# ELECTRICITY INDUSTRY PARTICIPATION CODE
# DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

# CARTERTON DISTRICT COUNCIL AND MERCURY ENERGY LIMITED

Prepared by: Bernie Cross

Date audit commenced: 3 November 2022

Date audit report completed: 28 November 2022

Audit report due date: 1 December 2022

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## EXECUTIVE SUMMARY

This audit of the **Carterton District Council (CDC)** DUML database and processes was conducted at the request of **Mercury Energy Limited (Mercury)** in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

The audit was conducted in accordance with the audit guidelines for DUML audits version 1.1. The scope of the audit encompasses the collection, security and accuracy of the data, including the preparation of submission information.

A RAMM database is held by CDC. **Power Services Wairarapa (PSW)** are responsible for all field work including new connections, removals, repairs and maintenance. Fulton Hogan inspect the work completed by PSW and provide support as necessary. PSW update RAMM using a PC at Fulton Hogan's office in Masterton, because they do not have access to update RAMM remotely.

Mercury's calculation of submission volumes includes Waka Kotahi lights that are also included in the Waka Kotahi Lower North Island DUML database resulting in an over submission of 4,950 kWh for September 2022 and an assessed annual over submission of 56,394 kWh.

Mercury reconciles the CDC DUML load using the HHR profile in accordance with exemption 233. Wattages are derived from the monthly database extracts provided by CDC, and on and off times are derived from data logger information.

A field audit was conducted of a statistical sample of 146 items of load. The "database auditing tool" was used to analyse the results, which are shown in the table below.

| • Result | Percentage | Comments |
|---|---|---|
| The point estimate of R | 101.7 | Wattage from the survey is higher than the database wattage by 1.7% |
| $R_L$ | 97.2 | With a 95% level of confidence, it can be concluded that the error could be between -2.8% and +8.9% |
| $R_H$ | 108.9 | |

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 1 February 2019. The best available estimate confirmed that the database accuracy is not within the allowable +/-5% threshold.

- The variability of the sample results across the strata means that the true wattage (installed in the field) could be between 2.8% lower and 8.9% higher than the wattage recorded in the DUML database.
- In absolute terms the installed capacity is estimated to be 1 kW higher than the database indicates.
- There is a 95% level of confidence that the installed capacity is between 1 kW and 3 kW higher than the database.
- In absolute terms, total annual consumption is estimated to be 2,200 kWh higher than the DUML database indicates.
- There is a 95% level of confidence that the annual consumption is between 3,600 kWh lower and 11,300 kWh higher than the database indicates

On 18 June 2019, the Electricity Authority issued a memo clarifying the memo of 2012 that stated that a monthly snapshot was sufficient to calculate submission from, and confirmed the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed, and

- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

The current monthly report is provided as a snapshot, which is non-compliant. Mercury applies the kW value for the last day of the month when calculating submission volumes. Mercury completes revision submissions where corrections are required and has not yet updated their processes to be compliant with the Authority's memo.

Seven non-compliances were identified, and no recommendations were made. The future risk rating of 35 indicates that the next audit be completed in three months. I have considered this in conjunction with Mercury's comments and recommend that the next audit be in six months The matters raised are detailed below:

## AUDIT SUMMARY

### NON-COMPLIANCES

| Subject | Section | Clause | Non-Compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Deriving submission information | 2.1 | 11(1) of Schedule 15.3 | Database assessed as having poor precision therefore the potential error is greater than 5.0% resulting in an estimated over submission of 2,200 kWh per annum.<br><br>Mercury's calculation of submission volumes includes Waka Kotahi lights that are also included in the Waka Kotahi Lower North Island DUML database resulting in an over submission of 4,950 kWh for September 2022 and an assessed annual over submission of 56,394 kWh.<br><br>The database contains some inaccurate data.<br><br>• 31 items of load do not have an ICP number recorded; the impact is accessed as 3.234 kWh per annum using an annual hours value of 4,271 hours, and<br>• five lights have a blank lamp model with a zero lamp and blank gear wattage recorded.<br><br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. | Weak | High | 9 | |
| ICP identifier and items of load | 2.2 | 11(2)(a) and (aa) of Schedule 15.3 | 31 items of load do not have an ICP number recorded. | Moderate | Low | 2 | |
| Description and capacity of load | 2.4 | 11(2)(c) and (d) of Schedule 15.3 | Five items of load with a blank ICP number have no lamp model, lamp wattage or gear wattage recorded in the database. | Moderate | Low | 2 | |
| All load recorded in database | 2.5 | 11(2A) of Schedule 15.3 | Seven items of load not recorded in the database of the sample of 146 items of load checked. | Moderate | Low | 2 | |
| Audit trail | 2.7 | 11(4) of Schedule 15.3 | Where manual changes to the database extract occur to populate missing information or make updates to wattage values, an audit trail is not created. | Moderate | Low | 2 | |
| Database accuracy | 3.1 | 15.2 and 15.37B(b) | Database assessed as having poor precision therefore the potential error | Weak | High | 9 | |

| Subject | Section | Clause | Non-Compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| | | | is greater than 5.0% resulting in an estimated over submission of 2,200 kWh per annum.<br><br>Mercury's calculation of submission volumes includes Waka Kotahi lights that are also included in the Waka Kotahi Lower North Island DUML database resulting in an over submission of 4,950 kWh for September 2022 and an assessed annual over submission of 56,394 kWh.<br><br>The database contains some inaccurate data.<br><br>• 31 items of load do not have an ICP number recorded; the impact is accessed as 3,234 kWh per annum using an annual hours value of 4,271 hours, and<br>• five lights have a blank lamp model with a zero lamp and blank gear wattage recorded.<br><br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. | | | | |
| Volume information accuracy | 3.2 | 15.2 and 15.37B(c) | Database assessed as having poor precision therefore the potential error is greater than 5.0% resulting in an estimated over submission of 2,200 kWh per annum.<br><br>Mercury's calculation of submission volumes includes Waka Kotahi lights that are also included in the Waka Kotahi Lower North Island DUML database resulting in an over submission of 4,950 kWh for September 2022 and an assessed annual over submission of 56,394 kWh.<br><br>The database contains some inaccurate data.<br><br>• 31 items of load do not have an ICP number recorded; the impact is accessed as 3,234 kWh per annum using an annual hours value of 4,271 hours, and<br>• five lights have a blank lamp model with a zero lamp and blank gear wattage recorded.<br><br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. | Weak | High | 9 | |
| Future Risk Rating | | | | | | 35 | |

| Future risk rating | 0 | 1-4 | 5-8 | 9-15 | 16-18 | 19+ |
|---|---|---|---|---|---|---|
| **Indicative audit frequency** | 36 months | 24 months | 18 months | 12 months | 6 months | 3 months |

