# ELECTRICITY INDUSTRY PARTICIPATION CODE
# DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

# CHRISTCHURCH CITY COUNCIL
# MAINPOWER LIGHTS
# AND
# CONTACT ENERGY LIMITED

Prepared by: Rebecca Elliot

Date audit commenced: 3 May 2021

Date audit report completed: 4 June 2021

Audit report due date: 1 May 2021

## TABLE OF CONTENTS


Executive summary ..... 3
Audit summary ..... 4

Non-compliances ..... 4
Recommendations ..... 5
Issues 5

1. Administrative ..... 6

Exemptions from Obligations to Comply with Code ..... 6
Structure of Organisation ..... 6
Persons involved in this audit ..... 7
Hardware and Software ..... 7
1.1. Breaches or Breach Allegations ..... 7
1.2. ICP Data ..... 7
1.3. Authorisation Received ..... 8
1.4. Scope of Audit ..... 8
1.5. Summary of previous audit ..... 9
1.6. Distributed unmetered load audits (Clause 16A.26 and 17.295F) ..... 10
1.7.
1.8.
1.9.
1.10.
2. DUML database requirements ..... 12

Deriving submission information (Clause 11(1) of Schedule 15.3) ..... 12
2.1. ICP identifier and items of load (Clause 11(2)(a) and (aa) of Schedule 15.3) ..... 13
2.2. Location of each item of load (Clause 11(2)(b) of Schedule 15.3) ..... 14
2.3. Description and capacity of load (Clause 11(2)(c) and (d) of Schedule 15.3) ..... 14
2.4. All load recorded in database (Clause 11(2A) of Schedule 15.3) ..... 15
2.5. Tracking of load changes (Clause 11(3) of Schedule 15.3) ..... 16
2.6. Audit trail (Clause 11(4) of Schedule 15.3) ..... 17
2.7.

3. Accuracy of DUML database ..... 18
3.1.
3.2.

Database accuracy (Clause 15.2 and 15.37B(b)) ..... 18
Volume information accuracy (Clause 15.2 and 15.37B(c)) ..... 19

Conclusion ..... 22

Participant response ..... 23

## EXECUTIVE SUMMARY

This audit of the **Christchurch City Council (CCC) DUML database** on the Mainpower network and processes was conducted at the request of **Contact Energy Limited (Contact)**, 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 previous CCC audit contained assessment of both the Orion and Mainpower databases. This audit reviews the Mainpower database only and covers the 128 unmetered items of load (0.28% of the CCC total lighting load). The CCC lights on the Orion network are recorded in their own DUML report. Mainpower is no longer engaged as the streetlighting maintenance contractor and are not maintaining this database going forward, therefore any changes are not being tracked until a new database source is determined. Contact is using the report provided by Mainpower on the 2/2/2021 to calculate submissions.

This DUML database switched from Contact Energy's CTCT participant code to the CTCS code on 1 October 2020. This is managed by Contact Energy's subsidiary Simply Energy. Contact Energy carried out a material change audit in relation to the ICPs that were switched to the CTCS code. This did not include the management of unmetered load. Therefore, a material change should have been undertaken prior to this. This is recorded as non-compliance in Contact Energy's Reconciliation Participant audit. This audit examines submission since it switched to the CTCS participant code.

This full field audit found a large number of discrepancies as the database is no longer maintained. The field audit found 48% less wattage than is recorded in the database. This is outside of the allowable +/- 5% allowable threshold and will be resulting in an estimated over submission of 10,699 kWh per annum. This is recorded as non-compliance.

Contact reconciles this DUML load using the DST profile. I checked the January 2021 submission data for ICPs 0000366681MPA69 and 0000366751MPE2F and confirmed that the calculation methodology was correct. I found that there was a difference between the wattage applied by Contact and the database extract I received from Mainpower.

Simply Energy on behalf of Contact send the monthly kW values to EMS. EMS prepare the submission file using the data logger hours to determine the burn hours and the file is then sent to Simply Energy who submit the data under the CTCS code.

