authority (clause 18(c)(ii))*
- *within five 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 and registry lists with history were examined to:

- identify all switch withdrawal requests issued by ELKI, and check a sample for accuracy, and
- identify all switch withdrawal acknowledgements issued by ELKI and check a sample of rejections.

The switch breach history reports were checked for any late switch withdrawal requests or acknowledgements.

### Audit commentary

**NW**

Switch withdrawals are managed on a case-by-case basis by an operator. These are loaded manually to the registry.

3,289 NW files were issued. 383 (11.6%) were rejected and 2,906 (88.4%) were accepted. I checked a sample of three NWs per NW advisory code, including the 16 files which were rejected. The withdrawal code reasons were correct apart from the those coded with DF – date failure. This code is only to be used if a switch is requested more than ten days in advance but is being used if the incorrect date has been requested. Training to the team is being provided to address this. Three of the rejections were due to the withdrawal being sent in error.

The switch breach history report recorded:

- 20 NA breaches; ten of these were examined and found all were delayed due to the time it took to identify these needed to be withdrawn e.g., wrong premise requested in the first instance or was part of a double withdrawal, and
- 11 SR breaches; ten of these were examined and found they were either part of a double withdrawal or were a wrong premise request which required more than one NW to be sent as the first was rejected in error.

**AW**

Switch withdrawals are managed on a case-by-case basis by an operator. These are loaded manually to the registry.

2,099 AW files were issued. 309 (14.7%) were rejected and 1,790 (85.3%) were accepted. I checked a sample of three or all rejected NWs per NW advisory code and found they were validly rejected apart from ICPs 0000505553NRB6C and 0007179571RN7B5 which should have been accepted.

The switch breach history report did not record any AW breaches.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 4.15<br>With: Clauses 17 and 18 Schedule 11.3<br><br>From: 12-Apr-22<br>To: 16-Jan-23 | 20 NA breaches.<br>11 SR breaches.<br>Two switch withdrawals requests incorrectly rejected.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Three times previously<br>Controls: Strong<br>Breach risk rating: 1 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as strong as these are managed on a case-by-case basis by an operator.<br>The audit risk rating is assessed to be low as only two late RRs were sent during the audit period. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| All switching team members are to refresh on training materials for switch withdrawal processes. | Immediately | |

## 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

The reads applied in switching files were examined in **section 4.3** for standard switches, **section 4.10** for switch moves, and **sections 4.4** and **4.11** for read changes. The meter readings used in the switching process are predominantly validated meter readings or permanent estimates.

As detailed in **section 4.3**:

- all five files sampled of a possible 70 TR CS files the final read was labelled as an actual but was not from the midnight read from the day before the relevant event date, and
- two TR CS final actual reads were incorrectly sent with a read value of zero as both ICPs (0000165518CK633 and 0000052489WE589) had no actual reads received during the period of supply and were being estimated, but Bikkie ignored the last estimated read and sent a zero read (no RRs were received for these ICPs and the new trader is reconciling these as NHH so they will have over submitted volumes based incorrectly on the zero start read), so I recommend in **section 4.3**, that ELKI review the automation for this scenario to ensure that estimated reads are sent.

As detailed in **section 4.10:**

- all five files sampled of a possible 323 files the MI CS reads were incorrectly labelled as actual reads and two of the sample had received an RR that was accepted; in both cases the reads were higher than the reads sent indicating that 4,304 kWh would have been pushed to the gaining trader if an RR was not sent (the code doesn't allow a gaining trader to send an RR to a HHR losing trader if an actual read is provided so this may be why only two of the five files sampled had an RR) and I recommend in **section 4.10**, that ELKI review the automation to ensure that reads are correctly labelled.

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

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 4.16<br>With: Clauses 21 Schedule 11.3<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | All five sampled of a possible 70 TR CS files sent with the read incorrectly labelled as actual.<br>Incorrect final reads of zero sent for ICPs that have had no actual reads during period of supply.<br>All five sampled of a possible 323 MI CS files sent with the read incorrectly labelled as actual.<br>Potential impact: Medium<br>Actual impact: Medium<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 6 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Medium** | The controls are recorded as weak as the automation of CS files is not working correctly for all scenarios.<br>The audit risk rating is assessed to be medium as the code doesn't allow gaining traders to send a RR file if an actual read has been sent by a HHR trader. 323 estimated reads have been sent as actuals which will have resulted in volume being pushed to the gaining trader if trading as NHH as indicated by the two CS files that did receive an RR to correct these. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Update the automated logic when sending CS notifications to look at the read from the event date and unless it is an Actual read from that date, update the code to 'E'. | 3 - 6 Months | |

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

### 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 contacted 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 processes were discussed. The event detail report and registry lists with history were analysed to identify all withdrawn switches with a CX code applied within 180 days of switch completion where ELKI was the losing trader. All were checked to determine compliance.

### Audit commentary

When ELKI is notified that a customer wants to switch out, an email was being sent to a customer asking for confirmation that it is a valid request and asking for the reason for switching away via a survey. The code does not allow the losing trader to ask why the customer is switching away. This is also the subject of a breach (detailed below) which is still being investigated:

| Reference | Code section allegedly breached | Severity | Description | Status |
|---|---|---|---|---|
| 2206ELKI2 | Part 11 clause 11.15AA<br>Part 11 clause 11.15AB | Low | A complaint was received from another retailer asking for the reason that the customer wanted to switch away, which the Authority has previously advised is not permitted by the Code in their saves and win-backs practice note. | Closed- declined to pursue as ELKI has amended its processes. |

ELKI has stopped sending the survey to customers as of February 2023.

404 NWs were issued with a CX withdrawal reason code where ELKI was the losing trader. 40 (9.9%) were rejected and 364 (90.1%) were accepted. I checked a sample of ten rejected files and found that an agent asked in a chat conversation why the customer was switching away. This practice is non-compliant, and I recommend that ELKI provide training to that all customer facing agents.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Switch saving protection | Train agents to comply with switch protection requirements. Confirmation that a switch has been requested is allowed but not asking why they are switching away. | No action letter from EA and an exit survey is no longer sent. ELKIs view is that the purpose of the exit survey is not a contravention of the switch saves protection and will submit a Code amendment proposal to make this more clear. | Response in the non-compliance below indicates that the staff are being trained. |

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 4.17<br>With: Clauses 17 and 18 Schedule 11.3<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | Customers are being asked their reason for switching away.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as weak as agents are asking why customers are switching away.<br>The audit risk rating is assessed to be low as the number of customers with a switch withdrawal reason of CX is small. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Electric Kiwi has removed exit surveys and will refresh customer service team training on saves and win backs regulations to ensure they do not ask why they are leaving but just to confirm that the switch request received by ELKI has been issued correctly. | Immediately | |

## 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 processes to identify and monitor shared unmetered load were discussed. The registry lists and AC020 report were reviewed to identify any ICPs with unmetered load.

**Audit commentary**

ELKI does not trade on ICPs with shared unmetered load, and this is monitored as part of the validation processes discussed in **section 3.7**.

All ICPs supplied by ELKI are HHR settled and do not have unmetered load connected. No ICPs have unmetered load recorded by the distributor or trader.

**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 processes to identify and monitor shared unmetered load were discussed. The registry lists and AC020 report were reviewed to identify any ICPs with unmetered load.

### Audit commentary

All ICPs supplied by ELKI are HHR settled and do not have unmetered load connected. No ICPs have unmetered load recorded by the distributor or trader.

### 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:*
    - *the date the limit was calculated or estimated to have been exceeded,*
    - *the details of the corrective measures that the retailer proposes to take or is taking to reduce the unmetered load.*

### Audit observation

The processes to identify and monitor shared unmetered load were discussed. The registry lists and AC020 report were reviewed to identify any ICPs with unmetered load.

### Audit commentary

All ICPs supplied by ELKI are HHR settled and do not have unmetered load connected. No ICPs have unmetered load recorded by the distributor or trader.

### 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 processes to identify and monitor shared unmetered load were discussed. The registry lists and AC020 report were reviewed to identify any ICPs with unmetered load.

### Audit commentary

All ICPs supplied by ELKI are HHR settled and do not have unmetered load connected. No ICPs have unmetered load recorded by the distributor or trader.