## RECOMMENDATIONS

| Subject | Section | Recommendation |
|---|---|---|
| | | Nil |

## ISSUES

| Subject | Section | Description | Issue |
|---|---|---|---|
| | | Nil | |

# 1. ADMINISTRATIVE

## 1.1. Exemptions from Obligations to Comply with Code

### Code reference

*Section 11 of Electricity Industry Act 2010.*

### Code related audit information

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

### Audit observation

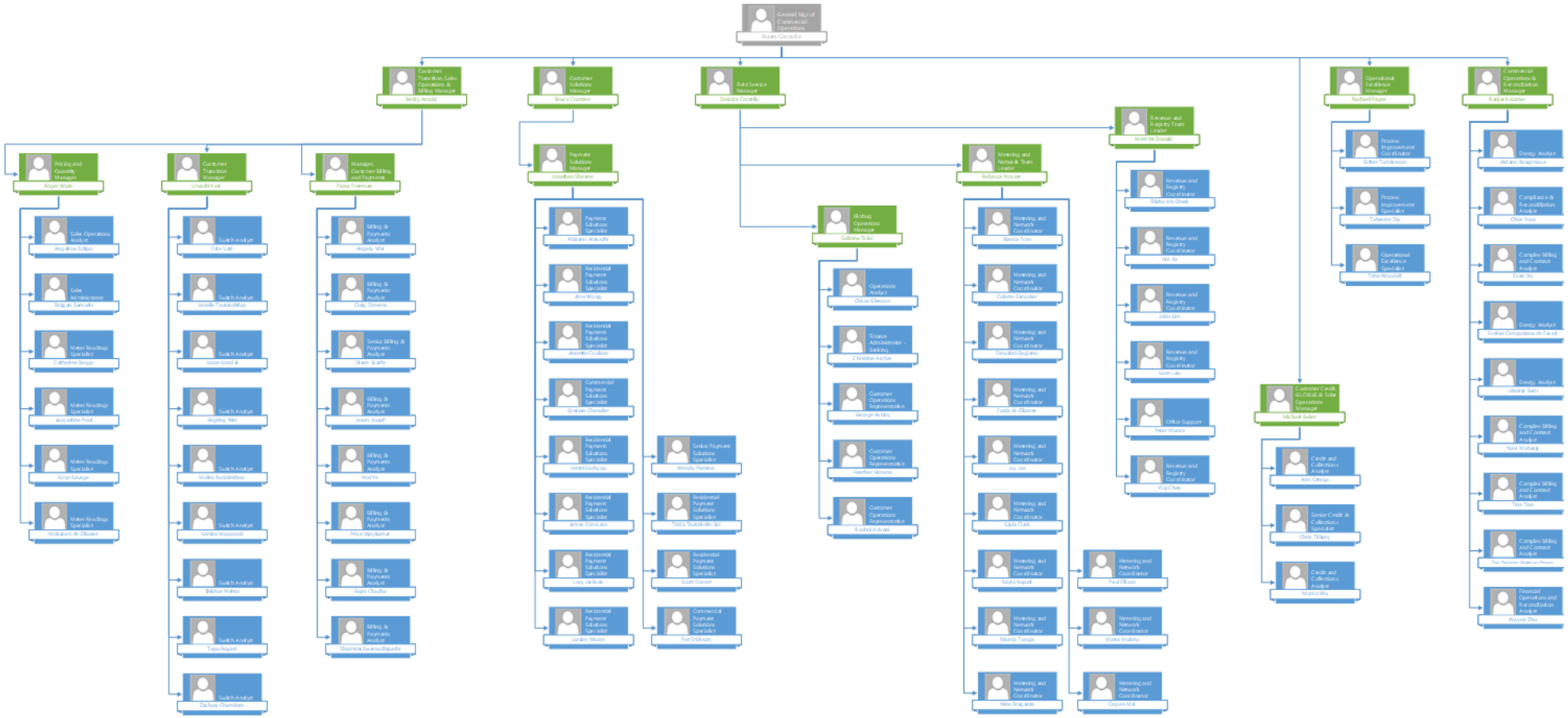
Current code exemptions were reviewed on the Electricity Authority website.

### Audit commentary

Mercury has been granted exemption No. 233. This allows them to provide half-hour ("HHR") submission information instead of non-half-hour ("NHH") submission information for distributed unmetered load ("DUML"). This exemption expires on 31 October 2023.

## 1.2. Structure of Organisation

Mercury provided their current organisational structure:



## 1.3. Persons involved in this audit

Auditor:

**Bernie Cross**

**Veritek Limited**

**Electricity Authority Approved Auditor**

Other personnel assisting in this audit were:

| Name | Title | Company |
|---|---|---|
| Chris Posa | Compliance Reconciliation Analyst | Mercury Energy |

## 1.4. Hardware and Software

**RAMM**

The SQL database used for the management of DUML is remotely hosted by thinkproject New Zealand Ltd. The database is commonly known as "RAMM" which stands for "Roading Asset and Maintenance Management". The specific module used for DUML is called RAMM Contractor.

Thinkproject New Zealand Ltd backs up the database and assists with disaster recovery as part of their hosting service. Nightly backups are performed. As a minimum, daily backups are retained for the previous five working days, weekly backups are retained for the previous four weeks, and monthly backups are retained for the previous six months.

Access to the database is secure by way of password protection.

**Mercury systems**

Systems used by the trader to calculate submissions are assessed as part of their reconciliation participant audits.

## 1.5. Breaches or Breach Allegations

There are no breach allegations relevant to the scope of this audit.

## 1.6. ICP Data

| ICP Number | Description | NSP | Profile | Number of items of load | Database wattage (watts) |
|---|---|---|---|---|---|
| 0020903000WRADA | STREET LIGHTING CARTERTON | MST0331 | HHR | 630 | 27,902 |
| Blank | - | - | - | 31 | 757 |
| Total | | | | 661 | 28,659 |

31 items of load did not have an ICP number recorded in the database. The missing ICPs numbers are recorded as non-compliance in **section 2.2**.

## 1.7. Authorisation Received

All information was provided directly by Mercury.