This audit found four non-compliances, and no recommendations were raised. The future risk rating of 26 indicates that the next audit be completed in three months. I have considered this in conjunction with Contact's responses and agree with the recommendation.

The matters raised are detailed below:

## AUDIT SUMMARY

### NON-COMPLIANCES

| Subject | Section | Clause | Non-Compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Distributed Unmetered Load audit | 1.10 | 16A.26 | Submission data was not provided within the required time frame. | Moderate | Low | 2 | Identified |
| Deriving submission information | 2.1 | 11(1) of Schedule 15.3 | Variance in light volumes reported to Simply Energy vs what is recorded in the database is likely to be resulting in an estimated 2,368 kWh per annum of under submission.<br>The database accuracy is assessed to be 48% less than is recorded in the database. Resulting in an estimated over submission of 10,699 kWh per annum (based on 4,271 annually<br>The monthly database extract used for submission does not track changes at a daily basis and is provided as a snapshot. | None | Medium | 8 | Investigating |
| Database accuracy | 3.1 | 15.2 and 15.37B (b) | The database accuracy is assessed to be 48% less than is recorded in the database. Resulting in an estimated over submission of 10,699 kWh per annum (based on 4,271 annual burn hours).<br>Load changes no longer tracked in the Mainpower database. | None | Medium | 8 | Investigating |
| Volume information accuracy | 3.2 | 15.2 and 15.37B (c) | Variance in light volumes reported to Simply Energy vs what is recorded in the database is likely to be resulting in an estimated 2,368 kWh per annum of under submission.<br>The database accuracy is assessed to be 48% less than is recorded in the database. Resulting in an estimated over submission of 10,699 kWh per annum (based on 4,271 annually<br>The monthly database extract used for submission does not track changes at a daily basis and is provided as a snapshot. | None | Medium | 8 | Investigating |
| Future Risk Rating | | | | | | 26 | |

| 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

### Exemptions from Obligations to Comply with Code

#### Code reference

*Section 11 of Electricity Industry Act 2010.*

#### Code related audit information

1.1. *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

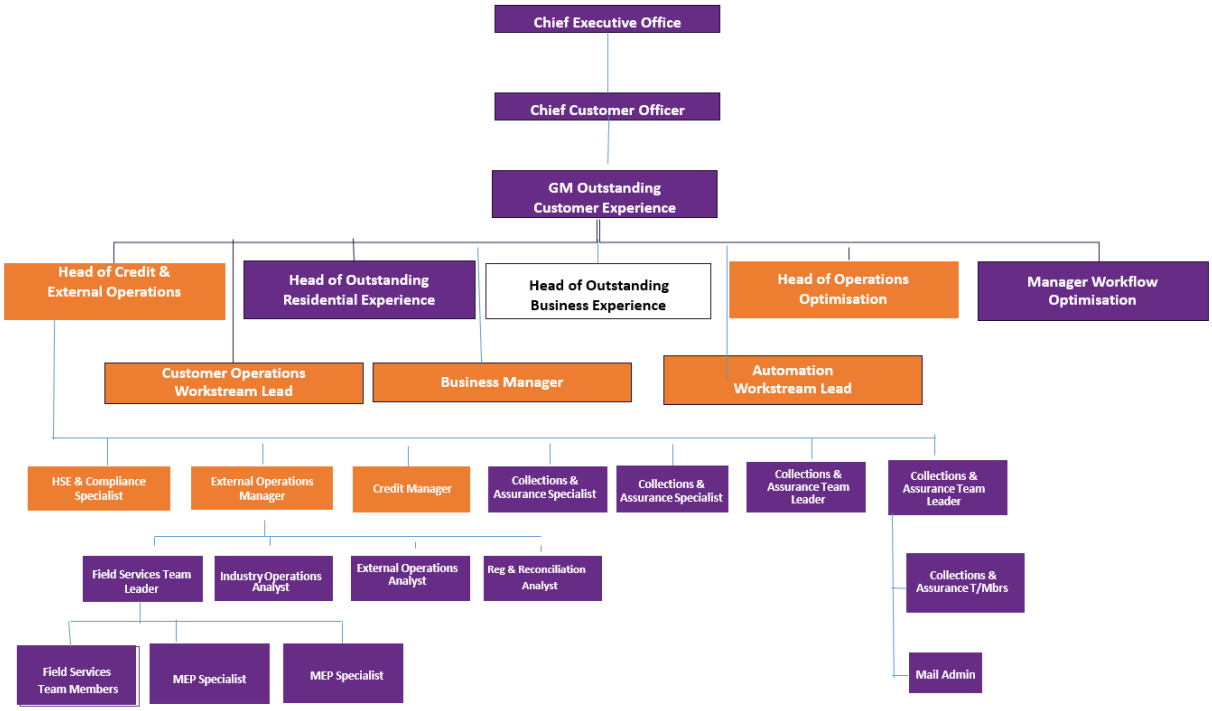
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