### 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

Processes for metering, submission, and distributed generation were reviewed. The registry lists and AC020 reports were examined to determine compliance.

#### Audit commentary

**Metering installations installed**

ELKI only supplies ICPs with category 1 or 2 HHR or AMI metering, and no unmetered load is supplied. All "active" ICPs have an MEP recorded. Two ICPs with NHH meters were identified. These are being estimated and submitted with a HHR profile:

- ICP 0000961036TU69F did have an AMI meter but a BTS was installed on 14 January 2022 when a new house was being built; ELKI have made multiple attempts to contact the customer to arrange a smart meter installation, and
- ICP 1000028080BP5B8 AMI certification was cancelled on 25 June 2021; ELKI has made multiple attempts to contact the customer to arrange a new meter to be installed.

Half hour volumes being submitted against NHH certified ICPs is recorded as non-compliance in **section 12.9**.

The audit compliance report recorded that ICP 0424577526LC98B was "active" with metering category 9 and no unmetered load recorded. The metering was removed on 27 October 2022 and the meter was moved inside but was not certified or providing data until 2 March 2023. Bikkie has estimated the volume for this period using the average daily consumption of 9 kWh per day from the CS file received on 22 November 2019, rather than using data from the removed meter which would have been an estimated 13 kWh per day. This will have resulted in an estimated under submission of 956 kWh and is recorded as non-compliance below and in **sections 2.1, 8.2** and **12.7**.

Subtraction is not used to determine submission information.

**Generation**

Customers with distributed generation are accepted and the volumes are submitted accordingly. If solar is added whilst supplied by ELKI, they expect the installer to advise the customer to get in touch to get an import export meter installed. ELKI have not advised the RM of any ICPs which are gifting their generation to the market.

ELKI supplies 1,703 ICPs with distributed generation indicated by the distributor, which all have the HHR profile recorded. There are no discrepancies between the fuel type recorded and the profile, and no instances where ELKI has recorded generation, but the distributor has not.

1,674 ICPs (98.3%) have settled I flow meter registers installed. 1,442 of these ICPs were recorded in the September 2023 revision 3 HHR aggregates file. 1,361 had I flow volumes reported as expected, the other 81 ICPs did not have I flow volumes reported because distributed generation was not present in September 2023 and/or I flow metering had not been installed in September 2023.

29 ICPs (1.7%) have no I flow meter register or no settled I flow meter register. I checked the high-risk database and found that 12 of these have had distributed generation installed. These were checked and found:

- ELKI expects the customer to advise them of distributed generation being present and as a result six have had no action taken,
- ELKI is actively working with three to get import export metering installed, and
- for the remaining three ICPs contact was made with the customers in 2021 or earlier to get import export metering installed but nothing has been progressed since then.

I recommend that the management of distributed generation is reviewed to ensure that all sites with this present either have an import export meter installed or ELKI should advise the RM that the any generation is gifted to the market and maintain these ICPs on a gifting register. This is recorded as non-compliance below and in **sections 2.1, 12.2** and **12.7**.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Distributed generation | Review the management of distributed generation so that all sites with this present either have an import export meter installed or ELKI advise the RM that the any generation is gifted to the market. | Acknowledge new process required for gifting ICP | Identified |

**Bridged meters**

ELKI provided a list of seven ICPs which were indicated to be bridged during the audit period. Six of these have been un-bridged and the meters were replaced and certified, or existing meters were recertified on un-bridging. ICP 0000545160NR7C0 was bridged on 18 January 2023 and is in the process of being unbridged, but this has not been able to be completed due to delays in the field in Northland following the recent adverse weather events.

I checked the six bridged corrections that have been un-bridged and found:

- three had been calculated as expected, and
- three ICPs (0833999239LCFD1, 0001452806UN056 and 0605335004LC76C) had estimations applied but these have subsequently been replaced with zero values from the catch-up data provided by the MEP for the bridged period.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 6.1<br>With: Clause 10.13<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | Energy is not metered and quantified according to the code for bridged meters, some ICPs with distributed generation, one ICP with no meter for a period and 12 ICPs with distributed generation present.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Three times previously<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as weak as the processes in place to manage bridged meters and distributed generation are not robust.<br>The audit risk rating is assessed to be as low as the impact on settlement and participants is minor as the number of ICPs affected is small. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Putting in a process to identify ICPs with solar but not on an I/E meter for resale to be looked at monthly. | 1 month | |

## 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 to confirm whether ELKI responsible for any GIPs.

**Audit commentary**

Examination of the NSP table found that ELKI 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 AC020 reports and registry list were reviewed to confirm the profiles used.

**Audit commentary**

ELKI has only used the HHR profile which does not require certified control devices.

**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 leads 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.

### Audit commentary

Defective meters are typically identified through the meter reading validation process, or from information provided by the MEP via email, or the customer. Upon identifying a possible defective meter, a field services job is raised to investigate and resolve the defect and a consumption correction is processed if necessary.

Seven potentially defective meters and seven bridged meters were identified during the audit period. In all cases the MEP was notified of the fault by ELKI.

### 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 is 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

The data collection and clock synchronisation processes were examined. Data collection and clock synchronisation processes were reviewed as part of the MEP audits.

### Audit commentary

Information used to determine volume information is provided to ELKI by MEPs.

MEPs advise ELKI of clock synchronisation events. These are reviewed and action is taken as requested. I reviewed examples of these notifications and did not find any examples where action was required to be taken.

### Audit outcome

Compliant

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

### Code reference

*Clauses 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

ELKI supplies ICPs with category 1 or 2 HHR or AMI metering which are read remotely, and no unmetered load is supplied.

ELKI's processes to manage meter condition information were reviewed.

Processes for customer and photo reads were reviewed.

### Audit commentary

AMI data is provided by MEPs. Validated readings are derived from actual meter readings. All data received from the MEP is validated upon uploading to Bikkie. Review of a diverse sample of meter readings in **section 2.3** confirmed they are appropriately labelled, and validated readings are derived from meter readings.

Meter event reports are provided by MEPs and are reviewed. Service requests are issued as required. I reviewed ten meter events and the MEP was contacted in all instances and service requests were issued and actioned by the MEP as required.

**Customer and customer photo readings**

ELKI ask customers for a photo read if reads are not able to be gained. Customer readings are treated as estimates and labelled as ME - manual estimates.

I checked a sample of ten customer readings to confirm the process.

**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 timestamping.

The content of CS and RR files was examined in **sections 4.3**, **4.4**, **4.10** and **4.11** and found:

- all five files sampled of a possible 70 TR CS files the final read was labelled as an actual but was not from the midnight read from the day before the relevant event date,
- two TR CS final actual reads were incorrectly sent with a read value of zero as both ICPs (0000165518CK633 and 0000052489WE589) had no actual reads received during the period of supply and were being estimated, but Bikkie ignored the last estimated read and sent a zero read (no RRs were received for these ICPs so the new trader will have over submitted volumes based on the zero start read) so I recommend in **section 4.3**, that ELKI review the automation for this scenario to ensure that estimated reads are sent, and
- all five files sampled of a possible 323 files the MI CS reads were incorrectly labelled as actual reads and two of the sample had received an RR that was accepted; in both cases the reads were higher than the reads sent indicating that 4,304 kWh would have been pushed to the gaining trader if an RR was not sent (the code doesn't allow a gaining trader to send an RR to a HHR losing trader if an actual read is provided so this may be why only two of the five files sampled had an RR) and I recommend in **section 4.10**, that ELKI review the automation to ensure that reads are correctly labelled.

**Audit outcome**

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 6.7<br>With: Clause 6 Schedule 15.2<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | All five sampled of a possible 70 TR CS files sent with the read incorrectly labelled as actual.<br>Incorrect final reads of zero sent for ICPs that have had no actual reads during period of supply.<br>All five sampled of a possible 323 MI CS files sent with the read incorrectly labelled as actual.<br>Potential impact: Medium<br>Actual impact: Medium<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 6 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Medium** | The controls are recorded as weak as the automation of CS files is not working correctly for all scenarios.<br>The audit risk rating is assessed to be medium as the code doesn't allow gaining traders to send a RR file if an actual read has been sent by a HHR trader. 323 estimated reads have been sent as actuals which for those being traded as NHH will have resulted in volume being pushed to the gaining trader as indicated by the two CS files that did receive an RR to correct these. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Update the automated logic when sending CS notifications to look at the read from the event date and unless it is an Actual read from that date, update the code to 'E'. | 3 - 6 months | |

## 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

ELKI has not submitted any NHH volumes. The registry list was reviewed to identify all ICPs with NHH certified metering, and they were checked to determine whether actual readings were obtained during the period of supply.

