# ELECTRICITY INDUSTRY PARTICIPATION CODE
# DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

# GORE DISTRICT COUNCIL AND PIONEER ENERGY

Prepared by: Steve Woods

Date audit commenced: 11 November 2020

Date audit report completed: 2 December 2020

Audit report due date: 08-Dec-20

## TABLE OF CONTENTS

## EXECUTIVE SUMMARY

This audit of the **Gore District Council (GDC)** DUML database and processes was conducted at the request of **Pioneer Energy Limited (Pioneer)**, 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, which became effective on 1 June 2017.

The database is remotely hosted by RAMM Software Ltd. The field work and asset data capture is conducted by Powernet using Pocket RAMM.

The field audit was undertaken of a statistical sample of 142 items of load on 10th and 11th November. The main findings are as follows:

- some of the errors found in previous audits were still present in this audit,
- in absolute terms, total annual consumption is estimated to be 27,800 kWh higher than the DUML database indicates, and
- the under verandah fluorescent lights have been recorded with the incorrect wattages, so the database accuracy fell outside of the allowable +/-5% variance threshold.

This audit found four non-compliances and repeats the previous audit's recommendation that the fluorescent lamps be audited to confirm the correct wattages. The future risk rating of 29 indicates that the next audit be completed in three months. I have considered this in conjunction with Pioneer's comments and recommend that the next audit be undertaken in six months to allow time for the proposed improvements to be made.

## 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 | The database accuracy is assessed to be 121.7% of the database for the sample checked indicating a potential under submission of approximately 27,800 kWh per annum.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM and therefore not reconciled.<br>Estimated potential under submission of 29,508 kWh per annum due to incorrect lamp wattage and ballasts being used. | Weak | High | 9 | Identified |
| All load recorded in the database | 2.5 | 11(2A) of Schedule 15.3 | 5 additional lights found in the field.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM. | Moderate | Low | 2 | Identified |

| Subject | Section | Clause | Non-Compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---|---|---|---|---|---|---|
| Database accuracy | 3.1 | 15.2 and 15.37B(b) | The database accuracy is assessed to be 121.7% of the database for the sample checked indicating a potential under submission of approximately 27,800 kWh per annum.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM.<br>Estimated potential under submission of 29,508 kWh per annum due to incorrect lamp wattage and ballasts being used. | Weak | High | 9 | Identified |
| Volume information accuracy | 3.2 | 15.2 and 15.37B(c) | The database accuracy is assessed to be 121.7% of the database for the sample checked indicating a potential under submission of approximately 27,800 kWh per annum.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM and therefore not reconciled.<br>Estimated potential under submission of 29,508 kWh per annum due to incorrect lamp wattage and ballasts being used. | Weak | High | 9 | Identified |
| Future Risk Rating | | | | | | 29 | |

| **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 |
|---|---|---|
| Database accuracy | 3.1 | Audit all under verandah lighting to confirm the correct fluorescent lamp values are recorded in RAMM. |

## 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

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 commentary

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

## 1.2. Persons involved in this audit

Auditor:

**Steve Woods**

**Veritek Limited**

**Electricity Authority Approved Auditor**

**Claire Stanley**

**Supporting Auditor**

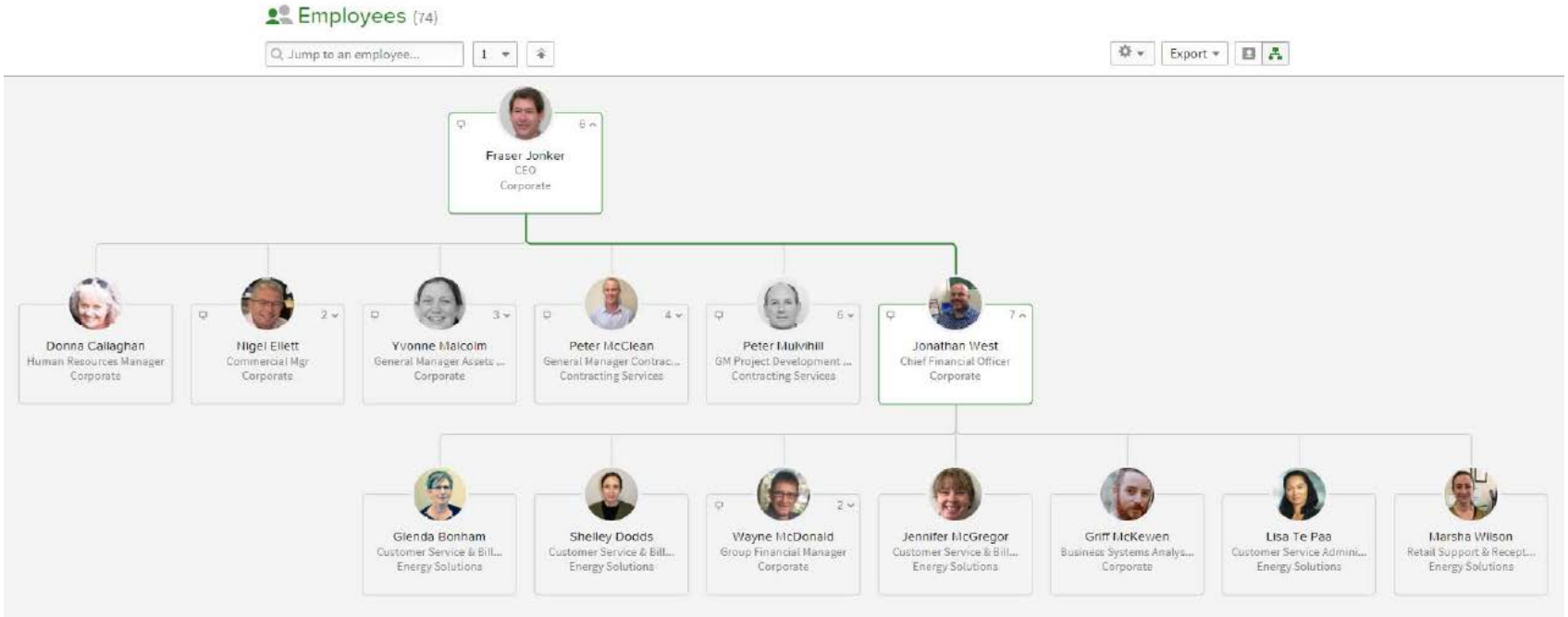
**Veritek Limited**

Other personnel assisting in this audit were:

| Name | Title | Company |
|---|---|---|
| Peter Standring | Transportation Manager | Gore District Council |
| Shivani Nayagar | Asset Information and GIS Officer | Gore District Council |
| Jennifer McGregor | Customer Services & Billing Analyst | Pioneer Energy |

## 1.3. Structure of Organisation

Pioneer provided a copy of their organisational structure:



## 1.4. Hardware and Software

The SQL database used for the management of DUML is remotely hosted by RAMM Software Ltd. The database is commonly known as "RAMM" which stands for "Roading Asset and Maintenance Management".

GDC confirmed that the database back-up is in accordance with standard industry procedures. Access to the database is secure by way of password protection.

Systems used by the trader and their agent 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 | Number of items of load | Database wattage (watts) |
|---|---|---|---|---|
| 0008801007TPEE2 | GDC LIGHTS - URBAN | GOR0331 | 1,065 | 30,023 |

