ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

For

MANAWATU DISTRICT COUNCIL AND CONTACT ENERGY

Prepared by: Rebecca Elliot

Date audit commenced: 1 July 2020

Date audit report completed: 31 August 2020

Audit report due date: 1 September 2020

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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. MDC use three contractors to work on the streetlight network, East Coast Lines (C & J Contracting), Alf Downs and Max Tarr. Work is allocated on a project basis. The contractors provide invoices and supporting paperwork to MDC, who use this information to update 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.

MDC have robust processes in place for the management of the streetlights. The private lights recorded in the database have been passed to Powerco to progress.

Four non-compliances were identified, and no recommendations were raised. The future risk rating of six indicates that the next audit be completed in 18 months. I have considered this in conjunction with Contact's comments and agree with this 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
Deriving submission information	2.1	11(1) of Schedule 15.3	Variance found between the monthly wattage report provided to Contact and the database extract provided for this audit resulting in an estimated annualised under submission of 9,881.58 kWh. Database is not confirmed as accurate with a 95% level of confidence resulting in an estimated over submission of 7,900 kWh per annum. Nine lamps had incorrect lamp or ballast wattage applied in the DUML database which would result in a very minor estimated under submission of 188 kWh per annum. The data used for submission does not track changes at a daily basis and is provided as a snapshot.	Moderate	Low	2	Investigating
Database accuracy	3.1	15.2 and 15.37B(b)	Database is not confirmed as accurate with a 95% level of confidence resulting in an estimated over submission of 7,900 kWh per annum. Nine lamps had incorrect lamp or ballast wattage applied in the DUML database which would result in a very minor estimated under submission of 188 kWh per annum.	Moderate	Low	2	Identified
Volume information accuracy	3.2	15.2 and 15.37B(c)	Variance found between the monthly wattage report provided to Contact and the database extract provided for this audit resulting in an estimated annualised under submission of 9,881.58 kWh.	Moderate	Low	2	Identified

			Database is not confirmed as accurate with a 95% level of confidence resulting in an estimated over submission of 7,900 kWh per annum. Nine lamps had incorrect lamp or wattage ballast applied in the DUML database which would result in a very minor estimated under submission of 188 kWh per annum. The data used for submission does not track changes at a daily basis and is provided as a snapshot.				
Future Risk Rating						6	

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.