### Audit commentary

Read attainment processes for NHH non-AMI ICPs were reviewed and no ICPs had their period of supply end with NHH certified metering.

### 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

ELKI has not submitted any NHH volumes. The registry list was reviewed to identify all ICPs with NHH certified metering, and they were checked to determine whether actual readings were obtained during the period of supply.

### Audit commentary

Review of the registry list with history confirmed that no ICPs were settled as NHH. All ICPs have HHR metering or the AMI flag set to yes, apart from:

| ICP | MEP | Metering Category | Meter Type HHR | Advanced Metering Installation |
|---|---|---|---|---|
| 0000961036TU69F | NGCM | 1 | N | N |
| 1000028080BP5B8 | BOPE | 1 | N | N |

Both were gained with HHR certified meters, but the MEP has subsequently changed these to be NHH certified. These were both settled using estimated HHR volumes. ELKI has made multiple attempts using at least two forms of communication to arrange for a meter change for these sites, therefore I have recorded compliance with this clause.

### 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 four 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

ELKI has not submitted any NHH volumes. The registry list was reviewed to identify all ICPs with NHH certified metering, and they were checked to determine whether actual readings were obtained during the period of supply.

### Audit commentary

Review of the registry list with history confirmed that no ICPs were settled as NHH. All ICPs have HHR metering or the AMI flag set to yes, apart from:

| ICP | MEP | Metering Category | Meter Type HHR | Advanced Metering Installation |
|---|---|---|---|---|
| 0000961036TU69F | NGCM | 1 | N | N |
| 1000028080BP5B8 | BOPE | 1 | N | N |

Both were gained with HHR certified meters, but the MEP has subsequently changed these to be NHH certified. These were both settled using estimated HHR volumes. ELKI has made multiple attempts using at least two forms of communication to arrange for a meter change for these sites.

No reporting has been provided to the Electricity Authority, but this is required for any NHH certified ICPs. This is recorded as non-compliance.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 6.10<br>With: Clause 9(3) of Schedule 15.2<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | No reporting of meter reading achievement provided to the Electricity Authority.<br>Potential impact: Low<br>Actual impact: None<br>Audit history: None<br>Controls: None<br>Breach risk rating: 5 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as none as ELKI does not carry out any NHH meter reading and therefore has no process to provide reporting information to the Authority.<br>The audit risk rating is assessed to be low as this is a technical non-compliance and has no material impact to the market. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| In the event that a NHH meter is required to be served by Electric Kiwi due to an AMI meter being replaced with a NHH meter or the AMI meter expiring then a manual process will be documented and initiated should an ICP need to be reclassified as NHH. | 1 month | |

## 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

ELKI has not submitted any NHH volumes. The registry list was reviewed to identify all ICPs with NHH certified metering, and they were checked to determine whether actual readings were obtained during the period of supply.

### Audit commentary

Review of the registry list with history confirmed that no ICPs were settled as NHH. All ICPs have HHR metering or the AMI flag set to yes, apart from:

| ICP | MEP | Metering Category | Meter Type HHR | Advanced Metering Installation |
|---|---|---|---|---|
| 0000961036TU69F | NGCM | 1 | N | N |
| 1000028080BP5B8 | BOPE | 1 | N | N |

Both were gained with HHR certified meters, but the MEP has subsequently changed these to be NHH certified. These were both settled using estimated HHR volumes. No NHH reading is undertaken.

### Audit outcome

Not applicable

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

### Code reference

*Clause 11(1) Schedule 15.2*

### Code related audit information

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

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

### Audit observation

HHR data is provided by MEPs. Compliance was assessed as part of their MEP audits.

### Audit commentary

MEPs are responsible for HHR data collection, and compliance is recorded in their audit reports.

### 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

HHR data is provided by MEPs. Compliance was assessed as part of their MEP audits.

### Audit commentary

MEPs are responsible for HHR data collection, and compliance is recorded in their audit reports.

### Audit outcome

Compliant

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

### Code reference

*Clause 11(3) Schedule 15.2*

### Code related audit information

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

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

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

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

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

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

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

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

### Audit observation

HHR data is provided by MEPs. Compliance was assessed as part of their MEP audits.

### Audit commentary

MEPs are responsible for HHR data collection, and compliance is recorded in their audit reports.

### 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 ±0.1% (±2 seconds).*

**Audit observation**

HHR data is provided by MEPs. Compliance was assessed as part of their MEP audits.

**Audit commentary**

MEPs are responsible for trading period duration, and compliance is recorded 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 during the MEP audits. I checked that meter readings cannot be modified without an audit trail and viewed archived meter reading data.

**Audit commentary**

The MEPs are compliant with these clauses.

Raw reading data is retained indefinitely, and raw data from 2017 was viewed during the audit. Review of audit trails in **section 2.4** confirmed that reads cannot be modified without an audit trail being created. Access to modify readings is restricted through log on privileges.

**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**

Collection of non-metering information was examined.

**Audit commentary**

ELKI does not deal with any non-metering information.

**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**

No ICPs are settled as NHH, and this clause does not apply.

**Audit commentary**

Review of the registry list with history confirmed that no ICPs were settled as NHH, and this clause does not apply.

**Audit outcome**

Not applicable

### 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

Corrections of HHR data are completed by ELKI. The process was confirmed by reviewing a sample of corrections.

### Audit commentary

Processes for correction of HHR meter readings were reviewed. All HHR data and register reads are provided by MEPs. ELKI monitors completeness and accuracy of data. If there are any intervals missing the relevant MEP is contacted and asked for catch-up data. If this is not able to be provided the missing intervals are estimated using the following methodologies:

- if register reads are not available, the consumption is expected to be estimated based on consumption history for the ICP, however:
    - as detailed in **section 2.9**, for ICP 0424577526LC98B, Bikkie ignored the recent consumption history from the removed meter and used the CS file average kWh value resulting in some estimated under submission, and
    - as recorded in **section 3.4**, ICP 0000193181TR57D was last read on 17 August 2022 and Bikkie used the average daily read value from the CS file to estimate this volume rather than from the recent consumption history (this appears to be happening when the meter is removed as the estimation process works as expected where the meter is still in place as was demonstrated for three of the six bridged meter estimations examined),
- if there is no read history available, then the average daily kWh figure from the CS file is used,
- if there is no profile history, the residual profile shape is used, and
- if register reads are available, the intervals are estimated so that the total kWh matches the difference between register reads, and the profile for the intervals is the same as the same day of the previous week.

Each of estimate methods takes into account HoP (Hour of Power), which is an hour of free power which each ELKI customer gets every day.

As soon as an MEP provides actual metering data, estimates are replaced with actuals as part of the normal schedule of revision submissions. Every month, before day 13, revision files are submitted for month 3, 7, and 14. However, if a meter has been bridged and the MEP provides the missing actual zero value data for the bridged period then this overwrites the estimated value resulting in no volume being submitted for the bridged period. This was found for three of the six bridged meters provided as detailed in **section 2.17**.

I checked seven examples of stopped or faulty meters and confirmed that corrections were appropriately processed and flowed through to reconciliation.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 8.2<br>With: Clause 19(2) of Schedule 15.2<br><br>From: 01-Apr-22<br>To: 28-Apr-23 | Estimations not calculated as expected where a meter is removed, as the data is being estimated using the CS file average daily figure, rather than being estimated from the recent consumption history as expected.<br>Volumes for three bridged meters not submitted due to estimations being replaced with zero values.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as weak as the estimation process is not estimating data as expected in some scenarios and some estimations are being replaced with invalid zero data.<br>The audit risk rating has the potential to be medium as it is unknown how many incorrect estimations are being applied but I have rated it as low based on the number of examples found. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Revisit estimate routines to determine where best practices can be improved. Multiple scenarios use recent data to determine estimates, while scenarios such as a new meter install will see no history on the meter and will revert to the CS average consumption where recent ICP consumption would be more suitable.<br>Bridged Meter specific routine to be created when they come back online to use estimated data instead of actual '0' data. | 3 - 6 Months | |

## 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 registry list file was examined to confirm compliance. Loss compensation processes were discussed.