## 1.7. Authorisation Received

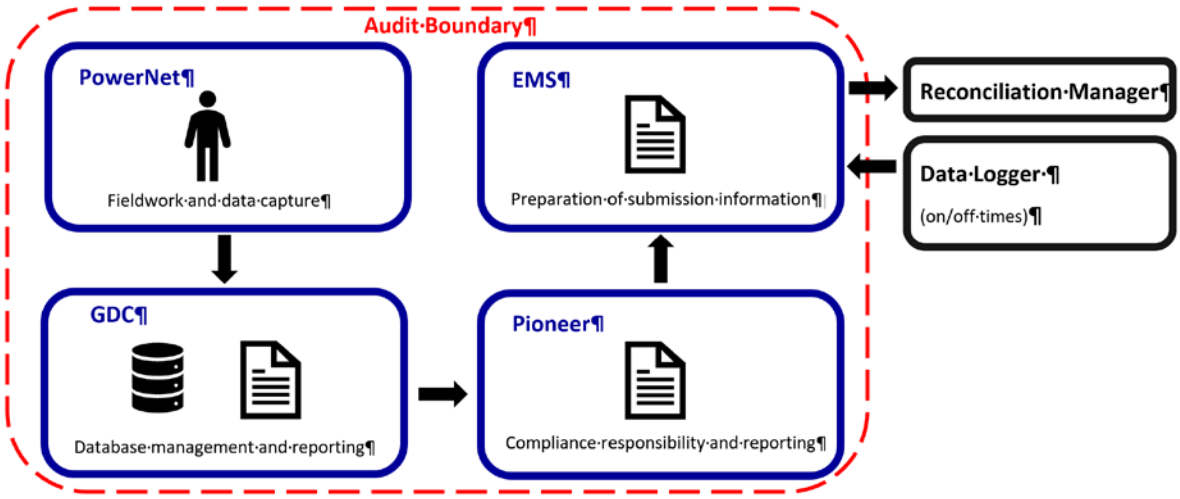
All information was provided directly by Pioneer and GDC.

## 1.8. Scope of Audit

The database used for submission is the GDC RAMM database.

Field work is conducted by PowerNet as a contractor.

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 audit was conducted in accordance with the audit guidelines for DUML audits version 1.1.

The field audit was undertaken of a statistical sample of 142 items of load on 10th and 11th November 2020.

### 1.9. Summary of previous audit

The previous audit was completed for all of the GDC ICPs in March 2020 by Rebecca Elliot of Veritek Limited. I have included only those non-compliances relevant to the ICP associated with this audit. Five non-compliances were identified, and one recommendation was made. The current status of the non-compliances recorded are detailed below.

## Table of Non-Compliance

| Subject | Section | Clause | Non-Compliance | Status |
|---|---|---|---|---|
| Deriving submission information | 2.1 | 11(1) of Schedule 15.3 | The database accuracy is assessed to be 120.9% of the database for the sample checked indicating a potential under submission of approximately 26,800 kWh per annum.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM and therefore not reconciled.<br>Estimated potential under submission of 29,508 kWh per annum due to incorrect lamp wattage and ballasts being used.<br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. | Still existing |
| Description of lights | 2.4 | 11(2)(c) of Schedule 15.3 | Two items of load with insufficient light descriptions | Cleared |
| All load recorded in the database | 2.5 | 11(2A) of Schedule 15.3 | 12 additional lights found in the field.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM. | Still existing |
| Database accuracy | 3.1 | 15.2 and 15.37B(b) | The database accuracy is assessed to be 120.9% of the database for the sample checked indicating a potential under submission of approximately 26,800 kWh per annum.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM.<br>Estimated potential under submission of 29,508 kWh per annum due to incorrect lamp wattage and ballasts being used. | Still existing |

| Subject | Section | Clause | Non-Compliance | Status |
|---|---|---|---|---|
| Volume information accuracy | 3.2 | 15.2 and 15.37B(c) | The database accuracy is assessed to be 120.9% of the database for the sample checked indicating a potential under submission of approximately 26,800 kWh per annum.<br><br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM and therefore not reconciled.<br><br>Estimated potential under submission of 29,508 kWh per annum due to incorrect lamp wattage and ballasts being used.<br><br>The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. | Still existing |

## Table of Recommendations

| Subject | Section | Non-Compliance | Status |
|---|---|---|---|
| Database accuracy | 3.1 | Audit all under verandah lighting to confirm the correct fluorescent lamp values are recorded in RAMM. | 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**

Pioneer 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**

Pioneer reconciles this DUML load using the DST profile. Pioneer is using the GDC RAMM database for reconciliation. The on and off times are derived from a data logger read by EMS and are used to create a shape file. Pioneer supplies EMS with the capacity information and EMS calculates the kWh figure for each ICP and includes this in the relevant AV080 file. This process was audited during Pioneer's reconciliation participant audit and EMS' agent audit. Compliance was confirmed for both parties.