#### Audit commentary

There are no exemptions relevant to the scope of this audit. Contact have ceased submitting this data half hourly when the ICPs transferred to the CTCS code from CTCT. The DST profile is now used to submit this data. Therefore, the previously reported exemption No. 177 is no longer relevant.

### Structure of Organisation

1.2. Contact Energy provided a copy of their organisational structure.



## Persons involved in this audit

Auditor:

1.3.

| Name | Company | Role |
|---|---|---|
| Rebecca Elliot | Veritek Limited | Lead Auditor |
| Claire Stanley | Veritek Limited | Supporting Auditor |

Other personnel assisting in this audit were:

| Name | Title | Company |
|---|---|---|
| Neil O'Loughlin | Maintenance Manager | Mainpower |
| Joel Hung | Commercial Analyst | Mainpower |
| Luke Cartmell-Gollan | Commercial Operations Manager | Contact Energy |

## Hardware and Software

1.4. Mainpower use an Access based Mainpower Streetlight Database for the management of the DUML information. Backup and restoration procedures are in accordance with normal industry protocols.

Mainpower are no longer the field contractor and therefore will no longer be maintaining this DUML load in their database. A new database source needs to be sourced going forward.

1.5.

## Breaches or Breach Allegations

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

## ICP Data

**Mainpower**

| ICP Number | Description | NSP | Profile | Number of items of load | Database wattage (watts) |
|---|---|---|---|---|---|
| 0000366681MPA69 | Mainpower - KAI0111 Riverlea Estate Dr | KAI0111 | DST | 20 | 400 |
| 0000366751MPE2F | Mainpower - KAI0111 Street Lights | KAI0111 | DST | 108 | 7,296 |
| Total | | | | 128 | 7,696 |

## Authorisation Received

All information was provided directly by Contact or Mainpower.

