ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

MACKENZIE DISTRICT COUNCIL (MOUNTAIN POWER) AND CONTACT ENERGY LIMITED

Prepared by: Tara Gannon

Date audit commenced: 25 February 2020

Date audit report completed: 19 May 2020

Audit report due date: 1 June 2020

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EXECUTIVE SUMMARY

This audit of the **Mackenzie District Council (MDC)** DUML database (for Mountain Power's ICPs) and processes was conducted at the request of **Contact Energy Limited (Contact)**, in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

A RAMM database is held by **Timaru District Council (TDC)** on behalf of MDC.

New connection, fault and maintenance work is completed by NETcon. Paperwork for new connections, removals and changes is provided to TDC, who make the changes in the RAMM database.

TDC provide a monthly report to Contact from the database, but this is not used for submission. Contact reconciles the DUML load using the RPS profile, based on the registry unmetered load details. Contact intends to change their process to base submissions on the database information.

The audit was largely conducted in accordance with the audit guidelines for DUML audits version 1.1. A field audit was not undertaken due to the restrictions imposed by the Covid-19 lockdown.

I found it is likely that the database is still not accurate within ± 5%. The 2018 audit found that the field data was 108.6% of the database data, and I confirmed no corrections were made following the 2018 audit. No changes were made to the database during the audit period, and it is believed that no changes have been made in the field.

The future risk rating of ten indicates that the next audit be completed in 12 months. I recommend that the next audit is completed in a minimum of 15 months (01/09/2021 at the earliest), because Contact intends to resolve the non-compliances and the issues have a low impact.

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	Submissions are not calculated based on database information, but there is no impact because the values used for submission match the database. It is likely that the database is still not accurate within ± 5%, because no corrections were made following the 2018 audit. The database accuracy is assessed to be 108.6% indicating an estimated under submission of 800 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). Light ID 973 is recorded 36w Low Pressure Sodium (45W total) but is expected to be 35W Low Pressure Sodium (44W total), which could result in over submission of 4 kWh per annum.	Weak	Low	3	Identified
All load recorded in database	2.5	11(2)(a) and (aa) of Schedule 15.3	Six additional lamps found in the field in 2018 have not been added into the database, which could lead to estimated under submission of 198 W or 845 kWh per annum.	Moderate	Low	2	Identified
Database accuracy	3.1	15.2 and 15.37B (b)	It is likely that the database is still not accurate within ± 5%, because no corrections were made following the 2018 audit. The database accuracy is assessed to be 108.6% indicating an estimated under submission of 800 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). Light ID 973 is recorded 36w Low Pressure Sodium (45W total) but is expected to be 35W Low Pressure Sodium (44W total).	Moderate	Low	2	Identified
Volume information accuracy	3.2	15.2 and 15.37B(c)	Submissions are not calculated based on database information, but there is no impact because the values used for submission match the database. It is likely that the database is still not accurate within ± 5%, because	Weak	Low	3	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			no corrections were made following the 2018 audit. The database accuracy is assessed to be 108.6% indicating an estimated under submission of 800 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). Light ID 973 is recorded 36w Low Pressure Sodium (45W total) but is expected to be 35W Low Pressure Sodium (44W total), which could result in over submission of 4 kWh per annum.				
Future Risk Rating						10	

