ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

For

MANAWATU DISTRICT COUNCIL AND CONTACT ENERGY

Prepared by: Tara Gannon

Date audit commenced: 16 April 2019

Date audit report completed: 10 May 2019

Audit report due date: 1 June 2019

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EXECUTIVE SUMMARY

This audit of the **Manawatu District Council (MDC)** DUML database and processes was conducted at the request of **Contact Energy (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.

A RAMM database is held by MDC, who is Contact's customer. East Coast Lines (C & J Contracting) are responsible for new connections, fault, and maintenance work. Upgrades are completed by one of Powerco's approved contractors. The contractors provide invoices and supporting paperwork to MDC, who use this information to update RAMM.

Previously field work was completed by Alf Downs Streetlighting, who updated the database using Pocket RAMM. Once processes are bedded in with the new contractors, MDC may allow updates directly to the database using Pocket RAMM.

A monthly report from the database is provided to Contact, and used to calculate submissions. Contact submits the DUML load as HHR using the HHR profile. On hours are derived from data logger information.

Four non-compliances were identified, and no recommendations were raised. The future risk rating of 14 indicates that the next audit be completed in 12 months. Based on the comments provided, and taking into consideration that some of the non-compliances have little to no impact, I recommend that the next audit is completed in 15 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	The database contains some inaccurate data. Seven disconnected lights were included in the submission data.	Moderate	Medium	4	Identified
Description and capacity of load	2.4	11(2)(c) and (d) of Schedule 15.3	Three lamps have missing model, wattage and gear information. These are private lights which MDC is not responsible for. 30 festive LED lights have missing gear information. The gear is expected to be 0, and there is no impact.	Moderate	Low	2	Identified
Database accuracy	3.1	15.2 and 15.37B(b)	The database contains some inaccurate data.	Moderate	Medium	4	Identified
Volume information accuracy	3.2	15.2 and 15.37B(c)	The database contains some inaccurate data. Seven disconnected lights were included in the submission data. ICPs 0900087357PCBB6 and 1000560474PC712 had RPS HHR profile assigned on the registry instead of HHR.	Moderate	Medium	4	Identified
Future Risk Rating						14	

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	Description	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