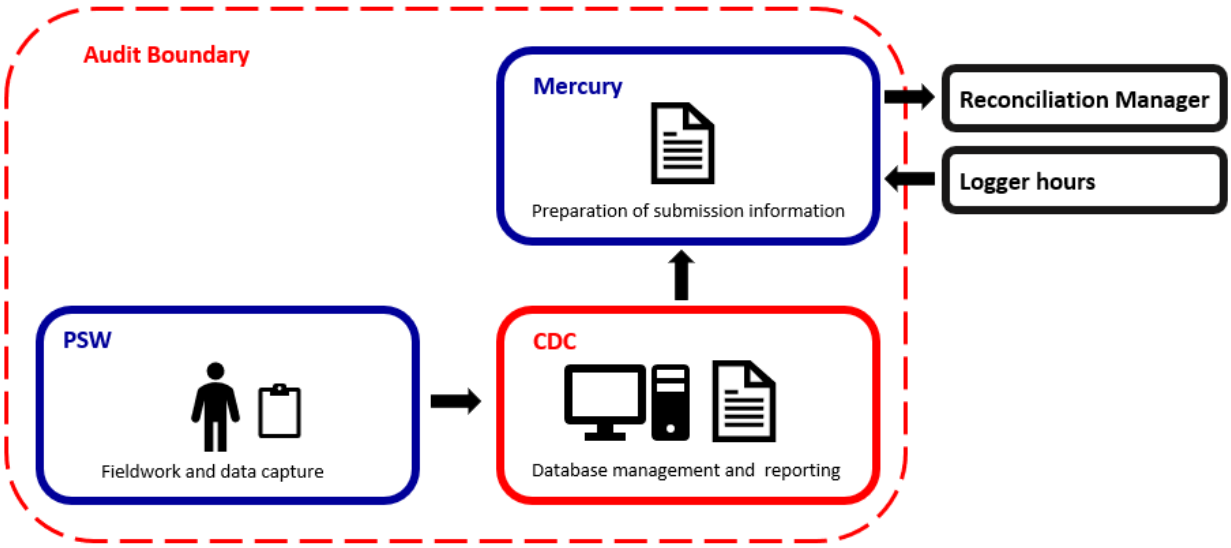
## 1.8. Scope of Audit

This audit of the CDC DUML database and processes was conducted at the request of Mercury in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied. The audit was conducted in accordance with the audit guidelines for DUML audits version 1.1.

A RAMM database is held by CDC. PSW are responsible for all field work including new connections, removals, repairs and maintenance. Fulton Hogan inspect the work completed by PSW and provide support as necessary. PSW update RAMM using a PC at Fulton Hogan's office in Masterton, because they do not have access to update RAMM remotely.

Mercury reconciles the CDC DUML load using the HHR profile in accordance with exemption 233. Wattages are derived from the monthly database extracts provided by CDC, and on and off times are derived from data logger information.

The scope of the audit encompasses the collection, security and accuracy of the data, including the preparation of submission information based on the database reporting. The diagram below shows the audit boundary for clarity.




The field audit was undertaken of a statistical sample of 146 items of load on 14 November 2022.

## 1.9. Summary of previous audit

The previous audit of this database was undertaken by Tara Gannon of Veritek Limited in May 2020. The summary table below shows the statuses of the non-compliances raised in the previous audit. Further comment is made in the relevant sections of this report.

| Subject | Section | Clause | Non-compliance | Status |
|---|---|---|---|---|
| Deriving submission information | 2.1 | 11(1) of Schedule 15.3 | The database contains some inaccurate data.<br>• Six items of load do not have an ICP number recorded. There is no impact because the RAMM database extract is manually amended to include the missing information before it is provided to Mercury.<br>• One light (pole ID 939) has a lamp model of UNK (UNK, 0 watts) with a zero lamp and gear wattage recorded. I found that the light was a CA 7022 24 LED (21W) and the light details and wattage had been manually added to the extract that was provided to Mercury for submission.<br>• Four LED lights (pole IDs 900, 901, 904 and 905) have a blank gear wattage but zero should be recorded.<br>• 15 ITAL (ITRO, 55 watts) have a lamp wattage which differs from the expected value in the lamp specifications.<br>• Two PH (50E, 50 watts) and two UNK (50E, 50 watts) have a gear wattage which differs from Authority's standardised wattages.<br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. | Still existing. |
| ICP identifier and items of load | 2.2 | 11(2)(a) and (aa) of Schedule 15.3 | Six items of load do not have an ICP number recorded. | Still existing |
| Description and | 2.4 | 11(2)(c) & (d) of Schedule 15.3 | One item of load connected to ICP 0020903000WRADA (pole ID 939) has a lamp model of UNK (UNK, 0 watts) and a zero lamp and gear wattage in the database. The correct lamp details and | Still existing |

| Subject | Section | Clause | Non-compliance | Status |
|---|---|---|---|---|
| capacity of load | | | wattages are manually added prior to providing the database extract to Mercury.<br><br>Four items of load connected to ICP 0020903000WRADA (pole IDs 900, 901, 904 and 905) have a blank gear wattage but zero is expected.<br><br>Three items of load with a blank ICP number have no lamp model, lamp wattage or gear wattage recorded in the database. The correct lamp details and wattages are manually added prior to providing the database extract to Mercury. | |
| Database accuracy | 3.1 | Clause 15.2 & 15.37(b) | The database contains some inaccurate data.<br>• Six items of load do not have an ICP number recorded. There is no impact because the RAMM database extract is manually amended to include the missing information before it is provided to Mercury.<br>• One light (pole ID 939) has a lamp model of UNK (UNK, 0 watts) with a zero lamp and gear wattage recorded. I found that the light was a CA 7022 24 LED (21W) and the light details and wattage had been manually added to the extract that was provided to Mercury for submission.<br>• Four LED lights (pole IDs 900, 901, 904 and 905) have a blank gear wattage but zero should be recorded.<br>• 15 ITAL (ITRO, 55 watts) have a lamp wattage which differs from the expected value in the lamp specifications.<br><br>Two PH (50E, 50 watts) and two UNK (50E, 50 watts) have a gear wattage which differs from Authority's standardised wattages | Still existing |
| Volume information accuracy | 3.2 | 15.2 and 15.37B(c) | The database contains some inaccurate data.<br>• Six items of load do not have an ICP number recorded. There is no impact because the RAMM database extract is manually amended to include the missing information before it is provided to Mercury.<br>• One light (pole ID 939) has a lamp model of UNK (UNK, 0 watts) with a zero lamp and gear wattage recorded. I found that the light was a CA 7022 24 LED (21W) and the light details and wattage had been manually added to the extract that was provided to Mercury for submission.<br>• Four LED lights (pole IDs 900, 901, 904 and 905) have a blank gear wattage but zero should be recorded.<br>• 15 ITAL (ITRO, 55 watts) have a lamp wattage which differs from the expected value in the lamp specifications.<br>• Two PH (50E, 50 watts) and two UNK (50E, 50 watts) have a gear wattage which differs from Authority's standardised wattages.<br><br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. | Still existing |