## Scope of Audit

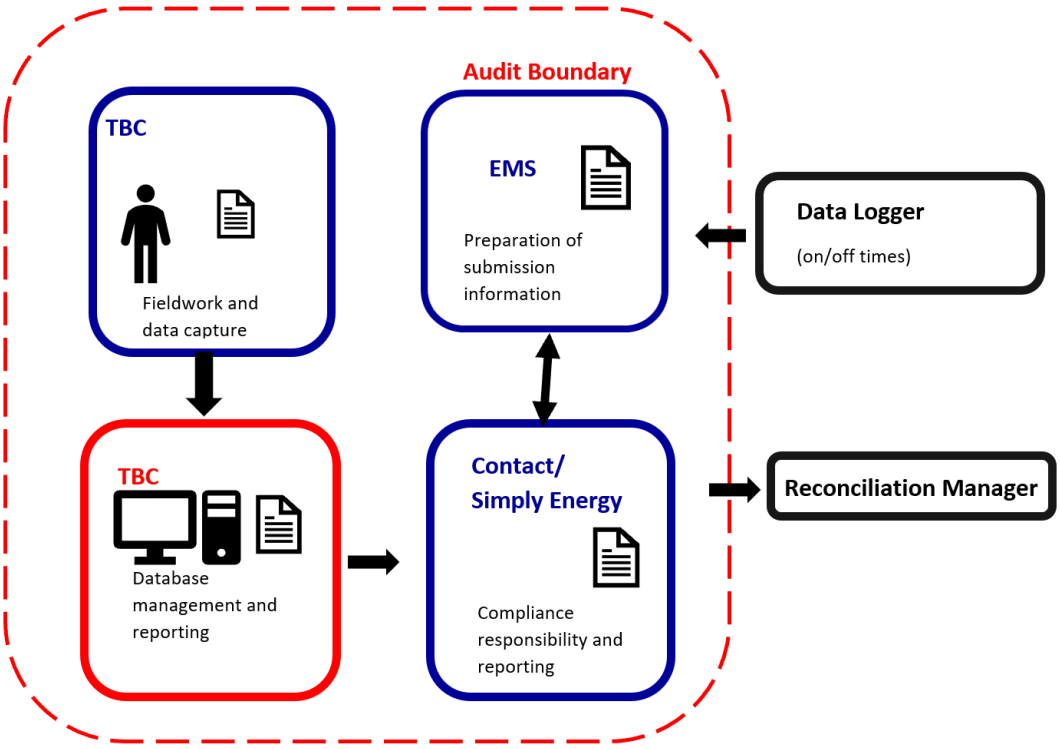
1.7. This audit of the CCC DUML database and processes was conducted at the request of Contact in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied. The audit was conducted in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

1.8. Electricity is supplied in the CCC region by Mainpower. Mainpower previously managed the database of unmetered load information on behalf of CCC, who is Contact's customer. 128 unmetered items of load are connected to Mainpower's network in Kainga.

Mainpower is no longer engaged as the streetlighting maintenance contractor, therefore they are no longer being advised of any changes to maintain the database. The Mainpower database was audited as this is the last extract that was provided to the trader.

This audit is assessing the last extract provided by Mainpower. Contact is using a report provided by Mainpower on the 2/2/2021 to calculate submissions, they have advised they will continue to use this information until they are able to get updated 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 diagrams below show the audit boundaries for clarity.




A field audit was undertaken for all 128 items of load for Mainpower on 5th May 2021.

## Summary of previous audit

The previous audit of this database was undertaken by Tara Gannon of Veritek Limited in February 2020. The current status of the issues raised in that audit are detailed below.

1.9.

| Subject | Section | Clause | Non-compliance | Status |
|---|---|---|---|---|
| Deriving submission information | 2.1 | 11(1) of Schedule 15.3 | The database accuracy is assessed to be 92.4% indicating estimated over submission of 2,366 kWh per annum (based on 4,271 annual burn hours).<br>There was a 271 W or 73.84 kWh difference between the database information and submission information for January 2020.<br>A "comm date" and "installation year" are recorded in the database, but the dates may not be sufficient to determine exactly when a light was installed, and the fields are not always populated consistently.<br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. | Still existing<br>Still existing<br>Existing – database not updated<br>Existing – database not updated |
| All load recorded in database | 2.5 | 11(2A) of Schedule 15.3 | Five L20 lamps situated on Pine Ave are not included in the database, resulting in estimated under submission of 100W or 427.10 kWh p.a. based on 4,271 burn hours. | Cleared |
| Database accuracy | 3.1 | 15.2 and 15.37B(b) | The database accuracy is assessed to be 92.4% indicating estimated over submission of 2,366 kWh per annum (based on 4,271 annual burn hours).<br>Some street addresses do not reflect the street that the light is located on.<br>A "comm date" and "installation year" are recorded in the database, but the dates may not be sufficient to determine exactly when a light was installed, and the fields are not always populated consistently. | Still existing<br>Still existing<br>Existing – database not updated |
| Volume information accuracy | 3.2 | 15.2 and 15.37B(c) | The database accuracy is assessed to be 92.4% indicating estimated over submission of 2,366 kWh per annum (based on 4,271 annual burn hours).<br>There was a 271 W or 73.84 kWh difference between the database information and submission information for January 2020.<br>A "comm date" and "installation year" are recorded in the database, but the dates may not be sufficient to determine exactly when a light was installed, and the fields are not always populated consistently.<br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. | Still existing<br>Still existing<br>Existing – database not updated<br>Existing – database not updated |