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

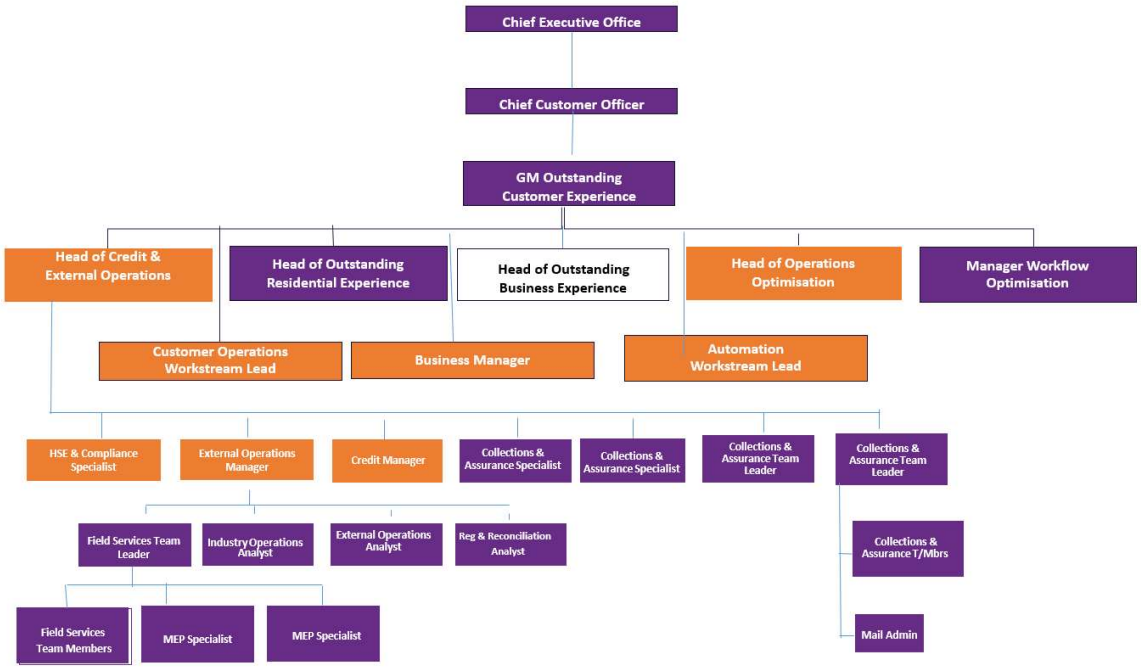
Audit commentary

There is one exemption in place relevant to the scope of this audit:

Exemption No. 177: Exemption to clause 8(g) of schedule 15.3 of the Electricity Industry Participation Code 2010 ("Code") in respect of providing half-hour ("HHR") submission information instead of non half-hour ("NHH") submission information for distributed unmetered load ("DUML"). This exemption expires at the close of 31 October 2023.

1.2. Structure of Organisation

Contact Energy provided a copy of their organisational structure.



1.3. Persons involved in this audit

Auditor:

Tara Gannon

Veritek Limited

Electricity Authority Approved Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Darryn Black	Asset Management Officer	Manawatu District Council
Paul Robson	Field Services Team Member	Contact Energy
Allie Jones	External Operations Analyst	Contact Energy

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".

Backup and restoration procedures are in place, and access to the database is restricted using logins and passwords.

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)
0900087357PCBB6	KAWAKAWA ROAD STREETLIGHTING	BPE0331	RPS HHR	1,864	128,294
1000560474PC712	MASTER ICP – MANAWATU DC URBAN STLIGHTS	BPE0331	RPS HHR	197	32,279
Total				2,061	160,573

1.7. Authorisation Received

All information was provided directly by Contact and MDC.

1.8. Scope of Audit

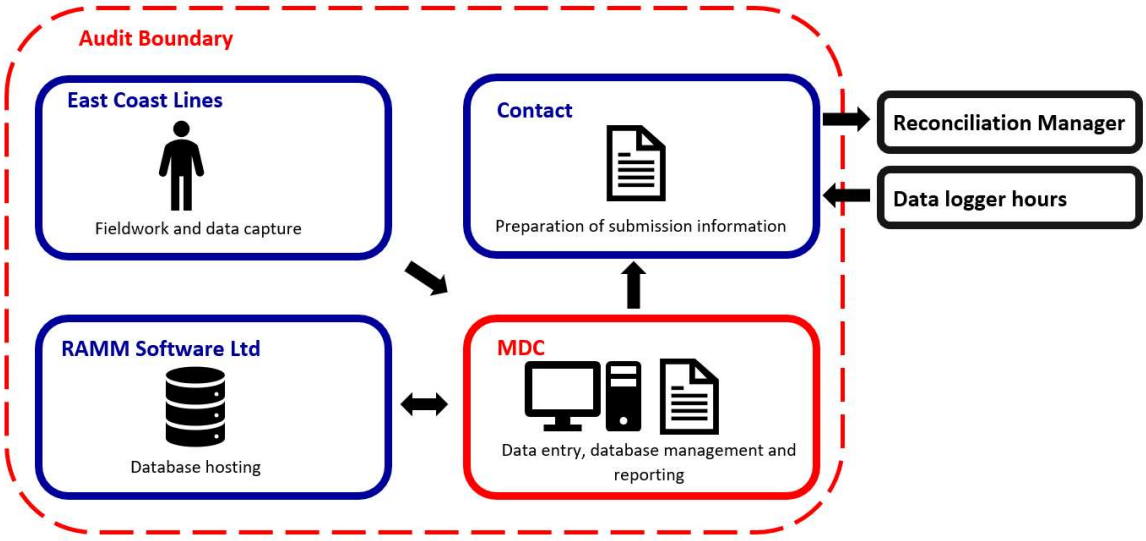
This audit of the MDC DUML database and processes was conducted at the request of Contact in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied. The audit was conducted in accordance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

A RAMM database is held by MDC, who is Contact's customer. East Coast Lines (C & J Contracting) are responsible for new connections, fault, and maintenance work. Upgrades are completed by one of Powerco's approved contractors. The contractors provide invoices and supporting paperwork to MDC, who use this information to update RAMM.