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

RECOMMENDATIONS

Subject	Section	Recommendation
		Nil

ISSUES

Subject	Section	Description	Issue
		Nil	

1. ADMINISTRATIVE

1.1. Exemptions from Obligations to Comply with Code

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

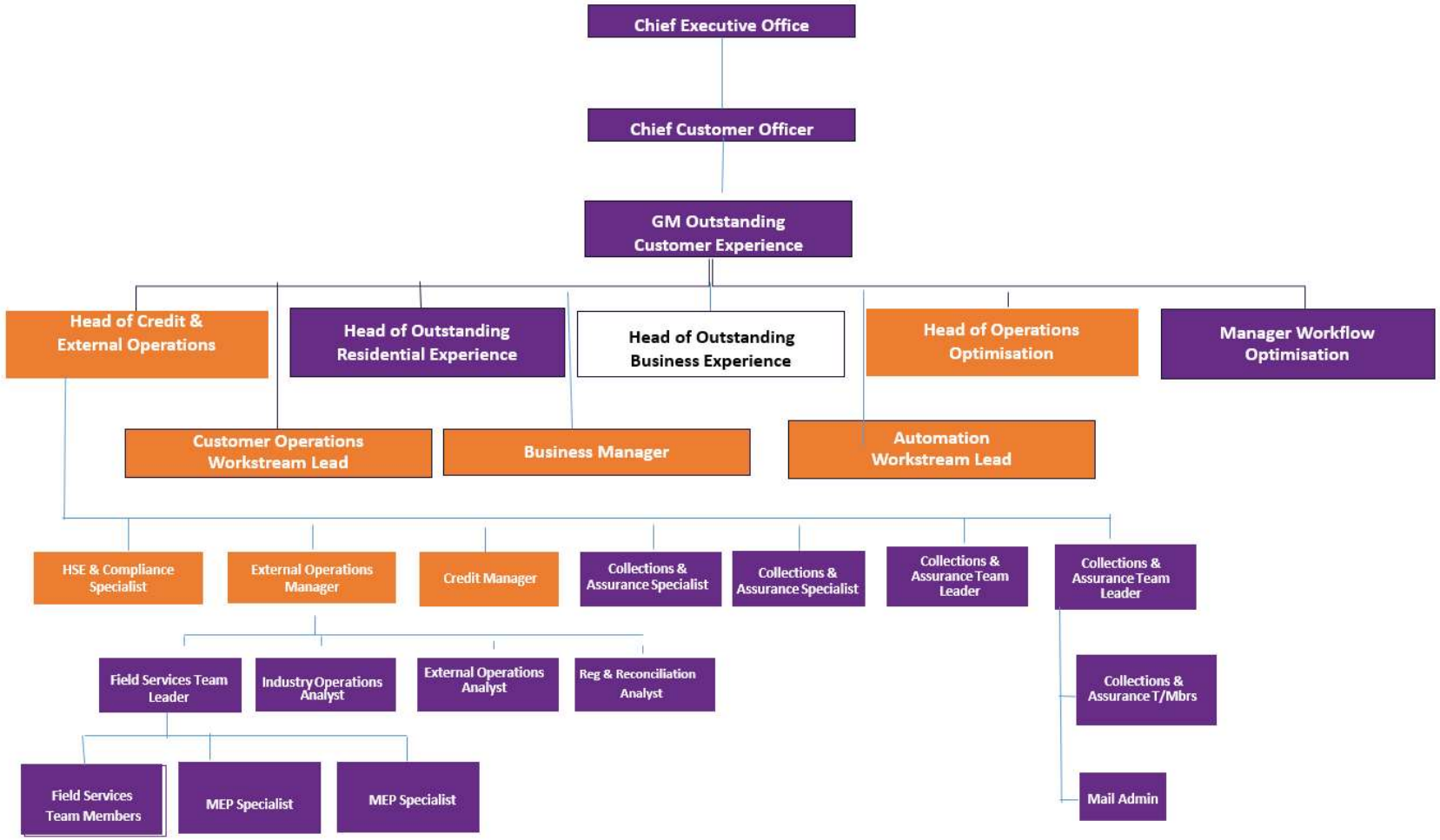
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

Audit commentary

The ICPs are settled as NHH using the RPS profile, and there are no exemptions in place relevant to the scope of this audit.

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
Anthony Bacon	Road Engineering Technician	Timaru District Council
Allie Jones	External Operations	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". The specific module used for DUML is called RAMM Contractor.

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

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

Contact systems used in the process are discussed in their reconciliation participant audit report.

1.5. Breaches or Breach Allegations

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

1.6. ICP Data

There have been no changes to the number of items of load or wattages since the previous audit in June 2018.

ICP Number	Description	NSP	Profile	Number of items of load	Database wattage (watts)
0000010005MO321	Streetlighting - The Drive	MMT0111	RPS	18	306
0000020005MO20D	Streetlighting	MMP0111	RPS	42	1,849
Total				3,651	228,982

1.7. Authorisation Received

All information was provided directly by Contact or TDC.