### Audit commentary

All ICPs supplied have metering category 1 or 2. There are no ICPs where loss compensation is 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. 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 **section 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 MEPs and agents was reviewed as part of their own audits.

### Audit commentary

Raw meter data is held by the MEPs and compliance was confirmed as part of their MEP audits.

ELKI only corrects working data and keeps an appropriate audit trail. Audit trails within Bikkie are compliant.

### Audit outcome

Compliant

## 9. ESTIMATING AND VALIDATING VOLUME INFORMATION

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

**Code reference**

*Clause 3(3) Schedule 15.2*

**Code related audit information**

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

**Audit observation**

A sample of reads and volumes were traced from the source files to Bikkie in **section 2.3**.

Provision of estimated reads to other participants during switching was reviewed in **sections 4.3**, **4.4**, **4.10** and **4.11**.

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

**Audit commentary**

All estimated readings, permanent estimates and actual readings are clearly identified as required by this clause.

The content of CS and RR files was examined in **sections 4.3**, **4.4**, **4.10** and **4.11** and found:

- all five files sampled of a possible 70 TR CS files the final read was labelled as an actual but was not from the midnight read from the day before the relevant event date, and
- all five files sampled of a possible 323 files the MI CS reads were incorrectly labelled as actual reads and two of the sample had received an RR that was accepted; in both cases the reads were higher than the reads sent indicating that 4,304 kWh would have been pushed to the gaining trader if an RR was not sent (the code doesn't allow a gaining trader to send an RR to a HHR losing trader if an actual read is provided so this may be why only two of the five files sampled had an RR) and I recommend in **section 4.10**, that ELKI review the automation to ensure that reads are correctly labelled.

**Audit outcome**

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 9.1<br>With: Clauses 3(3) Schedule 15.2<br><br>From: 01-Apr-22<br>To: 17-Feb-23 | All five sampled of a possible 70 TR CS files sent with the read incorrectly labelled as actual.<br>All five sampled of a possible 323 MI CS files sent with the read incorrectly labelled as actual.<br>Potential impact: Medium<br>Actual impact: Medium<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 6 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Medium** | The controls are recorded as weak as the automation of CS files is not working correctly for all scenarios resulting in reads being sent incorrectly labelled.<br>The audit risk rating is assessed to be medium as the code doesn't allow gaining traders to send a RR file if an actual read has been sent by a HHR trader. 323 estimated reads have been sent as actuals which will for those ICPs traded NHH have resulted in volume being pushed to the gaining trader as indicated by the two CS files that did receive an RR to correct these. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Update the automated logic when sending CS notifications to look at the read from the event date and unless it is an Actual read from that date, update the code to 'E'. | 3 - 6 Months | |

## 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 **sections 11** and **12**, to confirm that volume was based on readings as required.

HHR data is collected by MEPs, and compliance was assessed as part of their MEP audits.

### 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 **sections 11** and **12**, to confirm that volume was based on readings as required.

HHR data is collected by MEPs and compliance was assessed as part of their MEP and agent audits.

### Audit commentary

The MEPs retain the raw, unrounded data. Compliance with this clause has been demonstrated by the MEPs as part of their own audits.

Meter reading data is not rounded or truncated on import into Bikkie. I confirmed this by tracing a sample of data for two ICPs per MEP from the source files to Bikkie to confirm the data transmission process. All volumes matched. Rounding occurs at the point of submission.

ARC Innovations meters record data to one decimal place. Compliance is recorded in this section because data is not rounded or truncated on receipt by ELKI. Non-compliance is recorded in s**ections 2.1** and **12.7** in relation to submission accuracy.

### Audit outcome

Compliant

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

### Code reference

*Clause 15 Schedule 15.2*

### Code related audit information

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

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

### Audit observation

Estimations of HHR data are completed by ELKI. The process was confirmed by reviewing a sample of estimates.

### Audit commentary

All HHR data and register reads are provided by MEPs. ELKI monitors completeness and accuracy of data. If there are any intervals missing the relevant MEP is contacted and asked for catch-up data. If this is not able to be provided the missing intervals are estimated using the following methodologies:

- if register reads are not available, the consumption is expected to be estimated based on consumption history for the ICP,
- if there is no read history available, then the average daily kWh figure from the CS file is used,
- if there is no profile history, the residual profile shape is used, and
- if register reads are available, the intervals are estimated so that the total kWh matches the difference between register reads, and the profile for the intervals is the same as the same day of the previous week.

Each of estimate methods takes into account HoP (Hour of Power), which is an hour of free power which each ELKI customer gets every day.

As soon as an MEP provides actual metering data, estimates are replaced with actuals as part of the normal schedule of revision submissions. Every month, before day 13, revision files are submitted for month 3, 7, and 14.

I checked seven examples of stopped or faulty meters and confirmed that estimations were calculated and were appropriately processed and flowed through to reconciliation.

Estimates provided by Metrix are not used, and no other MEPs provided any estimated data.

### 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

Two ICPs with NHH certified meters were identified.

### Audit commentary

Review of the registry list with history confirmed that no ICPs were settled as NHH. All ICPs have HHR metering or the AMI flag set to yes, apart from:

| ICP | MEP | Metering Category | Meter Type HHR | Advanced Metering Installation |
|---|---|---|---|---|
| 0000961036TU69F | NGCM | 1 | N | N |
| 1000028080BP5B8 | BOPE | 1 | N | N |

Both were gained with HHR certified meters, but the MEP has subsequently changed these to be NHH certified. These were both settled using estimated HHR volumes. This is recorded as non-compliance in **sections 6.1** and **12.9**. I have recorded "not applicable" below as ELKI does not submit NHH data.

### Audit outcome

Not applicable

## 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**

The HHR data validation process was reviewed.

**Audit commentary**

Electronic data used to determine volume information is provided by MEPs and this function was examined as part of their MEP audits.

Electronic meter reading information is provided by MEPs. Meters are interrogated regularly, most of them daily. Bikkie validates data upon import, checking for missing data, checking for invalid dates and times. Any files which fail validation are not imported. A report is created which is analysed.

ELKI monitors the completeness and accuracy of data. If there are any intervals missing the relevant MEP is contacted and asked for catch-up data. If this is not able to be provided the missing intervals are estimated using the methodologies described in **section 9.4**.

Meter event reports are provided by MEPs and are reviewed. Service requests are issued as required. I reviewed ten meter events and the MEP was contacted in all instances and service requests were issued and actioned by the MEP as required.

**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**

ELKI is not responsible for any NSPs. No information is provided to the pricing manager 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**

ELKI is not responsible for any NSPs. No information is provided to the pricing manager 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**

ELKI is not responsible for any NSPs. No information is provided to the pricing manager 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**

ELKI is not responsible for any NSPs. No information is provided to the pricing manager 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**

Processes to create buying and selling notifications were discussed.

I checked whether any breach allegations had been made in relation to buying and selling notifications.

**Audit commentary**

ELKI has only used the HHR profile and trading notifications are 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**

The process for the calculation of ICP days was examined by checking a sample of NSPs with a small number of ICPs to confirm the AV110 ICP days calculation was correct.

I reviewed GR100 report variances for 23 months.

### Audit commentary

**ICP days calculation**

The process for the calculation of ICP days was examined by checking the calculation of ICP days for 50 NSPs for the January 2023 initial submission and found that the days reported were consistent with the registry list with history.