Previously field work was completed by Alf Downs Streetlighting, who updated the database using Pocket RAMM. Once processes are bedded in with the new contractors, MDC may allow updates directly to the database using Pocket RAMM.

A monthly report from the database is provided to Contact, and used to calculate submissions. Contact submits the DUML load as HHR using the HHR profile. On hours 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 140 items of load on 16 April 2019.

1.9. Summary of previous audit

Contact provided a copy of the last audit report completed by Tara Gannon of Veritek Limited in April 2018. Four non-compliances were identified, and no recommendations were made. The statuses of the non-compliances are described below.

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	The database used to prepare submissions contains some inaccurate information. The submission calculation excluded gear wattages, which resulted in under submission of 4,307 kWh for February 2018.	Still existing Cleared
Description and capacity of load	2.4	11(2)(c) and (d) of Schedule 15.3	Three lamps had missing model information. All were corrected during the audit.	Cleared, but some non-compliance remains in this section
Database accuracy	3.1	15.2 and 15.37B(b)	The database used to prepare submissions contains some inaccurate information.	Still existing
Volume information accuracy	3.2	*15.2 and 15.37B(c)*	The database used to prepare submissions contains some inaccurate information. The submission calculation excluded gear wattages, which resulted in under submission of 4,307 kWh for February 2018. Incorrect profiles are recorded on the registry for both ICPs.	Still existing Cleared 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

Contact 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. Compliance is confirmed.

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.

Audit commentary

This clause requires that the distributed unmetered load database must satisfy the requirements of schedule 15.5 regarding the methodology for deriving submission information. Contact reconciles this DUML load as HHR using the HHR profile, in accordance with exemption number 177. This exemption is discussed further in **section 1.1**. On and off times are derived from data logger information.

I checked the February 2019 submission data for ICPs 0900087357PCBB6 and 1000560474PC712. I found the calculation process was correct, but seven lights listed with an owner of "Not Connected to Network" connected to these ICPs were included in the calculation because a wattage is recorded in the database. The total wattage for these lights was 978W, resulting in over submission of 4,177 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

I confirmed that the previous audit issue relating to ballast wattages being excluded from the submission information has been cleared.

Volume inaccuracy is present as follows:

Issue	Estimated volume information impact (annual kWh)
Potential over submission due to database inaccuracy identified during the field audit	Potential over submission of 36,600 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).
14 lamps had incorrect lamp wattages recorded, and were corrected during the audit.	Under submission of 38W or 162 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).
Three private lights had missing model, lamp wattage and gear wattage.	No impact
30 festive lights had missing gear wattages.	No impact

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3 From: unknown To: 16-Apr-19	The database contains some inaccurate data. The field data was 94.5% of the database data for the sample checked. This will result in potential over submission of 36,600 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). 14 lamps had incorrect lamp wattages recorded, and were corrected during the audit. The error resulted in under submission of 38W or 162 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). Three private lights had missing model, lamp wattage and gear wattage. There was no impact on submission. 30 festive lights had missing gear wattages. The gear wattages for these lights was expected to be zero, and there is no impact on submission. Seven disconnected lights were included in the submission data. Potential impact: Medium Actual impact: Unknown Audit history: Once Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as moderate, because they are sufficient to ensure that lamp information is correctly recorded most of the time. The impact is assessed to be medium, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
Contact will continue to work with the customer to ensure that their database is accurate	23/05/2019	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Contact will ensure that quarterly checks are completed on the database to find any possible issues. Contact will also discuss regular outage patrols to ensure that all lights are being checked and any missing lights can be added to the database	23/05/2019	

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 whether an ICP is recorded for each item of load.

Audit commentary

All items of load have an ICP number 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

Street addresses and GPS coordinates are recorded for all 2,061 items of load.

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.