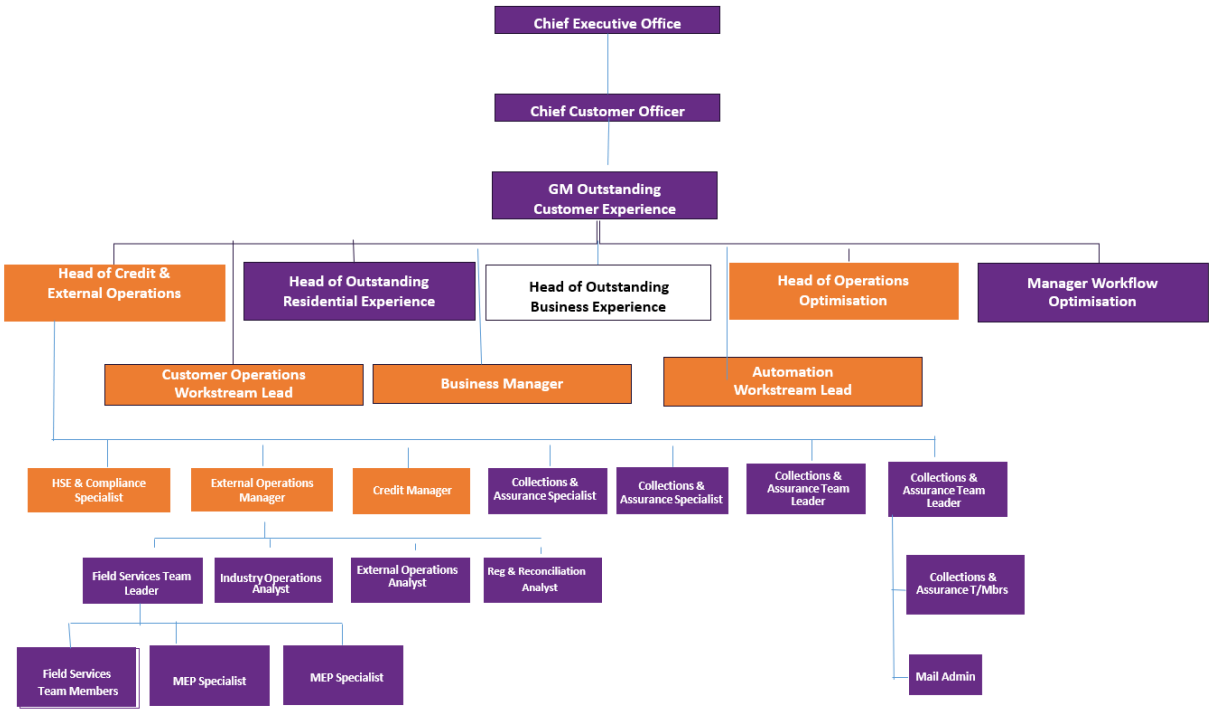
Audit commentary

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:

Rebecca Elliot

Veritek Limited

Electricity Authority Approved Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Darryn Black	Asset Management Team Leader	Manawatu District Council
Aaron Wall	Reconciliation Analyst	Contact Energy
Rosanna Tongilava	HDM Team Member	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.

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

1.5. Breaches or Breach Allegations

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

1.6. ICP Data

ICP Number	Description	NSP	Profile	Number of items of load	Database wattage (watts)
0900087357PCBB6	KAWAKAWA ROAD STREETLIGHTING	BPE0331	HHR	1,883	102,418
1000560474PC712	MASTER ICP – MANAWATU DC URBAN STLIGHTS	BPE0331	HHR	198	32,654
Total				2,081	135,072

1.7. Authorisation Received

All information was provided directly by Contact and MDC.