I compared the RAMM database provided to the capacity information Pioneer supplied to EMS for the month of October 2020 and found it matched.

| Issue | Potential volume information impact (annual kWh) |
|---|---|
| Potential under submission due to database inaccuracy | 27,800 kWh under submission |
| Some decorative LED and seasonal festive LED lighting not recorded in RAMM. | Unknown but the anticipated volume associated is expected to be small. |
| 147 x Fluorescent lamps – no lamp type recorded. All recorded as 15W +10W ballast. Field audit indicated 2x36W tubes with a total wattage of 72W. | 29,508 kWh under submission |

This is recorded as non-compliance and discussed in **sections 2.5, 3.1** and **3.2**.

**Audit outcome**

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 2.1<br>With: Clause 11(1) of Schedule 15.3<br><br>From: 03-Mar-20<br>To: 04-Nov-20 | The database accuracy is assessed to be 121.7% of the database for the sample checked indicating a potential under submission of approximately 27,800 kWh per annum.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM and therefore not reconciled.<br>Estimated potential under submission of 29,508 kWh per annum due to incorrect lamp wattage and ballasts being used.<br>Potential impact: High<br>Actual impact: High<br>Audit history: Multiple times<br>Controls: Weak<br>Breach risk rating: 9 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **High** | The controls are rated as weak because historic errors have not been corrected.<br>The impact is assessed to be high, based on the kWh differences described above. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| Pioneer have been advised by Peter Standring that they have carried out a complete review of the under canopy and Parks lighting, positioning of the full stock identifying the type and number and how they are presently powered. This will be recorded in the database.<br>We will endeavour to work with GDC to resolve the other issues indicated in the audit. | 31.01.2021 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Pioneer will continue to work with GDC to resolve issues indicated in the audit. | 31.01.2021 | |

## 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 the correct ICP was recorded against each item of load.

**Audit commentary**

The database contains an ICP reference and all items of load had an ICP recorded.

**Audit outcome**

Compliant

### 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 the nearest street address, pole numbers and Global Positioning System (GPS) coordinates for each item of load and users in the office and field can view these locations on a mapping system.

**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 lamp type and wattage capacity and included any ballast or gear wattage and that each item of load had a value recorded in these fields.

**Audit commentary**

The database contains two records for wattage, firstly the lamp wattage and secondly the gear wattage, which represents ballast losses. The database correctly records the lamp and gear wattage.

**Audit outcome**

Compliant

## 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 142 items of load on 10th and 11th November 2020.

### Audit commentary

The field audit discrepancies are detailed in the table below:

| Street/Area | Database Count | Field Count | Lamp no. difference | No of incorrect lamp wattage | Comments |
|---|---|---|---|---|---|
| MEDWAY ST | 14 | 14 | | 9 | 9x incorrect fluorescent wattages recorded as 25W but double 36W tubes found in the field which should be recorded as 72W |
| MERSEY ST WEST | 10 | 10 | | 7 | 7x incorrect fluorescent wattages recorded as 25W but double 36W tubes found in the field which should be recorded as 72W |
| WAYLAND PARK CAR PARK NTH | 3 | 10 | +5 | | 5 x extra lights found in the field |
| GRAND TOTAL | 142 | 149 | + 5 | 16 | |

The field audit found five additional lights in the field. This is recorded as non-compliance below.

Festive lighting is used over the Christmas period, but this is not recorded in the RAMM database. GDC had expected to add these after the last audit, but this has yet to be completed.

The permanent decorative lighting installed in the park beside Medway Road around the large trout sculpture and surrounding trees had been checked in the field in the previous audit and the findings from this were expected to be updated in the database, but this has not been completed as expected.

Post the November field audit, Peter Stranding has advised that the discrepancies notified for the missing Wayland Park car park lights in the February 2020 report have been updated and reflected in the database.

The database accuracy is discussed 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: 03-Mar-20<br>To: 04-Nov-20 | 5 additional lights found in the field.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Multiple times<br>Controls: Moderate<br>Breach risk rating: 2 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **Low** | The controls are rated as moderate there are good controls in place to ensure that the database is kept up to date, but historic errors have not been corrected.<br>The impact is assessed to be low because there were only a small number of lights found. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| Pioneer have been advised by Peter Standring, GDC that an improvement plan will be put in place to correct the festive and decorative lighting to be recorded correctly in RAMM. | 31.01.2021 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Pioneer will continue to work with GDC to resolve this issue as indicated in the audit. | 31.01.2021 | |

## 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 Pioneer 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 RAMM database was checked for audit trails.