## 1.10. Distributed unmetered load audits (Clause 16A.26 and 17.295F)

### Code reference

*Clause 16A.26 and 17.295F*

### Code related audit information

*Retailers must ensure that DUML database audits are completed:*

1. *by 1 June 2018 (for DUML that existed prior to 1 June 2017)*
2. *within three months of submission to the reconciliation manager (for new DUML)*
3. *within the timeframe specified by the Authority for DUML that has been audited since 1 June 2017.*

### Audit observation

Mercury have requested Veritek to undertake this streetlight audit.

### Audit commentary

This audit report confirms that the requirement to conduct an audit has been met for this database within the required timeframe.

### Audit outcome

Compliant

## 2. DUML DATABASE REQUIREMENTS

### 2.1. Deriving submission information (Clause 11(1) of Schedule 15.3)

**Code reference**

*Clause 11(1) of Schedule 15.3*

**Code related audit information**

*The retailer must ensure the:*

- *DUML database is up to date*
- *methodology for deriving submission information complies with Schedule 15.5.*

**Audit observation**

The process for calculation of consumption was examined and the application of profiles was checked. The database was checked for accuracy.

**Audit commentary**

Mercury reconciles this DUML load using the HHR profile in accordance with exemption 233.

- Wattages are derived from an extract provided by CDC each month. The best available estimate indicates that the potential error of the database is greater than 5.0%.as discussed in **section 3.1**.
- On and off times are derived from a data logger.

I reviewed the submission information for September 2022 and identified that the calculation methodology was correct, however the wattage value used by Mercury includes Waka Kotahi lights that are also part of the Lower North Island Waka Kotahi DUML database. The result is an over submission of 4,950 kWh for September 2022. Non-compliance is recorded here and in **sections 3.1 and 3.2.**

Volume inaccuracy is present in the database as follows:

| Issue | Estimated volume information impact (annual kWh) |
|---|---|
| 31 items of load do not have an ICP number recorded. | 3,234 kWh |
| Five lights have a blank lamp model with a zero lamp and blank gear wattage recorded. Four of these lights have a light change date of 6 July 2022. | ? |

On 18 June 2019, the Electricity Authority issued a memo clarifying the memo of 2012 that stated that a monthly snapshot was sufficient to calculate submission from, and confirmed the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed, and
- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

The current monthly report is provided as a snapshot and this practice is non-compliant. When a wattage is changed in the database due to a physical change or a correction, only the record present at the time the report is run is recorded, not the historical information showing dates of changes. Mercury completes revision submissions where corrections are required. Mercury has not yet updated their processes to be consistent with the Authority's memo, and no corrections have been required since Mercury became the retailer on 1 October 2019.

Additions, removals and changes are entered into RAMM at Fulton Hogan's office in Masterton by PSW. The database contains a "light install date" and a "lamp install date" but there is not a field for "livening date" for newly connected lights. Change dates are automatically generated by RAMM when records change but cannot be edited by the user. PSW normally enters the data into RAMM soon after the changes occur.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 2.1<br>With: Clause 11(1) of Schedule 15.3<br><br>From: 01-May-20<br>To: 30-Sep-22 | Database assessed as having poor precision therefore the potential error is greater than 5.0% resulting in an estimated over submission of 2,200 kWh per annum.<br>Mercury's calculation of submission volumes includes Waka Kotahi lights that are also included in the Waka Kotahi Lower North Island DUML database resulting in an over submission of 4,950 kWh for September 2022 and an assessed annual over submission of 56,394 kWh.<br>The database contains some inaccurate data.<br>• 31 items of load do not have an ICP number recorded; the impact is accessed as 3,234 kWh per annum using an annual hours value of 4,271 hours, and<br>• five lights have a blank lamp model with a zero lamp and blank gear wattage recorded.<br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot.<br>Potential impact: High<br>Actual impact: High<br>Audit history: Twice<br>Controls: Weak<br>Breach risk rating: 9 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **High** | Controls are rated as weak as the database extract provided for the audit had the CDC lights separated from the Waka Kotahi lights but yet when the data is aggregated for calculation of capacities for submission purposes, both data sets are being combined.<br>The impact is assessed to be high because of the inclusion in the submission volumes of Waka Kotahi lights resulting in double submission of this load. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| Investigating with regards to the Waka Kotahi lights, we will ensure that this is corrected. We will follow up and work with CDC to make the necessary corrections and ensure that CDC are database is being kept up to date to ensure compliance and accurate consumption reporting. | December 2022/January 2023 | Investigating |

| Preventative actions taken to ensure no further issues will occur | Completion date | |
|---|---|---|
| Investigating with regards to the Waka Kotahi lights, we will ensure that this is corrected. We will follow up and work with CDC to make the necessary corrections and ensure that CDC are database is being kept up to date to ensure compliance and accurate consumption reporting. | December 2022/January 2023 | |

## 2.2. ICP identifier and items of load (Clause 11(2)(a) and (aa) of Schedule 15.3)

### Code reference

*Clause 11(2)(a) and (aa) of Schedule 15.3*

### Code related audit information

*The DUML database must contain:*

- *each ICP identifier for which the retailer is responsible for the DUML*
- *the items of load associated with the ICP identifier.*

### Audit observation

The database was checked to confirm an ICP was recorded against each item of load.

### Audit commentary

The database contains load connected to DUML ICP 0020903000WRADA, as well as metered ICPs 0666003741PC35F, 0063024000WR98D and 0063068001WR5DD, and unmetered solar load.