**ICP days comparison**

The tables below show the difference between the AV110 ICP days submissions and the RM return file (GR100) for all available revisions for 23 months for ELKI. Negative percentage figures indicate that the ELKI AV110 ICP days figures are higher than those contained on the registry, and positive figures indicate that the registry's figures are higher than those contained in the AV110. The differences are very close to zero.

| Month | R0 | R1 | R3 | R7 | R14 |
|---|---|---|---|---|---|
| Feb 2021 | - | - | - | - | 0.00% |
| Mar 2021 | - | - | - | 0.00% | 0.00% |
| Apr 2021 | - | - | - | 0.00% | 0.00% |
| May 2021 | - | - | - | 0.00% | 0.00% |
| Jun 2021 | - | - | - | 0.00% | 0.00% |
| Jul 2021 | - | - | - | 0.00% | 0.00% |
| Aug 2021 | - | - | - | 0.00% | 0.00% |
| Sep 2021 | - | - | - | 0.00% | 0.00% |
| Oct 2021 | - | - | - | 0.01% | - |
| Nov 2021 | - | - | - | 0.00% | - |
| Dec 2021 | 0.02% | -0.02% | 0.00% | 0.00% | - |
| Jan 2022 | 0.00% | 0.01% | 0.00% | 0.00% | - |
| Feb 2022 | 0.00% | 0.00% | 0.01% | 0.00% | - |
| Mar 2022 | -0.01% | 0.00% | 0.00% | 0.00% | - |
| Apr 2022 | 0.00% | 0.02% | 0.00% | 0.00% | - |

| Month | R0 | R1 | R3 | R7 | R14 |
|---|---|---|---|---|---|
| May 2022 | 0.01% | 0.01% | 0.00% | 0.00% | - |
| Jun 2022 | 0.01% | 0.00% | 0.00% | 0.00% | - |
| Jul 2022 | -0.01% | 0.00% | 0.00% | - | - |
| Aug 2022 | 0.00% | 0.01% | 0.00% | - | - |
| Sep 2022 | 0.01% | 0.00% | 0.00% | - | - |
| Oct 2022 | 0.00% | 0.00% | 0.00% | - | - |
| Nov 2022 | 0.00% | 0.00% | - | - | - |
| Dec 2022 | 0.02% | 0.00% | - | - | - |

**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**

The process for the calculation of "as billed" volumes was examined by checking a sample of NSPs with a small number of ICPs to confirm the AV120 calculation was correct.

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

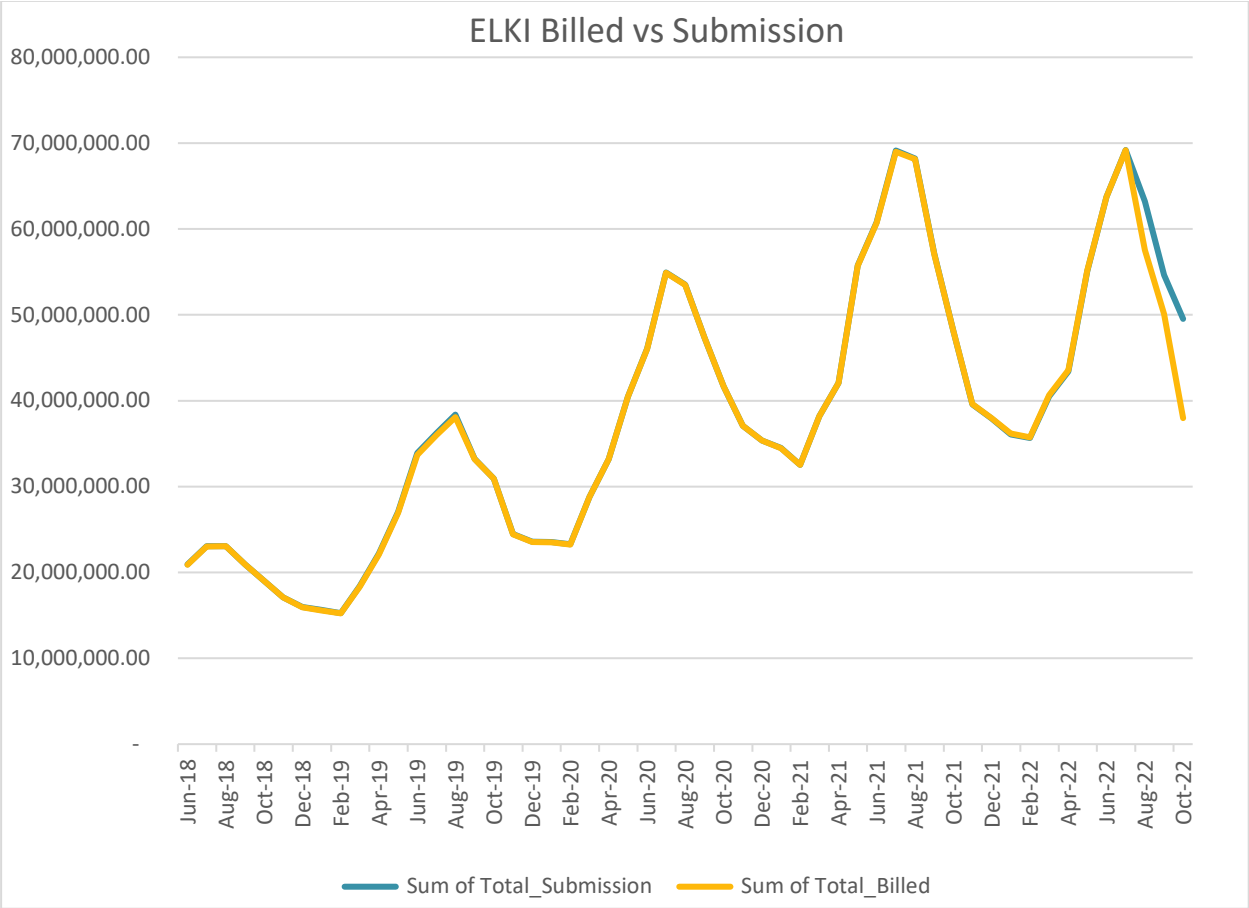
Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late.

### Audit commentary

The accuracy of the electricity supplied information was checked by examining five NSPs with a small volume and against the invoices for the January 2023 AV120 submission and found that rather than reporting the whole invoice period only the volume relating to the submission month is being reported. This appears to have changed in October 2022 as prior to this they were closely aligned. The October and November 2022 submitted volumes were higher than billed by 30.5% and 25.5% respectively. This is recorded as non-compliance. I recommend that ELKI review this report to ensure that it includes all of the volume for the invoice month as required by the code.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Electricity supplied | Review reporting to ensure that the AV120 includes the invoice total and not just the portion that relates to the month being reported. | In August 2022 ELKI launched our new Movemaster post-pay plan, this led to large numbers of customers shifting from our prepay plan of Stay Ahead 200 to the Movemaster post-pay plan. This meant that those customers who moved shifted from being invoiced in advanced of their supply to being invoiced after the supply. This has led to an initial large difference between billed and supplied as many customers on Monthly billing could have 50% of a month not billed until after the RM BD13 reports were run. R3 reports would bring the billed vs supplied figures much closer. | Identified |

The chart below shows a comparison between submissions and electricity supplied information. There is a -3.7% difference (submitted lower than billed) for the year ended October 2022 and a -1.9% difference (submitted higher than billed) for the two years ended October 2022. As detailed above the submitted volume appears to be higher than billed from October 2022.




## Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 11.3<br>With: Clause 15.7<br><br><br><br>From: 01-Oct-22<br>To: 30-Nov-22 | AV120 reporting incorrect for the months of October and November 2022.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded to be weak as the AV120 report is not reporting as expected and this wasn't identified.<br>The audit risk rating is assessed to be low as the actual billed vs submission is expected to be correct, so submission is expected to be accurate. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| ELKI bills customers across the month, when generating 'Billed' reports, a large number of our customers have not yet received invoices to cover R0 or R1. | | |

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

### Code reference

*Clause 15.8*

### Code related audit information

*Using relevant volume information, each retailer or direct purchaser (excluding direct consumers) must deliver to the reconciliation manager its total monthly quantity of electricity consumed 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

I confirmed that the process for the calculation and aggregation of HHR data is correct, by matching HHR aggregates information with the HHR volumes data for a sample of submissions. Aggregates data was also matched to the raw meter reading data for a sample of ICPs.