1.8. Scope of Audit

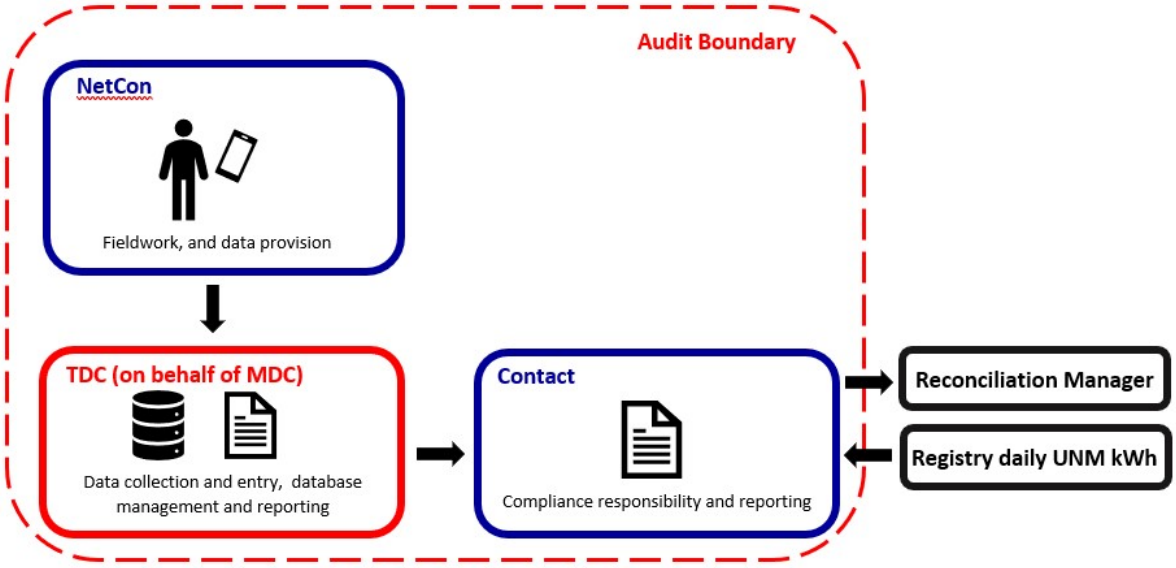
This audit of the MDC DUML database (for Mountain Power's ICPs) and processes was conducted at the request of Contact, in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

A RAMM database is held by TDC on behalf of MDC.

New connection, fault and maintenance work is completed by NETcon. Paperwork for new connections, removals and changes is provided to TDC, who make the changes in the RAMM database.

TDC provide a monthly report to Contact from the database, but this is not used for submission. Contact reconciles the DUML load using the RPS profile, based on the registry unmetered load details. Contact intends to change their process to base submissions on the database 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 audit was largely conducted in accordance with the audit guidelines for DUML audits version 1.1. A field audit was not undertaken due to the restrictions imposed by the Covid-19 lockdown.

The review of database accuracy found it is likely that the database is still not accurate within ± 5%. The 2018 audit found that the field data was 108.6% of the database data, and I confirmed no corrections were made following the 2018 audit. No changes were made to the database during the audit period, and it is believed that no changes have been made in the field.

1.9. Summary of previous audit

The previous audit was undertaken by Steve Woods of Veritek Limited in May 2018. The summary table below shows the statuses of the six non-compliances raised in the previous audit. Further comment is made in the relevant sections of this report.

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	There is some inaccurate data within the database used to calculate submissions: • 1 lamp type and wattage error, over submission of 4.3 kWh pa, and • 6 additional lamps found in field audit, under submission of 794 kWh pa.	Still existing
Description and capacity of load	2.4	11(2)(c) and (d) of Schedule 15.3	There is one incorrect lamp type and wattage value in the database. There is one lamp affected with an estimated over submission of 4.3 kWh per annum.	Cleared in this section because there are no missing or invalid zero wattages Non-compliance is recorded in **sections 2.1, 3.1** and **3.2**.
All load recorded in database	2.5	11(2A) of Schedule 15.3	Six additional L33 LED lamps were found in the field for an estimated under submission of 794.4 kWh per annum.	Still existing
Tracking of load changes	2.6	11(3) of Schedule 15.3	Some lamps not recorded in the database.	Cleared in this section because load changes are tracked. Non-compliance is recorded in **sections 2.1, 2.5, 3.1** and **3.2**.
Database accuracy	3.1	15.2 and 15.37B(b*)*	Database checks found one lamp with incorrect wattage information. Resulting in estimated over submission of 4.3 kWh per annum. The field audit found eight lamp type and wattage differences. The field data was 108.6% of the database data for the sample checked, resulting in estimated under submission of 794.4 kWh per annum.	Still existing
Accuracy of volume information	3.2	15.2 and 15.37B(c)	Inaccurate information in the database used for submission calculation: • 1 lamp type and wattage error, estimated over submission of 43 kWh per annum, and • 6 additional lamps in the field and 2 lamp wattage differences, estimated over submission of 794 kWh per annum.	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.

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

Submission

Contact reconciles the DUML load as NHH using the RPS profile. Submissions are based on the daily unmetered kWh recorded on the registry, which is calculated from the trader unmetered load details on the registry. I compared the registry information used for submission and the database values, and found that the wattage and kWh applied for submission were consistent with the database values.