31 items of load did not have an ICP number recorded in the database:

| RAMM database extract as at Sept 2022 | | | | | |
|---|---|---|---|---|---|
| Pole ID | Road Name | Light Owner | Lamp Make Model | Lamp Wattage | Gear Wattage |
| 934 | FANTAIL STREET | CDC Roading | 33W 4000k LED | 33 | 0 |
| 933 | FANTAIL STREET | CDC Roading | CA 7032 24 LED 33 Watt | 33 | 0 |
| 935 | FANTAIL STREET | CDC Roading | CA 7032 24 LED 33 Watt | 33 | 0 |
| 950 | ENDELAVE WAY | CDC Roading | CA 7032 24 LED 33 Watt | 33 | 0 |
| 948 | HARTLEY AVE | CDC Roading | CA 7032 24 LED 27watts | 27 | 0 |
| 932 | FANTAIL STREET | CDC Roading | CA 7032 24 LED 33 Watt | 33 | 0 |
| 949 | ENDELAVE WAY | CDC Roading | CA 7032 24 LED 33 Watt | 33 | 0 |
| 937 | FANTAIL STREET | CDC Roading | CA 7032 24 LED 33 Watt | 33 | 0 |
| 956 | KEA COURT | CDC Roading | CA 7032 24 LED 27watts | 27 | 0 |
| 931 | FANTAIL STREET | CDC Roading | CA 7032 24 LED 33 Watt | 33 | 0 |
| 938 | FANTAIL STREET | CDC Roading | CA 7032 24 LED 21watts | 21 | 0 |

| | | | | | |
|---|---|---|---|---|---|
| 939 | MAIN ROAD URBAN SOUTH | Amenity and Accessway | CA 7032 24 LED 21watts | 21 | 0 |
| 926 | HOWARD STREET | CDC Roading | Vizulo Mini Martin | 28 | 0 |
| 812 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 811 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 810 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 809 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 944 | FEIST STREET | CDC Roading | Vizulo Mini Martin | 28 | 0 |
| 943 | FEIST STREET | CDC Roading | Vizulo Mini Martin | 28 | 0 |
| 942 | FEIST STREET | CDC Roading | Vizulo Mini Martin | 28 | 0 |
| 945 | FEIST STREET | CDC Roading | Vizulo Mini Martin | 28 | 0 |
| 947 | MOLESWORTH STREET | CDC Roading | Vizulo Mini Martin | 28 | 0 |
| 946 | MOLESWORTH STREET | CDC Roading | Vizulo Mini Martin | 28 | 0 |
| 927 | FANTAIL STREET | CDC Roading | CA 7032 24 LED 33 Watt | 33 | 0 |
| 936 | HARTLEY AVE | CDC Roading | 33W 4000k LED | 33 | 0 |
| 954 | KEA COURT | CDC Roading | CA 7032 24 LED 27watts | 27 | 0 |
| 955 | KEA COURT | CDC Roading | CA 7032 24 LED 27watts | 27 | 0 |
| 960 | MADISON STREET | Unknown | | | |
| 951 | TAKAHE DRIVE | CDC Roading | CA 7032 24 LED 27watts | 27 | 0 |
| 952 | TAKAHE DRIVE | CDC Roading | CA 7032 24 LED 27watts | 27 | 0 |
| 953 | TAKAHE DRIVE | | CA 7032 24 LED 27watts | 27 | 0 |

The accuracy of ICP identifiers is discussed in **section 3.1**.

**Audit outcome**

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 2.2<br>With: Clause 11(2)(a) and (aa) of Schedule 15.3<br>From: 01-May-20<br>To: 30-Sep-22 | 31 items of load do not have an ICP number recorded.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Once<br>Controls: Moderate<br>Breach risk rating: 2 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | Controls are rated as moderate. The missing information is known but has not been updated in RAMM yet.<br>The impact is assessed to be low. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| We will work with CDC to update the database. | December 2022/January 2023 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will work with CDC to update the database. | December 2022/January 2023 | |

## 2.3. Location of each item of load (Clause 11(2)(b) of Schedule 15.3)

**Code reference**

*Clause 11(2)(b) of Schedule 15.3*

**Code related audit information**

*The DUML database must contain the location of each DUML item.*

**Audit observation**

The database was checked to confirm the location is recorded for all items of load.

**Audit commentary**

The database contains fields for the road name, displacement, pole number and GPS coordinates. The items of load without GPS coordinates have a road name and displacement recorded and are locatable.

Address accuracy is discussed further in **section 3.1**.

**Audit outcome**

Compliant

## 2.4. Description and capacity of load (Clause 11(2)(c) and (d) of Schedule 15.3)

**Code reference**

*Clause 11(2)(c) and (d) of Schedule 15.3*

**Code related audit information**

*The DUML database must contain:*

- *a description of load type for each item of load and any assumptions regarding the capacity*
- *the capacity of each item in watts.*

**Audit observation**

The database was checked to confirm that:

- it contained a field for light type and wattage capacity,
- wattage capacities include any ballast or gear wattage, and
- each item of load has a light type, light wattage, and gear wattage recorded.

**Audit commentary**

A description of each light is recorded in the lamp model field, and wattages are recorded in the lamp wattage and gear wattage fields.

I checked the completeness of light description and wattage information in the database extract.

All items of load connected to ICP 0020903000WRADA have a value recorded in the lamp model and lamp wattage fields.

Five items of load with a blank ICP number have no lamp model, lamp wattage or gear wattage recorded. Four of these lights have a light change date of 6 July 2022.

| RAMM database extract as at Sept 2022 | | | | | |
|---|---|---|---|---|---|
| Pole ID | Road Name | Light Owner | Lamp Make Model | Lamp Wattage | Gear Wattage |
| 812 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 811 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 810 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 809 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 960 | MADISON STREET | Unknown | | | |

The accuracy of the recorded wattages is discussed in **section 3.1**.

**Audit outcome**

Non-compliant

| Non-compliance | Description | | |
|---|---|---|---|
| Audit Ref: 2.4<br>With: Clause 11(2)(c) and (d) of Schedule 15.3<br><br>From: 01-May-20<br>To: 30-Sep-22 | Five items of load with a blank ICP number have no lamp model, lamp wattage or gear wattage recorded in the database.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Twice<br>Controls: Moderate<br>Breach risk rating: 2 | | |
| **Audit risk rating** | **Rationale for audit risk rating** | | |
| **Low** | Controls are rated as moderate. The missing information is known but has not been updated in RAMM yet.<br>The impact is assessed to be low. | | |
| **Actions taken to resolve the issue** | | **Completion date** | **Remedial action status** |
| We will work with CDC to update the database. | | December 2022/January 2023 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | | **Completion date** | |
| We will work with CDC to update the database. | | December 2022/January 2023 | |

## 2.5. All load recorded in database (Clause 11(2A) of Schedule 15.3)

### Code reference

*Clause 11(2A) of Schedule 15.3*

### Code related audit information

*The retailer must ensure that each item of DUML for which it is responsible is recorded in this database.*