I checked the GR090 ICP missing files for the audit period and checked a sample of missing ICPs as described in the commentary.

### Audit commentary

Every month, ELKI downloads the GR090 files from the reconciliation manager portal and this is expected to be reviewed to verify if volumes were allocated for each ICP to the NSP indicated by the data held in the registry.

I checked the aggregation of submission information by:

- matching the HHR volumes and aggregates for ten submissions:
  - for nine submissions I found that the values matched, with differences of up to 179 kWh at total submission level, and when I reconciled the data at NSP level, I confirmed that there were very small differences at each NSP indicating rounding differences,
  - the July 2022 initial submission had a large difference which was investigated at NSP level and found that the volume had not been allocated to the NSP due to a system issue resulting in the volume being missing from the aggregates file; this was identified and corrected for the R1 revision, and
- tracing a sample of readings from the raw file provide by the MEP to the submission files.

The GR090 ICP missing reports for July 2021 to November 2022 were examined.

I found 1,543 ICPs recorded on the GR090 reports as missing from both the aggregate submissions and the registry for the same submissions, indicating that they may have been reported with different aggregation factors to what was expected based on the registry information. I checked the 15 ICPs missing from the most submissions and found that they had been reported with a different NSP to what was expected on the registry. This was due to the NSP changing between the time the customer started signing up and completing their application. The validation checks are missing these changes. I recommend in **section 2.1** that ELKI review their validation processes. I recommend below that ELKI review the GR090 process to ensure these are being reviewed and actioned as expected.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| HHR aggregation | Review the GR090 process to ensure these are being reviewed and actioned as expected. | We acknowledge this should have been rectified sooner. Missing aggregated data was discovered within 24 hours and subsequently uploaded on BD13. | Comments in the non-compliance below indicate the recommendation is adopted. |

81,077 ICPs were recorded on the GR090 reports as missing from either the aggregates submissions or the registry. I found each of these ICPs was missing from a smaller number of submissions, with a maximum of 20. I checked the ten ICPs missing from the most submissions (15-20) and found that they were missing from the registry only, because of backdated corrections of submission type and backdated withdrawals to remove ELKI's period of supply. The other differences relate to smaller numbers of submissions and are expected to be caused by switch event timing.

I checked that changes to loss factor and dedicated NSP have been updated as expected for a sample of 16 ICPs and found all were correct.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 11.4<br>With: 15.8<br><br>From: 01-Apr-22<br>To: 28-Apr-23 | The initial aggregates file submitted for July 2022 was missing volume due to a system error.<br>All 15 ICPs sampled of a possible 1,543 ICPs submitted against the incorrect NSP.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as weak as they are not working as expected and this is affecting submission accuracy.<br>The audit risk rating has been assessed to be low as the issues identified were either corrected at the next revision or related to the incorrect NSP, but it is likely these were in the same balancing area, so this has no direct impact on submission. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will perform a manual sync on all ICPs that appear on the GR-090 in the first 3 business days of the month between Bikkie and the registry. This will be done before the EIEP and RM reports are created and uploaded.<br>The proposed automated fix will require a sync on ICPs when a CS file is received and triggers the ICP to be activated within Bikkie. | Manual process to start immediately, development of automation 6 - 9 months | |

## 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**

HHR data is provided by MEPs. Data provided by MEPS is already adjusted for NZDT. Daylight savings processes for the MEPs were reviewed as part of their audits and found to be compliant.

**Audit commentary**

Daylight savings processes for the MEPs were reviewed as part of their audits and found to be compliant.

**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**

Processes to ensure that submissions are accurate were reviewed. A list of breaches was obtained from the Electricity Authority.

**Audit commentary**

All ICPs supplied by ELKI have HHR profile and submission type.

As detailed in **sections 2.1** and **12.7**:

- three ICPs of six ICPs bridged (0833999239LCFD1, 0001452806UN056 and 0605335004LC76C) had estimations applied but these have subsequently been replaced with zero values provided by the MEP during the bridged period and are therefore missing from submission,
- one of seven ICPs checked with vacant consumption (ICP 0485040972LCBE2) had 40 kWh recorded from the date of disconnection 17 February 2023 to the switch event date of 25 February 2023; this hadn't been submitted as it was for less than seven days and ELKI will only correct if for more than seven days (this was corrected during the audit).

As detailed in **section 6.1**, 12 ICPs are confirmed to have distributed generation installed but generation has not been submitted or gifted.

The Authority recorded one alleged breach for late provision of submission information.

| Reference | Code section allegedly breached | Severity | Description | Status |
|---|---|---|---|---|
| 2205ELKI1 | Part 15 clause 15.4 (1) | Low | Electric Kiwi Limited (ELKI) failed to submit information to the RM by 1600 hours on the 4th business day of the reconciliation period.<br><br>The RM contacted the participant at 1530 through a phone call as no file had been received or even put through the file checker. The participant indicated that they were facing issues with their systems.<br><br>ELKI started checking their files through the file checker at 1532, where their AV-090 (HHRVOLS) file failed validation several times. They started uploading their actual files at 1557 and called the RM to seek assistance with the AV-090 as it was still getting rejected by the RM system. | Closed – declined to pursue without warning |

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 12.2<br>With: Clause 15.4<br><br>From: 01-Oct-22<br>To: 28-Apr-23 | Volumes for three bridged meters not submitted due to estimations being replaced with zero values.<br>Inactive consumption not submitted for one of a sample of seven ICPs checked.<br>12 ICPs are confirmed to have distributed generation installed but generation has not been submitted or gifted.<br>Alleged breach 2205ELKI1.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as weak as controls are not robust enough mitigate risk to an acceptable level.<br>The audit risk rating is rated as low based on the number of ICPs affected. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Bridged Meter specific routine to be created when they come back online to use estimated data instead of actual '0' data.<br>Putting in place a process to identify ICPs with solar but not on an I/E meter for resale to be looked at monthly and advising the Reconciliation Manager. | 1 month | |

## 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**. Processes to ensure that HHR submissions are accurate were reviewed.

### Audit commentary

ELKI's validation processes are detailed in **section 2.1**, and I recommend there that these processes are reviewed as they are not effective in identifying and resolving all potential discrepancies.

As detailed in section **6.1**, 29 ICPs (1.7%) have no I flow meter register or no settled I flow meter register. I checked the high-risk database and found that 12 of these have had distributed generation installed. These were checked and found:

- ELKI expects the customer to advise them of distributed generation being present and as a result six have had no action taken,
- ELKI is actively working with three to get import export metering installed, and
- for the remaining three ICPs contact was made with the customers in 2021 or earlier to get import export metering installed but nothing has been progressed since then.

This is recorded as non-compliance below and in **sections 2.1,6.1** and **12.7**.

As detailed in **section 11.4**, I found 1,543 ICPs recorded on the GR090 reports as missing from both the aggregate submissions and the registry for the same submissions, indicating that they may have been reported with different aggregation factors to what was expected based on the registry information. I checked the 15 ICPs missing from the most submissions and found that they had been reported with a different NSP to what was expected on the registry. This was due to the NSP changing between the time the customer started signing up and completing their application. I recommend in **section 11.4**, that ELKI review the GR090 process to ensure these are being reviewed and actioned as expected. This is recorded as non-compliance below.

I confirmed that if more accurate information is obtained, it is provided to the reconciliation manager as part of the normal schedule of revision submissions. Every month, before day 13, revision files are submitted for month 3, 7, and 14.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 12.3<br>With: 15.5<br><br><br><br><br>From: 01-Apr-22<br>To: 28-Apr-23 | All 15 ICPs sampled of a possible 1,543 ICPs submitted against the incorrect NSP.<br>12 ICPs are confirmed to have distributed generation installed but generation has not been submitted or gifted.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as weak as they are not working as expected and this is affecting submission accuracy.<br>The audit risk rating has been assessed to be low as the sample checked with the incorrect NSP related to the incorrect NSP being recorded. All were in the same balancing area, so this has no direct impact on reconciliation accuracy. And the number of ICPs with distributed generation present but not being submitted or gifted was small. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will perform a manual sync on all new ICPs to ELKI within the first 3 business days of the month between Bikkie and the registry. This will be done before the EIEP and RM reports are created and uploaded.<br>The proposed automated fix will require a sync on ICPs when a CS file is received and triggers the ICP to be activated within Bikkie. | Manual process to start immediately, development of automation 6 - 9 months | |

## 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

The registry list and NSP table were reviewed.