Audit commentary

Lamp model, lamp wattage and gear wattage are included in the database. Three lights have missing lamp models, lamp wattage, and gear wattages.

Road Name	Location	Light Make	Light Model	Gear Wattage	Lamp Model	Lamp Wattage	Lamp owner
AORANGI STREET (1310)	188	Betacomm	Goughlite 700				Private

Road Name	Location	Light Make	Light Model	Gear Wattage	Lamp Model	Lamp Wattage	Lamp owner
BOWEN STREET (427)	262	Betacomm	Goughlite 700				Private
HALCOMBE ROAD (1282)	233	Fluorescent make unknown	Fluorescent model unknown				Private

They are all private lights where a second council owned light is attached to the same pole. Because ICP number is assigned at pole level, the private lights are recorded with zero wattage because MDC is not responsible for them. Another 74 other private lights are recorded in the database with "private" as the ICP number. These lights will be reviewed as part of Powerco's distributor audit.

30 festive LED lights have blank gear wattages. All are LED lights and the gear wattages are expected to be zero, and MDC confirmed that these were updated at the time of the on-site audit.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.4 With: Clauses 11(2)(c) and (d) of Schedule 15.3 From: 11-Mar-19 To: 11-Mar-19	Three lamps have missing model, wattage and gear information. These are private lights which MDC is not responsible for, and are correctly excluded from submissions. 30 festive LED lights have missing gear information. The gear is expected to be zero, and there is no impact. Potential impact: Low Actual impact: None Audit history: Twice Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as moderate, as they are sufficient to ensure that most information is complete. There is no impact, because the total wattage was correct for the lamps with missing wattages.

Actions taken to resolve the issue	Completion date	Remedial action status
If the 3 lamps that have missing model, wattage and gear information are correctly excluded from submission – Contact disagrees that this should be included in this non compliance Contact will ensure that '0' gear wattage is added to the customers database for the festive lighting	23/05/2019	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
The customer has taken all actions required of them	23/05/2019	

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 140 items of load on 16 April 2019.

Audit commentary

The field audit findings are detailed in the table below.

Address	Database Count	Field Count	Count differences	Wattage differences	Comments
MDC other lights					
KOWHAI PARK (1205) ROAD NORTH)	9	7	-2	6	Six L27 LEDs and one 70W SON were located on the Kowhai Park pathway and by the Centennial Memorial Building. The database recorded three 250 ML/MV and six 70W SON. The other lights in the park are metered.
MDC road lights					
FRASER DRIVE (337)	14	14	-	1	One NXT-C 22w was recorded in the database as Terraled Mini T24.
Total	**140**	**138**	**-2**	**7**	

The field audit did not identify any lights which were present in the field but not recorded in the database. Two lights were recorded in the database but not located in the field, and seven wattage discrepancies were identified. These differences are recorded as non-compliance in **section 3.1**.

Audit outcome

Compliant

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

On 20th September 2012 the Authority sent a memo to Retailers and auditors advising that tracking of load changes at a daily level was not required as long as the database contained an audit trail. I have interpreted this to mean that the production of a "snapshot" report is sufficient to achieve compliance. The database tracks additions and removals as required by this clause.

Processes to track changes to the database were reviewed.

A RAMM database is held by MDC, who is Contact's customer. East Coast Lines (C & J Contracting) are responsible for new connections, fault, and maintenance work. Upgrades are completed by one of Powerco's approved contractors. The contractors provide invoices and supporting paperwork to MDC, who use this information to update RAMM.

Previously field work was completed by Alf Downs Streetlighting, who updated the database using Pocket RAMM. Once processes are bedded in with the new contractors, MDC may allow updates directly to the database using Pocket RAMM.

New connections on the Powerco network are customer initiated. The customer submits a plans to Powerco and MDC which are approved, and once ready the streetlights are livened by a Powerco approved contractor. An "as built" plan is provided to MDC which is used to update the database, and field checks are conducted to ensure that the lights installed match the plan. In some cases there may be a delay in MDC being advised that the streetlights are connected. MDC is aware of this issue and they monitor any new connections to ensure they are entered into the database at the earliest opportunity.