### Audit observation

The field audit was undertaken of a statistical sample of 146 items of load on 14 November 2022. The sample was selected from two strata, as follows:

1. CDC Roading, and
2. other light owners.

### Audit commentary

The field audit discrepancies are detailed in the table below:

| Street | Database count | Field count | Light count difference | Wattage recorded incorrectly | Comments |
|---|---|---|---|---|---|
| CDC Roading | | | | | |
| BROADWAY | 14 | 16 | 2 | 1 | 1 x 35W MH inground light for Carterton sign, and 1 x L28 LED found in the field.<br>1 x 82W LED recorded as 150W SON in the database. |
| FANTAIL STREET | 8 | 8 | - | 8 | 7 x L27 recorded as 33W in the database, 1 x L27 recorded as 21W in the database. |
| HOLLOWAY STREET | 11 | 9 | -2 | - | 2 x 35W NH inground lights not found in the field. |
| MACS LANE | 3 | 3 | - | 3 | 3 x L33 LEDs recorded as 30W LED in the database. |
| MADISON STREET | 3 | 7 | 4 | - | 3 x Itron LED (55W) found in the field, 1 x L28 LED found in the field. |
| Other | | | | | |
| HOLLOWAY STREET | 6 | 7 | 1 | 2 | Two lights in the carpark by St John were recorded as CRE (2S, 40W) but are 60W Cosmo Polis.<br>1 x 50W SON found in the field |
| **Grand Total** | **146** | **153** | **9 (+7, -2)** | **14** | |

The field audit identified seven items of load missing from the database. The wattage differences identified during the field audit are recorded as non-compliance in **section 3.1**.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 2.5<br>With: Clause 11(2A) of Schedule 15.3<br><br>From: 01-May-20<br>To: 30-Sep-22 | Seven items of load not recorded in the database of the sample of 146 items of load checked.<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 they will mitigate risk most of the time.<br>The impact on settlement and participants is minor; therefore, the audit risk rating is low. | | |
| **Actions taken to resolve the issue** | | **Completion date** | **Remedial action status** |
| We will work with CDC to update the database. | | December 2022/January 2023 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | | **Completion date** | |
| We will work with CDC to update the database. | | December 2022/January 2023 | |

## 2.6. Tracking of load changes (Clause 11(3) of Schedule 15.3)

### Code reference

*Clause 11(3) of Schedule 15.3*

### Code related audit information

*The DUML database must track additions and removals in a manner that allows the total load (in kW) to be retrospectively derived for any given day.*

### Audit observation

The process for tracking of changes in the database was examined.

### Audit commentary

The RAMM database functionality achieves compliance with the code.

The change management process and the compliance of the database reporting provided to Mercury is detailed in **sections 3.1** and **3.2**.

### Audit outcome

Compliant

## 2.7. Audit trail (Clause 11(4) of Schedule 15.3)

### Code reference

*Clause 11(4) of Schedule 15.3*

### Code related audit information

*The DUML database must incorporate an audit trail of all additions and changes that identify:*

- *the before and after values for changes*
- *the date and time of the change or addition*
- *the person who made the addition or change to the database.*

### Audit observation

The database was checked for audit trails.

### Audit commentary

The database has a complete audit trail for when lights are added or replaced.

However where changes are manually made to the RAMM extract prior to sending to populate missing ICP and update lamp wattage information, an audit trail is not recorded. This is recorded as non-compliance below.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 2.7<br>With: Clause 11(4) of Schedule 15.3<br><br>From: 01-May-20<br>To: 30-Sep-22 | Where manual changes to the database extract occur to populate missing information or make updates to wattage values, an audit trail is not created.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Once<br>Controls: Moderate<br>Breach risk rating: 2 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | Controls are rated as moderate, because most changes are made directly in RAMM. For the small number of manual changes made the user who made the change, the approximate date and time of the change, and before and after values can be determined from the other information available.<br>The impact is assessed to be low, because the manually made changes can be identified by comparing the unmodified RAMM extract to the modified one. All changes are made by the same user, at the same time. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| We will work with CDC to ensure that they are creating an audit trail when changes are made. | December 2022/January 2023 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| We will work with CDC to ensure that they are creating an audit trail when changes are made. | December 2022/January 2023 | |

## 3. ACCURACY OF DUML DATABASE

### 3.1. Database accuracy (Clause 15.2 and 15.37B(b))

#### Code reference

*Clause 15.2 and 15.37B(b)*

#### Code related audit information

*Audit must verify that the information recorded in the retailer's DUML database is complete and accurate.*

#### Audit observation

As detailed in **section 2.1**, I reviewed the submission calculation provided by Mercury and identified that the calculation methodology was correct, however the wattage value used by Mercury includes Waka Kotahi lights that are also part of the Lower North Island Waka Kotahi DUML database. The result is an over submission of 4,950 kWh for September 2022 and an assessed annual over submission of 56,394 kWh.

Mercury's submissions are based on a monthly extract from the RAMM database. A database extract was provided in November 2022, and I assessed the accuracy of this by using the DUML Statistical Sampling Guideline. The table below shows the survey plan.

| Plan Item | Comments |
|---|---|
| Area of interest | Carterton DC streetlights |
| Strata | The database contains 661 items of load in the Carterton DC region. The management process is the same for all lights. I created two strata:<br>1. CDC Roading, and<br>2. other light owners. |
| Area units | I created a pivot table of the roads, and I used a random number generator in a spreadsheet to select a total of 30 sub-units. |
| Total items of load | 146 items of load were checked, making up 22% of the database. |

Wattages were checked for alignment with the published standardised wattage table produced by the Electricity Authority against the database or in the case of LED lights against the LED light specification.

The change management process and timeliness of database updates was evaluated.

#### Audit commentary

**Field audit findings**

A field audit was conducted of a statistical sample of 146 items of load. The "database auditing tool" was used to analyse the results, which are shown in the table below.

| Result | Percentage | Comments |
|---|---|---|
| The point estimate of R | 101.7 | Wattage from the survey is higher than the database wattage by 1.7% |
| $R_L$ | 97.2 | With a 95% level of confidence, it can be concluded that the error could be between -2.8% and +8.9% |
| $R_H$ | 108.9 | |

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 1 February 2019. The table below shows that Scenario C (detailed below) applies, and the best available estimate indicates that the potential error of the database is greater than 5.0%.