### Audit commentary

ELKI is not a grid owner; compliance was not assessed.

### Audit outcome

Not applicable

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

### Code reference

*Clause 15.10*

### Code related audit information

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

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

### Audit observation

The registry list and NSP table were reviewed.

### Audit commentary

ELKI is not a grid connected or embedded network owner; compliance was not assessed.

### Audit outcome

Not applicable

## 12.6. Grid connected generation (Clause 15.11)

### Code reference

*Clause 15.11*

### Code related audit information

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

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

### Audit observation

The registry list and NSP table were reviewed.

### Audit commentary

ELKI is not a grid connected generator; compliance was not assessed.

### Audit outcome

Not applicable

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

### Code reference

*Clause 15.12*

### Code related audit information

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

### Audit observation

Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late. Corrections were reviewed in **sections 2.1, 8.1** and **8.2**.

### Audit commentary

The Authority recorded one alleged breach for late provision of submission information, which is recorded as non-compliance in **section 12.2**.

ELKI supplies 614 "active" ICPs with HHR settled Arc meters. There is an issue with ARC Innovations meters when used for HHR settlement. The on-site setup is that a meter pulses into a data storage device, which counts the pulses and "stores" them every 200 pulses which equals 0.1 kWh. There is only one decimal place, so the smallest increment of consumption is 0.1. Unfortunately for ELKI, this means the HHR data derived from ARC meters is not considered to be accurate in accordance with Clause 15.2. The total kWh per month will be accurate but if volumes are not recorded and reported against the correct trading period, ELKI may not be charged at the wholesale rate that applied during the trading period when the electricity was consumed. This is recorded as non-compliance below and **section 2.1**.

As detailed in **section 2.1**, consumption during bridged, stopped, or faulty periods is calculated using the following methodologies:

- if register reads are not available, the consumption is expected to be estimated based on consumption history for the ICP, however, as detailed in **section 2.9**, for ICP 0424577526LC98B, Bikkie has estimated the volume for this period using the average daily consumption of 9 kWh per day from the CS file received on 22 November 2019, rather than using data from the removed meter which would have been an estimated 13 kWh per day which will have resulted in an estimated under submission of 956 kWh; this is recorded as non-compliance below,
- if there is no read history available, then the average daily kWh figure from the CS file is used,
- if there is no profile history, the residual profile shape is used, and
- if register reads are available, the intervals are estimated so that the total kWh matches the difference between register reads, and the profile for the intervals is the same as the same day of the previous week, however, if a meter has been bridged and the MEP provides the missing actual zero value data for the bridged period this overwrites the estimated value resulting in no volume being submitted for the bridged period; three examples are detailed in **sections 2.1** and **2.17** of this occurring.

As detailed in **section 2.9**, ICP 0000053824WEF61 was claimed as a new connection in progress. Bikkie indicated metering was present, but no customer was registered. HHR readings were being provided but had stopped. ELKI has investigated this and confirmed this was an ICP deconsolidation. The ICP has since been made active from 20/01/2023 and the existing meter moved from the original ICP 0004104257WED65 to the new ICP for that date. Submission is correct. This is recorded as non-compliance in **sections 2.1, 3.2, 3.5** and **3.9**.

ICP 0000193181TR57D was last read on 17 August 2022 and was disconnected on 18 August 2022 but the status was incorrectly recorded as "active" until the date of decommissioning 14 September 2023. The estimation process described would have expected Bikkie to calculate the estimation from the recent consumption history, but as with ICP 0424577526LC98B, it used the average daily read value from the CS file of 15 kWh to estimate this volume. This resulted in an estimated over submission of 420 kWh. The incorrect status is recorded as non-compliance in **section 3.8**, and the incorrect status and volume estimated is shown as non-compliance below and in **section 12.7**.

Each of estimate methods takes into account HoP (Hour of Power), which is an hour of free power which each ELKI customer gets every day.

The five examples found (two where the estimation was calculated from the CS average daily kWh and the recent consumption was ignored and the three bridged meters where estimated data was incorrectly replaced zero consumption) are recorded as non-compliance below and in **section 2.1**. I recommend in **section 2.1**, that the estimation processes are reviewed to ensure they are calculated from the most recent available data and invalid actual data is not replacing estimated data.

ELKI monitors a flight path report that identifies any inactive vacant consumption. These are checked and sent for investigation with the MEP if the consumption is valid. I examined a sample of seven ICPs and found:

- six had switched from the account end date so the volume recorded was during the gaining trader's period of supply and not ELKI's; they had been recorded in the flight path report up to the date the CS file was sent, and
- ICP 0485040972LCBE2 had 40 kWh recorded from the date of disconnection 17 February 2023 to the switch event date of 25 February 2023; this hadn't been submitted as it was for less than seven days and ELKI will only correct if for more than seven days (this was corrected during the audit but is recorded as non-compliance below and in **sections 2.1** and **3.9)**.

As detailed in **section 6.1**, 12 ICPs are confirmed to have distributed generation installed but generation has not been submitted or gifted.

As recorded in **section 11.4**, I found 1,543 ICPs recorded on the GR090 reports as missing from both the aggregate submissions and the registry for the same submissions, indicating that they may have been reported with different aggregation factors to what was expected based on the registry information. I checked the 15 ICPs missing from the most submissions and found that they had been reported with a different NSP to what was expected on the registry. This was due to the NSP changing between the time the customer started signing up and completing their application. The validation checks are missing these changes. I recommend in **section 2.1** that ELKI review their validation processes. I recommend in **section 11.4**, that ELKI review the GR090 process to ensure these are being reviewed and actioned as expected.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 12.7<br>With: 10.13 and 15.2<br><br>From: 01-Apr-22<br>To: 28-Apr-23 | Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate.<br><br>Estimation process not calculating best estimates where a meter is removed, as the data is being estimated using the CS file average daily figure, rather than being estimated from the recent consumption history as identified in the two examples provided.<br><br>Over submission of 420kWh for ICP 0000193181TR57D due to the incorrect "active" status and volume estimated for the disconnected period.<br><br>Volumes for three bridged meters not submitted due to estimations being replaced with zero values.<br><br>Inactive consumption not submitted for one of a sample of seven ICPs checked due to ELKI only correcting volumes if for seven days or more.<br><br>12 ICPs are confirmed to have distributed generation installed but generation has not been submitted or gifted.<br><br>Validations not picking NSP changes being made at time of sign up resulting in submission being allocated to the incorrect NSP for the 15 ICPs sampled of a potential 1,543 ICPs.<br><br>Potential impact: Medium<br><br>Actual impact: Low<br><br>Audit history: Twice previously<br><br>Controls: Weak<br><br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as weak, and I have recommended some processes be reviewed as they are not mitigating risk effectively.<br><br>The audit risk rating has the potential to be medium due to the number of issues identified particularly in relation to the unknown number of incorrect estimations being applied but I have rated it as low based on the number of examples found. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Regular monthly checking of LIS Files is being done and will continue.<br><br>Team training refresh on the requirement for accurate and timely Registry updates.<br><br>Switching improvements to automate Disco/Reco to update the Registry is to be scoped and deploy to reduce the human error associated.<br>The initial plan is to have the internal data team create and run an automatic program to assist with semi-automation while automation is being built.<br><br>Revisit estimate routines to determine where best practices can be improved. Multiple scenarios use recent data to determine estimates, while scenarios such as a new meter install will see no history on the meter and will revert to the CS average consumption where recent ICP consumption would be more suitable.<br><br>Putting in place a process to identify ICPs with solar but not on an I/E meter for resale to be looked at monthly and advising the Reconciliation Manager.<br><br>We will manually sync all new ICPs to ELKI within the first 3 business days of the month between Bikkie and the registry. This will be done before the EIEP and RM reports are created and uploaded.<br><br>A proposed automated fix will require a sync on ICPs when a CS file is received and triggers the ICP to be activated within Bikkie. | Immediately put in place new ICP Sync and solar gifting.<br><br>Team training refresh to be conducted immediately<br><br>Automation development 9 - 12 months. | |

## 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

ELKI has not submitted any NHH volumes.