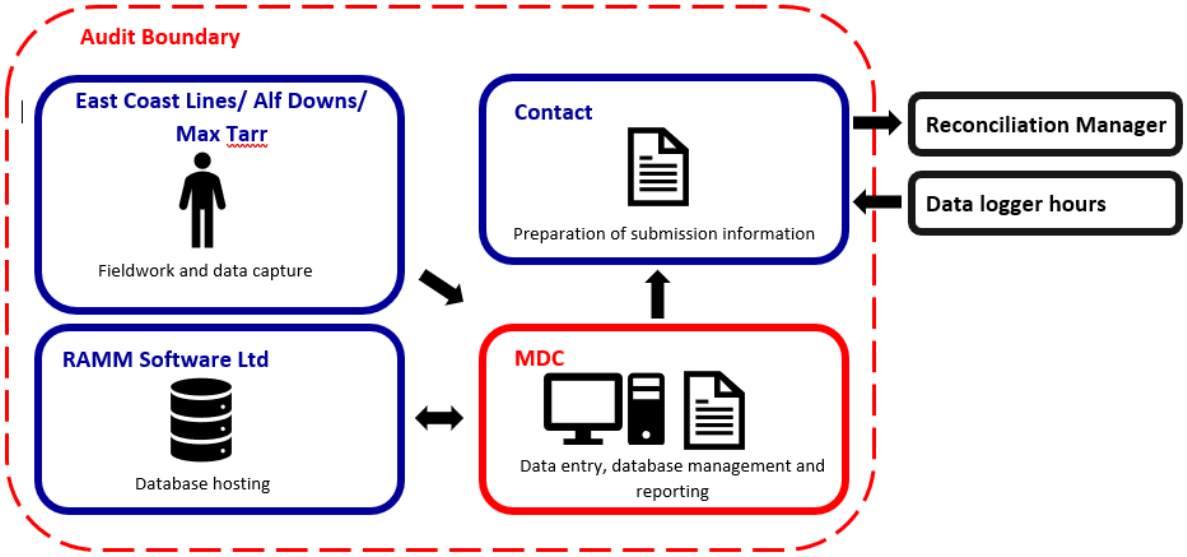
1.8. Scope of Audit

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. MDC use three contractors to work on the streetlight network, East Coast Lines (C & J Contracting), Alf Downs and Max Tarr. Work is allocated on a project basis. The contractors provide invoices and supporting paperwork to MDC, who use this information to update 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 162 items of load on 26 August 2020.

1.9. Summary of previous audit

Contact provided a copy of the last audit report completed by Tara Gannon of Veritek Limited in June 2019. 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 contains some inaccurate data. Seven disconnected lights were included in the submission data.	Still existing Cleared
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.	Cleared Cleared
Database accuracy	3.1	15.2 and 15.37B(b)	The database contains some inaccurate data.	Still existing
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.	Still existing Cleared Cleared

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.

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.

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 May 2020 submission data for ICPs 0900087357PCBB6 and 1000560474PC712. I found the calculation process was correct, but there was a variance of 823.47 kWh for the month. Annualised this equates to an estimated 9,881.58 kWh. Some of this will be due to the timing difference between the data extract being provided and the monthly report being provided to Contact. I did note that there appears to be 12 more Council Amenity lights in the database extract provided for the audit, than recorded in the report provided to Contact. They were all installed prior to 2020. I recommend the monthly report is checked to ensure that all lights are being included. This discrepancy is recorded as non-compliance below.

Examination of the database found:

Issue	Estimated volume information impact (annual kWh)
Nine incorrect wattages applied.	Under submission of 188 kWh

The field audit against the database quantities found that the database is not confirmed as accurate with a 95% level of confidence resulting in an estimated over submission of 7,900 kWh per annum. This is detailed in **section 3.1**.

On 18 June 2019, the Electricity Authority issued a memo confirming that the code requirement to calculate the correct monthly load must:

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

The current data used is a snapshot and this practice is non-compliant.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3 From: 17-Apr-19 To: 31-Jul-20	Variance found between the monthly wattage report provided to Contact and the database extract provided for this audit resulting in an estimated annualised under submission of 9,881.58 kWh. Database is not confirmed as accurate with a 95% level of confidence resulting in an estimated over submission of 7,900 kWh per annum. Nine lamps had incorrect lamp or ballast wattage applied in the DUML database which would result in a very minor estimated under submission of 188 kWh per annum. The data used for submission does not track changes at a daily basis and is provided as a snapshot. Potential impact: Low Actual impact: Low 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 mitigate the risk most of the time but there is room for improvement. The impact is assessed to be low, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
Contact will investigate this discrepancy between the DUML database and the monthly wattage report by undertaking its own comparison of an extract of the DUML DB to the monthly wattage report. Once the discrepancy is identified and resolved we will undertake any required market wash ups.	Dec 2020	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Contact will continue to attempt to perform quarterly checks on the database to find any possible issues to ensure these are resolved in a timely fashion	Ongoing	

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 2,081 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 and that all items of load were recorded.

Audit commentary

Lamp model, lamp wattage and gear wattage are included in the database. One light has a missing lamp wattage:

Road Name	Location	Light Make	Light Model	Gear Wattage	Lamp Wattage	Lamp owner
BOWEN STREET (427)	262	Betacomm	Goughlite 700	18		Private

This is a private light where a second council owned light is attached to the same pole. Because the ICP number is assigned at pole level, the private lights are recorded with zero wattage as MDC is not responsible for them. Another 74 private lights are recorded in the database with "private" as the ICP number. These lights are under review with Powerco.