### Audit commentary

The RAMM database has a complete audit trail of all additions and changes to the database information.

### Audit outcome

Compliant

## 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**

The DUML Statistical Sampling Guideline was used to determine the database accuracy. The table below shows the survey plan.

| Plan Item | Comments |
|---|---|
| Area of interest | Gore District Council region |
| Strata | The database contains items of load in Gore district area.<br>The processes for the management of GDC items of load are the same, but I decided to place the items of load into three alphabetical strata of a similar size, as follows:<br>1. A-H,<br>2. I-N, and<br>3. O-W |
| Area units | I created a pivot table of the roads in each area and I used a random number generator in a spreadsheet to select a total of 22 sub-units. |
| Total items of load | 142 items of load were checked. |

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

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

**Audit commentary**

**Field Audit Findings**

A statistical sample of 142 items of load found that the field data was 121.7% of the database data for the sample checked.

| Result | Percentage | Comments |
|---|---|---|
| The point estimate of R | 121.7 | Wattage from survey is higher than the database wattage by 21.7% |
| $R_L$ | 100.0 | With a 95% level of confidence it can be concluded that the error could be between 0.0% and + 39.7% |
| $R_H$ | 139.7 | |

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 01/02/19 and the table below shows that Scenario B (detailed below) applies.

The conclusion from Scenario B is that the variability of the sample results across the strata means that the true wattage (installed in the field) could be between 0.0% and + 39.7% higher than the wattage recorded in the DUML database. Non-compliance is recorded because the potential error is greater than 5.0%.

In absolute terms the installed capacity is estimated to be 7kW higher than the database indicates.

There is a 95% level of confidence that the installed capacity is between 0 kW lower and 12 kW higher than the database.

In absolute terms, total annual consumption is estimated to be 27,800 kWh higher than the DUML database indicates.

There is a 95% level of confidence that the annual consumption is between 0 kWh p.a. lower and 51,000 kWh p.a. higher than the database indicates. This will be due to the missing car park lights and the incorrect under verandah lights selected in the audit sample. If these issues were addressed this would greatly improve the overall database accuracy. These errors have been present for some time and are not due to recent changes in the database. There is a total of 147 fluorescent lights recorded in the database. I have repeated the recommendation made in the last audit, that these are all reviewed to ensure the correct wattages are recorded in the database.

Post the November field audit, Peter Stranding has advised that the discrepancies notified for the missing Wayland Park car park lights in the February 2020 report have been updated and reflected in the database.

| Recommendation | Description | Audited party comment | Remedial action |
|---|---|---|---|
| Database accuracy | Audit all under verandah lighting to confirm the correct fluorescent lamp values are recorded in RAMM. | Pioneer have been advised by Peter Standring, GDC that an improvement plan will be put in place to correct the database with the issues mentioned in this audit. | Identified |

| 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 % |

**Lamp description and capacity accuracy**

Wattages for all items of load were checked against the published standardised wattage table produced by the Electricity Authority and found the same issue as identified in the last audit of incorrect under verandah light wattages recorded. I have recommended above that these be corrected:

| Incorrect lamp wattages and ballasts | Potential volume information impact (annual kWh) |
|---|---|
| 147 x Fluorescent lamps – no lamp type recorded. All recorded as 15W +10W ballast. Field audit indicated 2x36W tubes with a total wattage of 72W. | 29,508 kWh under submission |
| TOTAL | 29,508 kWh under submission |

This is recorded as non-compliance below.

**Change management process findings**

The processes were reviewed for new lamp connections and the tracking of load changes due to faults and maintenance.

GDC have no new subdivisions in progress so new streetlight connections are few and far between. There were no new connections found during the audit period. GDC will liaise with Pioneer and PowerNet if any are required.

As discussed in **section 2.5**, there is some permanent decorative lighting installed in the park beside Medway Road around the large trout sculpture and surrounding trees, and festive lighting is used over the Christmas period, but these items are not recorded in the RAMM database. A field audit of the decorative lights has been undertaken but this is yet to be updated in RAMM.