Field as at 01/03/20	0000010005MO321	0000020005MO20D
Registry wattage (recorded in the trader unmetered load details)	306	1,849
Database extract wattage	306	1,849
Registry average daily kWh	3.7	22.2
Database average daily kWh (calculated based on database wattage and 12 hours)	3.7	22.2

Accuracy of the database information used for submission

The review of database accuracy in **section 3.1** found it is likely that the database is still not accurate within ± 5%. The 2018 audit found that the field data was 108.6% of the database data, and I confirmed no corrections were made following the 2018 audit. No changes were made to the database during the audit period, and it is believed that no changes have been made in the field.

Sources of inaccuracy are as follows:

Issue	Estimated volume information impact (annual kWh)
Light ID 973 is recorded as 36w Low Pressure Sodium (45W total) but is expected to be 35W Low Pressure Sodium (44W total).	Over submission of 4 kWh

The database extract is provided as a snapshot, which only shows the database values on the date that the extract is created. The database records installation and replacement dates.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3 From: 01-Feb-20 To: 29-Feb-20	Submissions are not calculated based on database information, but there is no impact because the values used for submission match the database. It is likely that the database is still not accurate within ± 5%, because no corrections were made following the 2018 audit. The database accuracy is assessed to be 108.6% indicating an estimated under submission of 800 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). Light ID 973 is recorded 36w Low Pressure Sodium (45W total) but is expected to be 35W Low Pressure Sodium (44W total), which could result in over submission of 4 kWh per annum. Potential impact: Low Actual impact: Unknown Audit history: Once Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as weak because the database information is not used for submission. The controls over database accuracy are rated as moderate. The impact is assessed to be low because: • there is no difference between the database wattages and the wattages used for submission, and • the estimated under submission for database inaccuracies is 800 kWh p.a.

Actions taken to resolve the issue	Completion date	Remedial action status
Contact will work with MDC's agent Timaru DC to get the database updated with the correct values and attributes. We will also back date this correction and also adjust our submission volumes to ensure all consumption volume is accounted for since the previous audit. Unfortunately due to a restructure within Contact at the time of the previous audit this interaction was not followed up at Contacts end resulting in this non-compliance remaining.	Dec 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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 analysis found that all items of load had an ICP number recorded. The accuracy of ICP number assignment is discussed in **section 3.1**.

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 RAMM database contains house addresses and GPS coordinates for all 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 light type and wattage capacity,
- wattage capacities include any ballast or gear wattage, and
- each item of load has a light type, light wattage, and gear wattage recorded.

Audit commentary

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

All items of load have a lamp model, light model, lamp wattage and gear wattage populated. No items of load have invalid zero lamp or gear wattages.

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

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

A field audit was not undertaken due to the restrictions imposed by the Covid-19 lockdown. I compared the March 2020 database extract to the March 2018 database extract used to conduct the previous audit, which confirmed that there had been no changes to the database since the previous audit.

Field audit and data discrepancies identified during the 2018 audit were re-checked, to determine whether they had been resolved.

Audit commentary

Field audit discrepancies identified in the 2018 audit were followed up, and found not to be resolved. Once COVID-19 travel restrictions ease, TDC intends to visit the affected lights to determine the correct details and will update the database.

Address	2018 Db Count	2018 Field Count	2018 Count difference	2018 Wattage difference	2020 Count difference	2020 wattage difference	2020 Comments
GRANDVUE DRIVE	17	23	6	1	6	1	The exceptions are not resolved. Six additional L33 lamps found during the 2018 field audit are still excluded from the database. One L33 is still recorded as a 35W LPS.

Address	2018 Db Count	2018 Field Count	2018 Count difference	2018 Wattage difference	2020 Count difference	2020 wattage difference	2020 Comments
LAKELAND AVENUE	11	11	-	1	-	1	The exceptions is not resolved. Pole ID 717 light ID 973 is still recorded as 36w Low Pressure Sodium (36W lamp wattage + 9 W gear wattage) but is expected to be 35W Low Pressure Sodium (35W lamp wattage + 9W gear wattage)
Total	**60**	**66**	**6**	**2**	**6**	**2**	

I assessed database accuracy, taking into consideration that:

1. The 2018 audit found that the field data was 108.6% of the database data, and no corrections were made following the 2018 audit.