| Subject | Section | Description | Recommendation | **Status** |
|---|---|---|---|---|
| Database accuracy | 3.1 | Street address information | Check and update street addresses to reflect the street that the lights are situated on. | Not implemented |

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

**Code reference**

*Clause 16A.26 and 17.295F*

1.10. **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**

Contact have requested Veritek to undertake this streetlight audit.

**Audit commentary**

This audit report confirms that the requirement to conduct an audit has been not met for this database within the required timeframe.

## Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 1.10<br>With: Clause 16A.26<br><br>From: 26-Feb-20<br>To: 03-May-21 | Submission data was not provided within the required time frame.<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 because they mitigate risk most of the time but there is room for improvement.<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 |
|---|---|---|
| | | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| The timely provision of information was impacted by the various other compliance related requests at that time. Since May 2021 significant additional resource has been added to the wider team and audits since this time have not been affected. | Completed late 2021 | |

## 2. DUML DATABASE REQUIREMENTS

Deriving submission information (Clause 11(1) of Schedule 15.3)

### Code reference

*Clause 11(1) of Schedule 15.3*

### Code related audit information

2.1. *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.

### Audit commentary

Contact reconciles this DUML load using the DST profile. Simply Energy on behalf of Contact send the monthly kW values to EMS. EMS prepare the submission file using the data logger hours to determine the burn hours and the file is then sent to Contact who submit the data under the CTCS code

I checked the January 2021 submission data for ICPs 0000366681MPA69 and 0000366751MPE2F and confirmed that the calculation methodology was correct. I found that there was a difference between the wattage applied by Contact and the database extract I received from Mainpower as detailed below:

| ICP Number | Wattage report light count | Database extract light count | Difference | kWh Value | Expected kWh value | kWh difference |
|---|---|---|---|---|---|---|
| 0000366681MPA69 | 20 | 20 | 0 | 114.04 | 114.05 | - |
| 0000366751MPE2F | 96 | 108 | 12 | 1,883.11 | 2,080.20 | 197.09 |
| **Total** | | | | | | 197.09 |

This will be resulting in an estimated under submission of 2,368 kWh per annum. This is recorded as non-compliance.

The field audit found 48% less wattage than is recorded in the database. This is outside of the allowable +/-5% allowable threshold and will be resulting in an estimated over submission of 10,699 kWh per annum. This is recorded as non-compliance.

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 monthly report is provided with a daily kW value, but changes are not tracked at a daily level. This is recorded as non-compliance.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 2.1<br>With: Clause 11(1) of Schedule 15.3<br><br>From: 26-Feb-20<br>To: 03-May-21 | Variance in light volumes reported to Simply Energy vs what is recorded in the database is likely to be resulting in an estimated 2,368 kWh per annum of under submission.<br>The database accuracy is assessed to be 48% less than is recorded in the database. Resulting in an estimated over submission of 10,699 kWh per annum (based on 4,271 annually<br>The monthly database extract used for submission does not track changes at a daily basis and is provided as a snapshot.<br>Potential impact: Medium<br>Actual impact: Medium<br>Audit history: Three times previously<br>Controls: None<br>Breach risk rating: 8 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Medium** | Controls are rated as none as this database is no longer being maintained.<br>The impact is assessed to be medium, based on the potential kWh variances detailed above but this will increase until an alternative database is found to manage this load. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| We will use the findings from the (complete) field audit completed in May 2021 for all submissions from 1/5/2021 until such time as we get better information from an additional field audit, or the Council providing a database extract again. | 31/1/2022 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| The Council discontinued their database management service with Mainpower in early 2021 and despite numerous requests we have not been able to find anyone within Council who can answer our questions. We will continue to make enquiries and push for resolution to this unfortunate scenario. | Unknown | |

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 databases were checked to confirm the correct ICP was recorded against each item of load.