No private lights have been identified in the GDC database.

### Audit outcome

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.1<br>With: Clause 15.2 and 15.37B(b)<br><br>From: 03-Mar-20<br>To: 04-Nov-20 | The database accuracy is assessed to be 121.7% of the database for the sample checked indicating a potential under submission of approximately 27,800 kWh per annum.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM.<br>Estimated potential under submission of 29,508 kWh per annum due to incorrect lamp wattage and ballasts being used.<br>Potential impact: High<br>Actual impact: High<br>Audit history: Multiple times<br>Controls: Weak<br>Breach risk rating: 9 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **High** | The controls are rated as weak because historic errors have not been corrected.<br>The impact is assessed to be high, based on the kWh differences described above. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| Pioneer have been advised by Peter Standring that they will carry out a complete review and make sure the correct data is recorded in RAMM.<br>We will endeavour to work with GDC to resolve issues indicated in the audit. | 31.01.2021 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Pioneer advised by Peter Standring, GDC that an improvement plan will be put in place. | 31.01.2021 | |

## 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 burn hours against the submitted figure to confirm accuracy.

### Audit commentary

Pioneer reconciles this DUML load using the DST profile. Pioneer is using the GDC RAMM database for reconciliation. The on and off times are derived from a data logger read by EMS and are used to create a shape file. Pioneer supplies EMS with the capacity information and EMS calculates the kWh figure for each ICP and includes this in the relevant AV080 file. This process was audited during Pioneer's reconciliation participant audit and EMS' agent audit. Compliance was confirmed for both parties.

I compared the RAMM database provided to the capacity information Pioneer supplied to EMS for the month of October 2020 and found it matched.

**Audit outcome**

Non-compliant

| Non-compliance | Description |
|---|---|
| Audit Ref: 3.2<br>With: Clause 15.2 and 15.37B(c)<br><br>From: 03-Mar-20<br>To: 04-Nov-20 | The database accuracy is assessed to be 121.7% of the database for the sample checked indicating a potential under submission of approximately 27,800 kWh per annum.<br>Festive lighting and decorative lighting in the park beside Medway Road not recorded in RAMM and therefore not reconciled.<br>Estimated potential under submission of 29,508 kWh per annum due to incorrect lamp wattage and ballasts being used.<br>Potential impact: High<br>Actual impact: High<br>Audit history: Three times<br>Controls: Weak<br>Breach risk rating: 9 |
| **Audit risk rating** | **Rationale for audit risk rating** |
| **High** | The controls are rated as weak because historic errors have not been corrected.<br>The impact is assessed to be high, based on the kWh differences described above. |

| Actions taken to resolve the issue | Completion date | Remedial action status |
|---|---|---|
| Pioneer have been advised by Peter Standring that they will carry out a complete review and make sure the correct data is recorded in RAMM.<br>We will endeavour to work with GDC to resolve issues indicated in the audit. | 31.01.2021 | Identified |
| **Preventative actions taken to ensure no further issues will occur** | **Completion date** | |
| Pioneer advised by Peter Standring, GDC that an improvement plan will be put in place. | 31.01.2021 | |

## CONCLUSION

The database is remotely hosted by RAMM Software Ltd. The field work and asset data capture is conducted by Powernet using Pocket RAMM.

The field audit was undertaken of a statistical sample of 142 items of load on 10th and 11th November. The main findings are as follows:

1. some of the errors found in previous audits were still present in this audit,
2. in absolute terms, total annual consumption is estimated to be 27,800 kWh higher than the DUML database indicates, and
3. the under verandah fluorescent lights have been recorded with the incorrect wattages. The database accuracy fell outside of the allowable +/-5% variance threshold.

This audit found four non-compliances and repeats the previous audit's recommendation that the fluorescent lamps be audited to confirm the correct wattages. The future risk rating of 29 indicates that the next audit be completed in three months. I have considered this in conjunction with Pioneer's comments and recommend that the next audit be undertaken in six months to allow time for the proposed improvements to be made.

PARTICIPANT RESPONSE