- The variability of the sample results across the strata means that the true wattage (installed in the field) could be between 2.8% lower and 8.9% higher than the wattage recorded in the DUML database.
- In absolute terms the installed capacity is estimated to be 1 kW higher than the database indicates.
- There is a 95% level of confidence that the installed capacity is between 1 kW and 3 kW higher than the database.
- In absolute terms, total annual consumption is estimated to be 2,200 kWh higher than the DUML database indicates.
- There is a 95% level of confidence that the annual consumption is between 3,600 kWh lower and 11,300 kWh higher than the database indicates.

| Scenario | Description |
|---|---|
| A - **Good accuracy, good precision** | This scenario applies if:<br>(a) $R_H$ is less than 1.05; and<br>(b) $R_L$ is greater than 0.95<br>The conclusion from this scenario is that:<br>(a) the best available estimate indicates that the database is accurate within +/- 5 %; and<br>(b) this is the best outcome. |
| B - **Poor accuracy, demonstrated with statistical significance** | This scenario applies if:<br>(a) the point estimate of R is less than 0.95 or greater than 1.05<br>(b) as a result, either $R_L$ is less than 0.95 or $R_H$ is greater than 1.05.<br>There is evidence to support this finding. In statistical terms, the inaccuracy is statistically significant at the 95% level |
| C - **Poor precision** | This scenario applies if:<br>(a) the point estimate of R is between 0.95 and 1.05<br>(b) $R_L$ is less than 0.95 and/or $R_H$ is greater than 1.05<br>The conclusion from this scenario is that the best available estimate is not precise enough to conclude that the database is accurate within +/- 5 % |

**Light description and capacity accuracy**

As discussed in **section 2.4**, all items of load connected to ICP 0020903000WRADA have a lamp model and lamp wattage recorded.

Five items of load with a blank ICP number have no lamp model, lamp wattage or gear wattage recorded. Four of these lights have a light change date of 6 July 2022.

| RAMM database extract as at Sept 2022 | | | | | |
|---|---|---|---|---|---|
| Pole ID | Road Name | Light Owner | Lamp Make Model | Lamp Wattage | Gear Wattage |
| 812 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 811 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 810 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 809 | MAIN ROAD URBAN NORTH | Amenity and Accessway | | | |
| 960 | MADISON STREET | Unknown | | | |

Lamp and gear wattages for all other lamps were compared to the expected values for ICP 0020903000WRADA, and no exceptions were identified:

**ICP number accuracy**

All DUML load is connected to ICP 0020903000WRADA.

As discussed in **section 2.2**, 31 items of load did not have an ICP number recorded in the database.

To check ICP number accuracy, I compared the ICP number to the light owner.

- All lights connected to metered ICPs were owned by "Parks".
- All lights recorded as solar were owned by "CDC Solar Lighting" or "Parks" and the lighting details indicated that they were solar powered.

**Address location accuracy**

As discussed in **section 2.3**, all lights have an address recorded, and I did not identify any inaccurate addresses.

**Change management process findings**

PSW are responsible for all field work including new connections, removals, repairs and maintenance. Fulton Hogan inspect the work completed by PSW and provide support as necessary. PSW update RAMM using a PC at Fulton Hogan's office in Masterton, because they do not have access to update RAMM remotely.

For new connections, CDC is only responsible once the subdivision is "vested" in council. Developers install the lights and provide as built plans and request a section 224 subdivision certification. Once the roading team receives the light details as part of this process they are updated in RAMM. The roading team has asked developers not to liven the lights until this process is complete, and staff periodically check pending new connections at night to determine whether they have been connected early. Most new subdivisions in the region are rural and do not have streetlights, and it is estimated that two or three new subdivisions are connected per annum.

Outage patrols are conducted every four months by Fulton Hogan. Outages are also reported by residents within the CDC region and work orders are raised with PSW as required.

**Festive lights**

Two festive lights are recorded in the database against ICP 0020903000WRADA. They are switched on and off by PSW, and I saw evidence that the festive light wattages, connection and disconnection dates are added to the database extract provided to Mercury during months where the festive lights are connected. Zero wattages are reported for these lights when they are disconnected.

**Private lights**

To the best of CDC's knowledge, all unmetered streetlights are recorded in the database. Some lights recorded in the database are owned by private organisations such as Salvation Army housing.

**Change Management**

The current monthly report is provided as a snapshot and this practice is non-compliant. When a wattage is changed in the database due to a physical change or a correction, only the record present at the time the report is run is recorded, not the historical information showing dates of changes. Mercury completes revision submissions where corrections are required. Mercury has not yet updated their processes to be consistent with the Authority's memo, and no corrections have been required since Mercury became the retailer on 1 October 2019.

**Audit outcome**

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.1<br>With: Clause 15.2 and 15.37B(b)<br><br>From: 01-May-20<br>To: 30-Sep-22 | Database assessed as having poor precision therefore the potential error is greater than 5.0% resulting in an estimated over submission of 2,200 kWh per annum.<br>Mercury's calculation of submission volumes includes Waka Kotahi lights that are also included in the Waka Kotahi Lower North Island DUML database resulting in an over submission of 4,950 kWh for September 2022 and an assessed annual over submission of 56,394 kWh.<br>The database contains some inaccurate data.<br>• 31 items of load do not have an ICP number recorded; the impact is accessed as 3,234 kWh per annum using an annual hours value of 4,271 hours, and<br>• five lights have a blank lamp model with a zero lamp and blank gear wattage recorded.<br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot.<br>Potential impact: High<br>Actual impact: High<br>Audit history: Twice<br>Controls: Weak<br>Breach risk rating: 9 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **High** | Controls are rated as weak as the database extract provided for the audit had the CDC lights separated from the Waka Kotahi lights but yet when the data is aggregated for calculation of capacities for submission purposes, both data sets are being combined.<br>The impact is assessed to be high because of the inclusion in submission of Waka Kotahi lights resulting in double submission of this load. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| Investigating with regards to the Waka Kotahi lights, we will ensure that this is corrected. We will follow up and work with CDC to make the necessary corrections and ensure that CDC are database is being kept up to date to ensure compliance and accurate consumption reporting. | December 2022/January 2023 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Investigating with regards to the Waka Kotahi lights, we will ensure that this is corrected. We will follow up and work with CDC to make the necessary corrections and ensure that CDC are database is being kept up to date to ensure compliance and accurate consumption reporting. | December 2022/January 2023 | |

## 3.2. Volume information accuracy (Clause 15.2 and 15.37B(c))

### Code reference

*Clause 15.2 and 15.37B(c)*

### Code related audit information

*The audit must verify that:*

- *volume information for the DUML is being calculated accurately*
- *profiles for DUML have been correctly applied.*

### Audit observation

The submission was checked for accuracy for the month the database extract was supplied. This included:

- checking the registry to confirm that the ICP has the correct profile and submission flag, and
- checking the database extract combined with the on hours against the submitted figure to confirm accuracy.