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 162 items of load on 26 August 2020.

Audit commentary

The field audit findings are detailed in the table below.

Address	Database Count	Field Count	Count differences	Wattage differences	Comments
GREEN ROAD	1	1	-	1	LED found in the field but is recorded as a 150W HPS in the database.
PERRY LINE	1	1	-	1	22W LED found in the field but is recorded as a 24W LED in the database.
Total	**160**	**160**	**-**	**2**	

The field audit did not identify any lights which were present in the field but not recorded in the database.

The accuracy of the database is detailed 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

The RAMM database functionality achieves compliance with the code.

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

Audit outcome

Compliant

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

Code reference

Clause 11(4) of Schedule 15.3

Code related audit information

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

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

Audit observation

The database was checked for audit trails.

Audit commentary

RAMM records audit trail information of all 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: • Street name A-H • Street name K-O • Street name P-Y.
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 35 sub-units (roads), making up 10% of the entire database wattage.
Total items of load	162 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.

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

Audit commentary

Field Audit Findings

A field audit was conducted of a statistical sample of 162 items of load. The "database auditing tool" was used to analyse the results, which are shown in the table below.

Result	Percentage	Comments
The point estimate of R	98.6	Wattage from survey is lower than the database wattage by 1.4%
R_L	90.3	With a 95% level of confidence it can be concluded that the error could be between -9.7% and zero
R_H	100.0	

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 C (detailed below) applies.

The conclusion from Scenario C is that the variability of the sample results across the strata means that the true wattage (installed in the field) could be between 9.7% lower and the same as 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 2.0 kW lower than the database indicates.

There is a 95% level of confidence that the installed capacity is between 13 kW lower and the same as the database.

In absolute terms, total annual consumption is estimated to be 7,900 kWh lower than the DUML database indicates.

There is a 95% level of confidence that the annual consumption is between 55,200kWh p.a. lower to the same as the database indicates.

Scenario	**Description**
A - **Good accuracy, good precision**	This scenario applies if: (a) R_H is less than 1.05; and (b) R_L is greater than 0.95 The conclusion from this scenario is that: (a) the best available estimate indicates that the database is accurate within +/- 5 %; and (b) this is the best outcome.
B - **Poor accuracy, demonstrated with statistical significance**	This scenario applies if: (a) the point estimate of R is less than 0.95 or greater than 1.05 (b) as a result, either R_L is less than 0.95 or R_H is greater than 1.05. 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: (a) the point estimate of R is between 0.95 and 1.05 (b) R_L is less than 0.95 and/or R_H is greater than 1.05 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 tables produced by the Electricity Authority and Veritek, or the manufacturer's specifications. Festive light wattages have been checked by MDC with a clamp meter in the past and were confirmed to be correct.

I found nine wattage discrepancies.

Lamp Model	Quantity	Recorded total wattage	Expected lamp wattage	Difference (W)
CREE XSP1 T3EU/T4 G	4	27	29	8
CREE XSP1 T3EU/T4 I	1	15	1 x 27	12
36w Single Fluorescent Tube	4	40	46	24
Total				44

This will result in an estimated under submission of 44W or 188 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). The very minor estimated amount of under submission is recorded as non-compliance below.

As discussed in **section 2.4**, one private light had missing lamp wattage but as this is not reconciled by MDC, there is no impact on reconciliation.

Change management process findings

Processes to track changes to the database were reviewed.

A RAMM database is held by MDC, who is Contact's customer. MDC use three contractors to work on the streetlight network, East Coast Lines (C & J Contracting), Alf Downs and Max Tarr. Work is allocated on a project basis. The contractors provide invoices and supporting paperwork to MDC, who use this information to update RAMM.