**Audit commentary**

An ICP is recorded for each item of load. Mainpower's database contained a customer number that is linked to the relevant ICP in the customer table in Access.

**Audit outcome**

Compliant

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

**Code reference**

2.3. *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 databases were checked to confirm the location is recorded for all items of load.

**Audit commentary**

All items of load have street and most have an area recorded. The database contains GPS coordinates for most items of load, and the 20 items without GPS coordinates have a pole or nearest house location recorded, so they can be located.

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

**Audit outcome**

2.4. Compliant

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

Mainpower's database contained light type which corresponded to lamp wattage, gear wattage and size (total wattage) information recorded in the SLType table. All items of load had a light type recorded, and all light types have a size (total wattage) recorded in the SLType table.

I confirmed that the lights identified in the field with a label of 36W is the installed wattage but not programmed wattage, the lights are programmed down to 29W as confirmed by the 'as built' report.

I confirmed that no light types had an invalid zero or blank total wattage recorded, and all light types which required a gear wattage had a valid lamp and gear wattage recorded. The accuracy of the recorded wattages is discussed in **section 3.1**.

### Audit outcome

Compliant

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

### Code reference

2.5. *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

A field audit included all 128 items of load and was undertaken on 5th May 2021.

### Audit commentary

The field audit discrepancies are detailed in the table below.

| Road | Database count | Field count | Light count difference | Wattage recorded incorrectly | Comments |
|---|---|---|---|---|---|
| MAIN NORTH RD | 18 | 18 | | 14 | 1 x 150W HPS recorded in the database but 1 x 150W LED found in the field<br>1 x 158W recorded in the database but 1 x 113W LED found in the field<br>5 x 250W HPS recorded in the database but 5 x 150W LED found in the field<br>2 x 250W HPS recorded in the database but 2 x 158W LED found in the field<br>5 x 70W HPS recorded in the database but 5 x 29W LED found in the field |

| Road | Database count | Field count | Light count difference | Wattage recorded incorrectly | Comments |
|---|---|---|---|---|---|
| KAINGA RD | 3 | 3 | | 3 | 2 x 136W recorded in the database but 29W LED found in the field<br>1 x 70W HPS recorded in the database but 1 x 29W LED found in the field |
| LINK ROAD | 1 | 1 | | 1 | 1 x 70W HPS recorded in the database but 1 x 29W LED found |
| PINE AVE | 1 | 1 | | 1 | 1 x 110W HPS recorded in the database but 1 x 29W LED found in the field |
| MAIN RD-KAINGA RD | 3 | 2 | -1 | 2 | 2 x 150W HPS recorded in the database but 2 x 29W LED found in the field<br>1 x 150W HPS recorded in the database but not found in the field |
| OLD MAIN NORTH RD | 8 | 8 | | 8 | 8 x 70W HPS recorded in the database but 8 x 29W LED found in the field |
| **Grand Total** | **34** | **33** | **-1** | **29** | |

There were no additional lamps found in the field, one lamp was not found in the field that was in the database. The database accuracy is discussed in **section 3.1**.

**Audit outcome**

2.6. Compliant

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 database functionality achieved compliance with the code when it was being managed by Mainpower.

### Audit outcome

Compliant

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

### Code reference

*Clause 11(4) of Schedule 15.3*

2.7. **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 had a complete and compliant audit trail.

### Audit outcome

Compliant

## 3. ACCURACY OF DUML DATABASE

Database accuracy (Clause 15.2 and 15.37B(b))

### Code reference

*Clause 15.2 and 15.37B(b)*

### Code related audit information

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

### Audit observation

The field audit was undertaken of all 108 items of unmetered load items recorded in the database on the 5th of May 2021.