### Audit commentary

As detailed in **section 2.1**, I reviewed the submission information for September 2022 and identified that the calculation methodology was correct, however the wattage value used by Mercury includes Waka Kotahi lights that are also part of the Lower North Island Waka Kotahi DUML database. The result is an over submission of 4,950 kWh for September 2022.

In absolute terms, total annual consumption is estimated to be 2,200 kWh higher than the DUML database indicates. This is outside the allowable +/- 5% variance threshold and is recorded as non-compliance below.

Mercury reconciles this DUML load using the HHR profile, and the correct profiles and submission types are recorded on the registry.

Volume inaccuracy is present in the database as follows:

| Issue | Estimated volume information impact (annual kWh) |
|---|---|
| 31 items of load do not have an ICP number recorded. | 3,234 kWh |

| Issue | Estimated volume information impact (annual kWh) |
|---|---|
| Five lights have a blank lamp model with a zero lamp and blank gear wattage recorded. Four of these lights have a light change date of 6 July 2022. | ? |

On 18 June 2019, the Electricity Authority issued a memo clarifying the memo of 2012 that stated that a monthly snapshot was sufficient to calculate submission from, and confirmed the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed, and
- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

The current monthly report is provided as a snapshot and this practice is non-compliant. When a wattage is changed in the database due to a physical change or a correction, only the record present at the time the report is run is recorded, not the historical information showing dates of changes. Mercury completes revision submissions where corrections are required. Mercury has not yet updated their processes to be consistent with the Authority's memo, and no corrections have been required since Mercury became the retailer on 1 October 2019.

Additions, removals and changes are entered into RAMM at Fulton Hogan's office in Masterton by PSW. The database contains a "light install date" and a "lamp install date" but there is not a field for "livening date" for newly connected lights. Change dates are automatically generated by RAMM when records change but cannot be edited by the user. PSW normally enters the data into RAMM soon after the changes occur.

**Audit outcome**

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.2<br>With: Clause 15.2 and 15.37B(c)<br><br>From: 01-May-20<br>To: 30-Sep-22 | Database assessed as having poor precision therefore the potential error is greater than 5.0% resulting in an estimated over submission of 2,200 kWh per annum.<br>Mercury's calculation of submission volumes includes Waka Kotahi lights that are also included in the Waka Kotahi Lower North Island DUML database resulting in an over submission of 4,950 kWh for September 2022 and an assessed annual over submission of 56,394 kWh.<br>The database contains some inaccurate data.<br>• 31 items of load do not have an ICP number recorded; the impact is accessed as 3,234 kWh per annum using an annual hours value of 4,271 hours, and<br>• five lights have a blank lamp model with a zero lamp and blank gear wattage recorded.<br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot.<br>Potential impact: High<br>Actual impact: High<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 9 |

| Audit risk rating | Rationale for audit risk rating | | |
|---|---|---|---|
| **High** | Controls are rated as weak as the database extract provided for the audit had the CDC lights separated from the Waka Kotahi lights but yet when the data is aggregated for calculation of capacities for submission purposes, both data sets are being combined.<br><br>The impact is assessed to be high because of the inclusion in submission of Waka Kotahi lights resulting in double submission of this load. | | |
| **Actions taken to resolve the issue** | | **Completion date** | **Remedial action status** |
| Investigating with regards to the Waka Kotahi lights, we will ensure that this is corrected. We will follow up and work with CDC to make the necessary corrections and ensure that CDC are database is being kept up to date to ensure compliance and accurate consumption reporting. | | December 2022/January 2023 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | | **Completion date** | |
| Investigating with regards to the Waka Kotahi lights, we will ensure that this is corrected. We will follow up and work with CDC to make the necessary corrections and ensure that CDC are database is being kept up to date to ensure compliance and accurate consumption reporting. | | December 2022/January 2023 | |

## CONCLUSION

A RAMM database is held by CDC. PSW are responsible for all field work including new connections, removals, repairs and maintenance. Fulton Hogan inspect the work completed by PSW and provide support as necessary. PSW update RAMM using a PC at Fulton Hogan's office in Masterton, because they do not have access to update RAMM remotely.

Mercury's calculation of submission volumes includes Waka Kotahi lights that are also included in the Waka Kotahi Lower North Island DUML database resulting in an over submission of 4,950 kWh for September 2022 and an assessed annual over submission of 56,394 kWh.

Mercury reconciles the CDC DUML load using the HHR profile in accordance with exemption 233. Wattages are derived from the monthly database extracts provided by CDC, and on and off times are derived from data logger information.

A field audit was conducted of a statistical sample of 146 items of load. The "database auditing tool" was used to analyse the results, which are shown in the table below.

| Result | Percentage | Comments |
|---|---|---|
| The point estimate of R | 101.7 | Wattage from the survey is higher than the database wattage by 1.7% |
| RL | 97.2 | With a 95% level of confidence, it can be concluded that the error could be between -2.8% and +8.9% |
| RH | 108.9 | |

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 1 February 2019. The best available estimate confirmed that the database accuracy is not within the allowable +/-5% threshold.

- The variability of the sample results across the strata means that the true wattage (installed in the field) could be between 2.8% lower and 8.9% higher than the wattage recorded in the DUML database.
- In absolute terms the installed capacity is estimated to be 1 kW higher than the database indicates.
- There is a 95% level of confidence that the installed capacity is between 1 kW and 3 kW higher than the database.
- In absolute terms, total annual consumption is estimated to be 2,200 kWh higher than the DUML database indicates.
- There is a 95% level of confidence that the annual consumption is between 3,600 kWh lower and 11,300 kWh higher than the database indicates

On 18 June 2019, the Electricity Authority issued a memo clarifying the memo of 2012 that stated that a monthly snapshot was sufficient to calculate submission from, and confirmed the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed, and
- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

The current monthly report is provided as a snapshot, which is non-compliant. Mercury applies the kW value for the last day of the month when calculating submission volumes. Mercury completes revision submissions where corrections are required and has not yet updated their processes to be compliant with the Authority's memo.

Seven non-compliances were identified, and no recommendations were made. The future risk rating of 35 indicates that the next audit be completed in three months. I have considered this in conjunction with Mercury's comments and recommend that the next audit be in six months The matters raised are detailed below:

PARTICIPANT RESPONSE