New connections on the Powerco network are customer initiated. The customer submits 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. These lights are added to the database once the asset has been vested to council and the date of vesting is used to update the database. Field checks are conducted to ensure that the lights installed match the plan. If the lights are vested after electrical connection, then that period of connection won't be recorded in RAMM. The lights are still the responsibility of the developer at that time and the Distributor at the point of electrical connection must ensure that a trader has taken responsibility for the lights. Council owned lights are added to RAMM with the date of electrical connection. 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.

As the MDC have LED lights in the field, outage patrols are completed irregularly. Outages are also reported by residents within the MDC region and work orders are raised as required.

The LED upgrade is largely complete with only the decorative lights remaining to be done. These will be updated in the database as this is completed.

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. The private lights are with Powerco to investigate and resolve.

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

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 17-Apr-19 To: 31-Jul-20	Database is not confirmed as accurate with a 95% level of confidence resulting in an estimated over submission of 7,900 kWh per annum. Nine lamps had incorrect lamp or ballast wattage applied in the DUML database which would result in a very minor estimated under submission of 188 kWh per annum. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	Controls are rated as moderate, as they are sufficient to mitigate the risk most of the time but there is room for improvement. The impact is assessed to be low, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
Contact will continue to engage with the customer to ensure that their database is accurate	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Contact will continue to attempt to perform quarterly checks on the database to find any possible issues to ensure these are resolved in a timely fashion	Ongoing	

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.

I checked the May 2020 submission data for ICPs 0900087357PCBB6 and 1000560474PC712. I found the calculation process was correct, but there was a variance of 823.47 kWh for the month. Annualised this equates to an estimated 9,881.58 kWh. Some of this will be due to the timing difference between the data extract being provided and the monthly report being provided to Contact. I did note that there appears to be 12 more Council Amenity lights in the database extract than provided for the audit than recorded in the report provided to Contact. They were all installed prior to 2020. I recommend the monthly report is checked to ensure that all lights are being included. This discrepancy is recorded as non-compliance below.

Examination of the database found:

Issue	Estimated volume information impact (annual kWh)
Nine incorrect wattages applied.	Under submission of 188 kWh

The field audit against the database quantities found that the database is not confirmed as accurate with a 95% level of confidence resulting in an estimated over submission of 7,900 kWh per annum. This is detailed in **section 3.1**.

On 18 June 2019, the Electricity Authority issued a memo confirming that the code requirement to calculate the correct monthly load must:

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

The current data used is a snapshot and this practice is non-compliant.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c) From: 17-Apr-19 To: 31-Jul-20	Variance found between the monthly wattage report provided to Contact and the database extract provided for this audit resulting in an estimated annualised under submission of 9,881.58 kWh. Database is not confirmed as accurate with a 95% level of confidence resulting in an estimated over submission of 7,900 kWh per annum. Nine lamps had incorrect lamp or ballast wattage applied in the DUML database which would result in a very minor estimated under submission of 188 kWh per annum. The data used for submission does not track changes at a daily basis and is provided as a snapshot. Potential impact: Low Actual impact: Low 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 mitigate the risk most of the time but there is room for improvement. The impact is assessed to be low, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
Contact will continue to engage with the customer to ensure that their database is accurate	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Contact will continue to attempt to perform quarterly checks on the database to find any possible issues to ensure these are resolved in a timely fashion	Ongoing	

CONCLUSION

A RAMM database is held by MDC, who is Contact's customer. MDC use three contractors to work on the streetlight network, East Coast Lines (C & J Contracting), Alf Downs and Max Tarr. Work is allocated on a project basis. The contractors provide invoices and supporting paperwork to MDC, who use this information to update 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.

MDC have robust processes in place for the management of the streetlights. The private lights recorded in the database have been passed to Powerco to progress.

Four non-compliances were identified, and no recommendations were raised. The future risk rating of six indicates that the next audit be completed in 18 months. I have considered this in conjunction with Contact's comments and agree with this recommendation.

PARTICIPANT RESPONSE

Contact Energy have reviewed this report and their comments are contained within the report.