Outage patrols are completed irregularly. Outages are also reported by residents within the MDC region and work orders are raised as required.

LED upgrades are mostly complete, and another 300 LEDs are expected to be installed between June and December 2019 in high use areas. MDC has installed heritage lights on some CBD streets and is investigating whether these lights could be replaced or retrofitted with LED lights while still maintaining their character.

Private lights are recorded in the database with an ICP number of "private", except where the private light is connected to a pole which has a council or NZTA light attached. Because ICP is assigned at pole level, these lights have a valid ICP, but are recorded with zero wattage because MDC is not responsible for private lights. MDC and Powerco tried to work together to ensure the private lights were correctly recorded but agreement was not reached. The private lights will be reviewed as part of Powerco's distributor audit.

Some Christmas and festive lights are used and are included in the database. These lights are excluded from submissions when they are not connected, and on and off dates are advised to Contact. Some festive lights are listed as not being connected to the network; I confirmed that these lights are faulty and not currently used. They will be updated in RAMM if they are repaired and used again.

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

RAMM records audit trail information of changes made.

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	Manawatu DC region
Strata	The database contains items of load in the Manawatu area. The processes for the management of all MDC items of load are the same, and I decided to create three strata: • MDC road lights • MDC other lights • NZTA lights.
Area units	I created a pivot table of the roads in each stratum, and I used a random number generator in a spreadsheet to select a total of 13 sub-units, making up 10% of the entire database wattage.
Total items of load	140 items of load were checked.

Wattages for all items of load were checked against the published standardised wattage tables produced by the Electricity Authority and Veritek, or the manufacturer's specifications.

Audit commentary

Database accuracy based on the field audit

The database was found to contain some inaccuracies and missing data as described in **section 2.5**. The field data was 94.5% of the database data for the sample checked. This is not within the required database accuracy of ±5%. The statistical sampling tool reported with 95% confidence the precision of the sample was 8.7%, and the true load in the field will be between 91.3% to 100.0% of the load recorded in the database. There is sufficient evidence to support the finding that the database is likely to be over recording wattages.

The tool indicated that there is potentially 36,600 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool) of over submission. The statistical sampling tool reported with 95% confidence the possible impact will be between 0 and 58,500 kWh per annum over submission.

Wattage accuracy

Wattages for all items of load were checked against the published standardised wattage tables produced by the Electricity Authority and Veritek, or the manufacturer's specifications. Festive light wattages were checked by MDC with a clamp meter during the audit period and were confirmed to be correct.

I identified 17 lamps with lamp wattage discrepancies, which were corrected to the expected values during the audit. The error resulted in under submission of 38W or 162 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

Lamp Model	Quantity	Recorded lamp wattage	Expected lamp wattage	Difference (W)
GL520 LED 300mA	9	25	27	18
CREE XSP1 T3EU/T4 G	4	27	29	8
CREE XSP1 T3EU/T4 I	4	15	3 x 15 1 x 27	0 12
Total				38

I could not confirm expected gear wattages for two lamp models, and MDC confirmed that the recorded values matched their expected values:

Lamp Model	Quantity	Recorded gear wattage
16W PL Fluorescent	1	0
36w Single Fluorescent Tube	4	4

As discussed in **section 2.4**, three private lights had missing model, lamp wattage and gear wattage. A further 30 festive lights had missing gear wattages. The expected values for the missing data was zero, and there is no impact on submission.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: unknown To: 16-Apr-19	The database contains some inaccurate data. The field data was 94.5% of the database data for the sample checked. This will result in potential over submission of 36,600 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). 14 lamps had incorrect lamp wattages recorded, and were corrected during the audit. The error resulted in under submission of 38W or 162 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). Three private lights had missing model, lamp wattage and gear wattage. There was no impact on submission. 30 festive lights had missing gear wattages. The gear wattages for these lights was expected to be zero, and there is no impact on submission. Potential impact: Medium Actual impact: Unknown Audit history: Once Controls: Moderate Breach risk rating: 4