Wattages were checked for alignment with the published standardised wattage table produced by the Electricity Authority or LED light specifications where available against the DUML database.

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

### Audit commentary

**ICP accuracy**

As discussed in **section 2.2**, all lights have a GXP and corresponding ICP recorded. The ICP and corresponding GXP number are assigned based on information provided during the connection process.

**Database accuracy**

The field audit found a large number of errors as this database is no longer being maintained. Many lights were recorded as 70W HPS and have since been replaced with 29W LEDs, a number of other lights have also been replaced. These are detailed in **section 2.5.** That database was found to have 48% less wattage in than is recorded in the database. This is outside of the allowable +/-5% allowable threshold and will be resulting in an estimated over submission of 10,699 kWh per annum. This is recorded as non-compliance.

**Lamp description and capacity accuracy**

As discussed in **section 2.4**, wattages for all items of load were checked against the published standardised wattage table produced by the Electricity Authority or LED light specifications and found to be correct.

**Change management process findings**

Mainpower is no longer engaged as the streetlighting maintenance contractor, therefore they are no longer being advised of any changes to maintain the database. This is recorded as non-compliance.

Outage patrols are no longer conducted by Mainpower.

The new connections when Mainpower was the field contractor required a proposed plan be provided and an “as built” plan once the development was complete. Once installed, the information was passed to Mainpower and processed within two days of receipt. Mainpower added the records to their database immediately as ‘proposed’ and they were updated within a day of livening. Mainpower has no visibility of any recent new connections. A new database source is required and once determined the change management process will need to be assessed.

**Address location accuracy**

As discussed in **section 2.3**, all lights have an address recorded. I found that street names were sometimes recorded inconsistently (e.g. Cawood St/Cawood Tce, Gillespie St/Gillespies Rd, Ourbridge/Ourbridge St, Riverlea Est Drive/Riverlea Estate Driv/Riverlea Estate Drive).

The previous two audits recommended that the street names should be reviewed and corrected, which has not been done. As this is no longer going to be the database source, I haven't repeated the recommendation. I found that in general the GPS locations appeared correct, and these were relied upon when completing the field audit.

**Audit outcome**

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.1<br>With: Clause 15.2 and 15.37B(b)<br><br>From: 26-Feb-20<br>To: 03-May-21 | The database accuracy is assessed to be 48% less than is recorded in the database. Resulting in an estimated over submission of 10,699 kWh per annum (based on 4,271 annual burn hours).<br>Load changes no longer tracked in the Mainpower database.<br>Potential impact: Medium<br>Actual impact: Medium<br>Audit history: Three times previously<br>Controls: None<br>Breach risk rating: 8 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Medium** | Controls are rated as none as this database is no longer being maintained.<br>The impact is assessed to be medium, based on the potential kWh variances detailed above but this will increase until an alternative database is found to manage this load. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| We will use the findings from the (complete) field audit completed in May 2021 for all submissions from 1/5/2021 until such time as we get better information from an additional field audit, or the Council providing a database extract again. | 31/1/2022 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| The Council discontinued their database management service with Mainpower in early 2021 and despite numerous requests we have not been able to find anyone within Council who can answer our questions. We will continue to make enquiries and push for resolution to this unfortunate scenario. | Unknown | |

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

Contact reconciles this DUML load using the DST profile. Simply Energy on behalf of Contact send the monthly kW values to EMS. EMS prepare the submission file using the data logger hours to determine the burn hours and the file is then sent to Contact who submit the data under the CTCS code

I checked the January 2021 submission data for ICPs 0000366681MPA69 and 0000366751MPE2F and confirmed that the calculation methodology was correct. I found that there was a difference between the wattage applied by Contact and the database extract I received from Mainpower as detailed below:

| ICP Number | Wattage report light count | Database extract light count | Difference | kWh Value | Expected kWh value | kWh difference |
|---|---|---|---|---|---|---|
| 0000366681MPA69 | 20 | 20 | 0 | 114.04 | 114.05 | - |
| 0000366751MPE2F | 96 | 108 | 12 | 1,883.11 | 2,080.20 | 197.09 |
| **Total** | | | | | | 197.09 |

This will be resulting in an estimated under submission of 2,368 kWh per annum. This is recorded as non-compliance.