### Audit commentary

All ICPs were submitted as HHR, no NHH data was submitted.

When estimates are created and used for submission, it is not possible to differentiate between estimate types or between estimates and corrections. If HHR data is calculated between register reads, the total kWh is correct. If estimates or corrections are conducted without register reads this may be less accurate, but ELKI cannot report on the quantity and type of estimates still present at 14 months.

### 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

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

Aggregation and content of reconciliation submissions was reviewed, and the registry lists were reviewed.

### Audit commentary

Compliance with this clause was assessed:

- all ICPs have HHR profile and submission type and metering category 1 or 2, but two of these have NHH certified metering only and the code states “The submission provided must not comprise HHR data volume information for a NHH metered installation” which is recorded as non-compliance below,
- no unmetered load is supplied,
- no profiles requiring certification are used,
- no loss or compensation arrangements are required, and
- aggregation of the AV110, AV090 and AV140 submissions are covered in **sections 11.2**, and **11.4** respectively.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 12.9<br>With: 2 of Schedule 15.3<br><br>From: 01-Apr-22<br>To: 28-Apr-23 | Two NHH certified metered ICPs submitted using HHR data volume.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Moderate<br>Breach risk rating: 2 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are recorded as moderate as both were gained as HHR metered ICPs, but the MEP has subsequently recertified these as NHH and ELKI are actively working to get either a HHR certified meter installed or to get the customer to switch away.<br>The audit risk rating is assessed to be low as only two ICPs are affected. . |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| In the event that an NHH meter is required to be served by Electric Kiwi due to an AMI meter being replaced with an NHH meter or the AMI meter expiring then a manual process will be documented and initiated should an ICP need to be reclassified as NHH. | 1 month | |

## 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 techniques described in clauses 4 to 7 to create historical estimates and forward estimates.*

*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

No ICPs are settled as NHH, and this clause does not apply.

### Audit commentary

Review of the registry list with history confirmed that no ICPs were settled as NHH, and this clause does not apply.

### Audit outcome

Not applicable

## 12.10. Historical estimate process (Clauses 4 and 5 Schedule 15.3)

### Code reference

*Clauses 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 historical estimates of volume information for each ICP when the relevant seasonal adjustment shape is available, and the reconciliation participant is not using an approved profile in accordance with clause 4A.*

*If the Authority has approved a profile for the purpose of apportioning volume information (in kWh) to part or full consumption periods, a reconciliation participant may use the profile despite the relevant seasonal adjustment shape being available; and if it uses the profile, must otherwise prepare the historical estimate in accordance with the methodology in clause 4.*

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

### Audit observation

No ICPs are settled as NHH, and this clause does not apply.

### Audit commentary

Review of the registry list with history confirmed that no ICPs were settled as NHH, and this clause does not apply.

### Audit outcome

Not applicable

## 12.11. 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

No ICPs are settled as NHH, and this clause does not apply.

### Audit commentary

Review of the registry list with history confirmed that no ICPs were settled as NHH, and this clause does not apply.

### Audit outcome

Not applicable

## 12.12. 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 reports were examined to identify any ICPs which had a profile change during the report period.

### Audit commentary

ELKI has only used the HHR profile, and no profile changes have occurred.

### 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 non-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**, aggregation of HHR volumes is discussed in **section 11.4** and NSP volumes are discussed in **section 12.6**.

### 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
- trading period for half hour metered ICPs.

As recorded in **section 11.4**, I found 1,543 ICPs recorded on the GR090 reports as missing from both the aggregate submissions and the registry for the same submissions, indicating that they may have been reported with different aggregation factors to what was expected based on the registry information. I checked the 15 ICPs missing from the most submissions and found that they had been reported with a different NSP to what was expected on the registry. This was due to the NSP changing between the time the customer started signing up and completing their application. The validation checks are missing these changes. I recommend in **section 2.1** that ELKI review their validation processes. I recommend in **section 11.4**, that ELKI review the GR090 process to ensure these are being reviewed and actioned as expected.

I checked that changes to loss factor and dedicated NSP have been updated as expected for a sample of 16 ICPs and found all were correct.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 13.1<br>With: 8 Schedule 15.3<br><br><br><br>From: 01-Apr-22<br>To: 28-Apr-23 | All 15 ICPs sampled of a possible 1,543 ICPs submitted against the incorrect NSP.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as weak as they are not working as expected and this is affecting submission accuracy.<br>The audit risk rating has been assessed to be low as the sample checked related to the incorrect NSP being recorded. All were in the same balancing area, so this has no direct impact on reconciliation accuracy. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will perform a manual sync on all new ICPs to ELKI within the first 3 business days of the month between Bikkie and the registry. This will be done before the EIEP and RM reports are created and uploaded.<br>The proposed automated fix will require a sync on ICPs when a CS file is received and triggers the ICP to be activated within Bikkie. | Manual process to start immediately, development of automation 6 - 9 months | |

## 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 five, the second digit is rounded up, and*

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

### Audit observation

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

### Audit commentary

Review of AV080, AV090 and AV140 reports identified that submission information is rounded to no more than 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

No ICPs are settled as NHH, and this clause does not apply.

### Audit commentary

Review of the registry list with history confirmed that no ICPs were settled as NHH, and this clause does not apply.

### Audit outcome

Not applicable

## CONCLUSION

ELKI has been through a business restructure and the previous Australian-based compliance function has been replaced with a New Zealand team. Some operations continue to be supported by the Hyderabad based team. Changes in personnel during the audit period caused some minor delays in the audit completion as the team adjusted to their new roles and a different audit approach.

This audit found a decrease in compliance resulting in 31 non-compliances being found and a future risk rating score of 92 up from the 26 recorded in the last audit. The audit risk rating score has increased due to a number of factors:

- some non-compliances relate to a small number of ICPs and are one off issues, such as the one new connection completed by ELKI when new connections are not expected,
- system issues that are affecting the accuracy of information to the market and other participants, and
- identification of some non-compliances that may have been present for some time but were not identified in previous audits.

I make nine recommendations in the report that should assist in getting these issues corrected.

**Registry and Switching Management**

The registry discrepancy processes require review to ensure that they identify all possible discrepancies and that these are corrected.

The switching process is automated and generally working well but I did identify some incorrect information being sent in the AN and CS files that require investigation.

ELKI have been asking their customers the reason for them switching away. This was evident in one of the switch withdrawals examined and is also being investigated as a breach by the Electricity Authority. The survey has stopped being sent since February 2023, but I recommend that all customer facing staff are provided training to ensure they are complying with switch save protection requirements.

**Reading and Reconciliation**

ELKI trades only half hourly. Processes are generally working as expected but I did identify some system and process issues that I recommend are investigated:

- the estimation processes are not working as expected in all scenarios and some instances of estimation being based on the CS file, and ignoring more recent consumption history, and estimated data being overwritten with invalid zero actual data were found,
- corrections for inactive vacant consumption not submitted unless the period is for seven days or more; one example of this occurring of a sample of seven ICPs checked,
- the GR090 report is expected to be checked as part of the submission process but in this audit 1,543 ICPs missing from both the aggregate submissions and the registry for the same submissions, indicate that they may have been reported with different aggregation factors to what was expected based on the registry information; the sample checked identified an issue with the sign-up process which is causing the incorrect NSP to be recorded which wasn't being identified or corrected (the incorrect NSPs are expected to be within the same balancing area so the impact to reconciliation will be minor), and
- the AV120 report identified that in October and November 2022 the electricity billed file was incorrectly only including the volume billed for the calendar month and not the invoiced month resulting in submitted being 25% or more higher than billed.

ELKI is working hard to address the issues in the audit raised. The audit risk rating score of 92 indicates that the next audit be in three months' time. I have considered this in conjunction with:

- ELKI's comments,
- allowing sufficient time to undertake the planned improvements, and
- the Christmas period when development is generally not deployed.

I recommend that the next audit is in 12 months time.

## PARTICIPANT RESPONSE

ELKI's comments are recorded in the body of the report.  No further comments were provided.