Audit risk rating	Rationale for audit risk rating
Medium	The controls are rated as moderate, because they are sufficient to ensure that lamp information is correctly recorded most of the time. The impact is assessed to be medium, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
Contact will continue to work with MDC to ensure that their database is accurate	23/05/2019	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Contact will complete quarterly checks on this database to ensure that the data is accurate	23/05/2019	

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 all ICPs have 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

This clause requires that the distributed unmetered load database must satisfy the requirements of schedule 15.5 regarding the methodology for deriving submission information. Contact reconciles this DUML load as HHR using the HHR profile, in accordance with exemption number 177. This exemption is discussed further in **section 1.1**. On and off times are derived from data logger information.

Both ICPs had the RPS HHR profile assigned on the registry instead of HHR; this is recorded as non-compliance below.

ICP Number	Profile on 09/05/19	Submission type on 09/05/19
0900087357PCBB6	RPS HHR	HHR
1000560474PC712	RPS HHR	HHR

I checked the February 2019 submission data for ICPs 0900087357PCBB6 and 1000560474PC712. I found the calculation was correct, but seven lights listed with an owner of "Not Connected to Network" connected to these ICPs were included in the calculation because a wattage is recorded in the database. The total wattage for these lights was 978W, resulting in over submission of 4,177 kWh per annum (based on 4271 hours per annum).

I confirmed that the previous audit issue relating to ballast wattages being excluded from the submission information has been cleared.

Volume inaccuracy is present as follows:

Issue	Estimated volume information impact (annual kWh)
Potential over submission due to database inaccuracy identified during the field audit	Potential over submission of 36,600 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).
14 lamps had incorrect lamp wattages recorded, and were corrected during the audit.	Under submission of 38W or 162 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).
Three private lights had missing model, lamp wattage and gear wattage.	No impact
30 festive lights had missing gear wattages.	No impact

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c)	The database contains some inaccurate data. The field data was 94.5% of the database data for the sample checked. This will result in potential over submission of 36,600 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). 14 lamps had incorrect lamp wattages recorded, and were corrected during the audit. The error resulted in under submission of 38W or 162 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). Three private lights had missing model, lamp wattage and gear wattage. There was no impact on submission. 30 festive lights had missing gear wattages. The gear wattages for these lights was expected to be zero, and there is no impact on submission. Seven disconnected lights were included in the submission data. ICPs 0900087357PCBB6 and 1000560474PC712 had RPS HHR profile assigned on the registry instead of HHR.
From: unknown To: 16-Apr-19	Potential impact: Medium Actual impact: Unknown Audit history: Once Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as moderate, because they are sufficient to ensure that lamp information is correctly recorded most of the time. The impact is assessed to be medium, based on the kWh differences described above. The impact of the inaccurate profiles is low. Volumes are submitted as HHR with the correct profiles applied.

Actions taken to resolve the issue	Completion date	Remedial action status
Contact will continue to work with the customer to ensure the database is accurate. We don't believe that the 3 private lights should be included in this non compliance	23/05/2019	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Contact will complete quarterly checks on this database to ensure that the data is accurate	23/05/2019	

CONCLUSION

A RAMM database is held by MDC, who is Contact's customer. East Coast Lines (C & J Contracting) are responsible for new connections, fault, and maintenance work. Upgrades are completed by one of Powerco's approved contractors. The contractors provide invoices and supporting paperwork to MDC, who use this information to update RAMM.

Previously field work was completed by Alf Downs Streetlighting, who updated the database using Pocket RAMM. Once processes are bedded in with the new contractors, MDC may allow updates directly to the database using Pocket RAMM.

A monthly report from the database is provided to Contact, and used to calculate submissions. Contact submits the DUML load as HHR using the HHR profile. On hours are derived from data logger information.

Four non-compliances were identified, and no recommendations were raised. The future risk rating of 14 indicates that the next audit be completed in 12 months. Based on the comments provided, and taking into consideration that some of the non-compliances have little to no impact, I recommend that the next audit is completed in 15 months.

PARTICIPANT RESPONSE

Contact have reviewed this report and their comments are contained within its body.