The field audit found 48% less wattage than is recorded in the database. This is outside of the allowable +/-5% allowable threshold and will be resulting in an estimated over submission of 10,699 kWh per annum. This is recorded as non-compliance.

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 monthly report is provided with a daily kW value, but changes are not tracked at a daily level. This is recorded as non-compliance.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.2<br>With: Clause 15.2 and 15.37B(c)<br><br>From: 26-Feb-20<br>To: 03-May-21 | Variance in light volumes reported to Simply Energy vs what is recorded in the database is likely to be resulting in an estimated 2,368 kWh per annum of under submission.<br>The database accuracy is assessed to be 48% less than is recorded in the database. Resulting in an estimated over submission of 10,699 kWh per annum (based on 4,271 annually<br>The monthly database extract used for submission does not track changes at a daily basis and is provided as a snapshot.<br>Potential impact: Medium<br>Actual impact: Medium<br>Audit history: Three times previously<br>Controls: None<br>Breach risk rating: 8 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Medium** | Controls are rated as none as this database is no longer being maintained.<br>The impact is assessed to be medium, based on the potential kWh variances detailed above but this will increase until an alternative database is found to manage this load. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| We will use the findings from the (complete) field audit completed in May 2021 for all submissions from 1/5/2021 until such time as we get better information from an additional field audit, or the Council providing a database extract again. | 31/1/2022 | Investigating |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| The Council discontinued their database management service with Mainpower in early 2021 and despite numerous requests we have not been able to find anyone within Council who can answer our questions. We will continue to make enquiries and push for resolution to this unfortunate scenario. | Unknown | |

## CONCLUSION

Electricity is supplied in the CCC region by Orion and Mainpower, 128 unmetered items of load (0.28%) are connected to Mainpower's network in Kainga.

Mainpower is no longer engaged as the streetlighting maintenance contractor and are not maintaining this database going forward, therefore any changes are not being tracked until a new database source is determined.

The Mainpower database was audited as this is the last extract that was provided to the trader.

A field audit included all 128 items of load and was undertaken on 5th May 2021. A large number of discrepancies were identified as the database is no longer maintained. Non-compliance is recorded because the error is more than ± 5.0%.

Contact reconciles this DUML load using the DST profile. I checked the January 2021 submission data for ICPs 0000366681MPA69 and 0000366751MPE2F and confirmed that the calculation methodology was correct. I found that there was a difference between the wattage applied by Contact and the database extract I received from Mainpower.

Simply Energy on behalf of Contact send the monthly kW values to EMS. EMS prepare the submission file using the data logger hours to determine the burn hours and the file is then sent to Simply Energy who submit the data under the CTCS code.

This audit is assessing the last extract provided by Mainpower. Contact is using a report provided by Mainpower on the 2/2/2021 to calculate submissions, they have advised they will continue to use this information until they are able to get updated information.

Mainpower are no longer the field contractor and are not maintaining this database going forward, therefore any changes going forward are not being tracked until a new database source is determined.

This audit found four non-compliances, and no recommendations were raised. The future risk rating of 26 indicates that the next audit be completed in three months. I have considered this in conjunction with Contact's responses and agree with the recommendation.

## PARTICIPANT RESPONSE

Firstly, we apologise for the late submission of this audit.

Mainpower ceased to manage this DUML database for CCC in early 2021 and we are still unaware what the Council's plans are in the ongoing management and maintenance of the database and lights within the Mainpower region. Getting this resolved is a very high priority. Until that time we will use the information provided by Veritek in their audit, as it was a complete field audit. Changes will be made to submission from May 2021 onwards to match the field audit data.