Result	**Percentage**	**Comments**
The point estimate of R	108.6	Wattage from survey is higher than the database wattage by 8.6%
R_L	100.0	With a 95% level of confidence it can be concluded that the error could be between -0.0% and +8.6%
R_H	108.6	

   The results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline" effective from 01/02/19, and I conclude that inaccuracy was demonstrated with statistical significance. In absolute terms, the annual consumption was estimated to be 800 kWh p.a. higher than the database, and at a 95% confidence interval the annual consumption was estimated to be 0-800 kWh p.a. higher than the database.
2. No changes were made to the database during the audit period, and it is believed that no changes have been made in the field.

I conclude that it is likely that the database is still not accurate within ± 5%.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: Clause 11(2A) of Schedule 15.3 From: 01-Mar-20 To: 01-Mar-20	Six additional lamps found in the field in 2018 have not been added into the database, which could lead to estimated under submission of 198 W or 845 kWh per annum. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate because they mitigate risk most of the time but some errors still occur. TDC intends to visit the affected lights to determine the correct details and will update the database. The impact is low based on the annual kWh difference.

Actions taken to resolve the issue	Completion date	Remedial action status
Contact will work with MDC's agent Timaru DC to get the database updated with the correct values and attributes. We will also back date this correction and also adjust our submission volumes to ensure all consumption volume is accounted for since the previous audit. Unfortunately due to a restructure within Contact at the time of the previous audit this interaction was not followed up at Contacts end resulting in this non-compliance remaining.	Dec 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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

The database has a complete audit trail.

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

Contact reconciles the DUML load as NHH using the RPS profile. Submissions are based on the daily unmetered kWh recorded on the registry, which is calculated from the trader unmetered load details on the registry.

A field audit was not undertaken due to the restrictions imposed by the Covid-19 lockdown. I compared the March 2020 database extract to the March 2018 database extract used to conduct the previous audit, which confirmed that there had been no changes to the database since the previous audit.

Field audit and data discrepancies identified during the 2018 audit were re-checked, to determine whether they had been resolved.

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

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

Audit commentary

Database accuracy

I assessed database accuracy, taking into consideration that:

1. The 2018 audit found that the field data was 108.6% of the database data, and no corrections were made following the 2018 audit. Once COVID-19 travel restrictions ease, TDC intends to visit the affected lights to determine the correct details and will update the database.

Result	Percentage	Comments
The point estimate of R	108.6	Wattage from survey is higher than the database wattage by 8.6%
R_L	100.0	With a 95% level of confidence it can be concluded that the error could be between -0.0% and +8.6%
R_H	108.6	

   The results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline" effective from 01/02/19, and I conclude that inaccuracy was demonstrated with statistical significance. In absolute terms, the annual consumption was estimated to be 800 kWh p.a. higher than the database, and at a 95% confidence interval the annual consumption was estimated to be 0-800 kWh p.a. higher than the database.
2. No changes were made to the database during the audit period, and it is believed that no changes have been made in the field.

I conclude that it is likely that the database is still not accurate within ± 5%.

Light description and capacity accuracy

As discussed in **section 2.4**, all items of load have a lamp model and lamp wattage populated, and no items of load have invalid zero lamp wattages.

The recorded lamp and gear wattages matched the expected values except light ID 973 which is recorded as 36w Low Pressure Sodium (36W lamp wattage + 9 W gear wattage) but is expected to be 35W Low Pressure Sodium (35W lamp wattage + 9W gear wattage). Once COVID-19 travel restrictions ease, TDC intends to visit the affected light to determine the correct details and will update the database.

ICP number and owner accuracy

As discussed in **section 2.2**, the analysis found that all items of load had an ICP number recorded. The accuracy of ICP numbers was checked by mapping the lights to check that they were consistent with the ICP description, and compliance is confirmed.

Address accuracy

As discussed in **section 2.3**, all items of load have an address recorded. The lights were mapped and I confirmed that the recorded addresses appeared reasonable based on the GPS locations.

Change management process findings

I compared the March 2020 database extract to the March 2018 database extract used to conduct the previous audit, which confirmed that there had been no changes to the database since the previous audit.

New connection, fault and maintenance work is completed by NETcon. Paperwork for new connections, removals and changes is provided to TDC, who make the changes in the RAMM database effective from the date that the change occurred.

New subdivisions require a proposed plan to be provided and an "as built" plan once the development is complete. When a new connection occurs, NETcon provides connection paperwork to TDC. TDC validates the data by visiting the site to check the light and location details, and enters the information from RAMM effective from the livening date.

The lights connected to 0000010005MO321 are LEDs, and the lights connected to 0000020005MO20D are low pressure sodium. MDC are working to establish a set light colour temperature to support their dark sky lighting requirements, and LED upgrades are unlikely to occur until this work is complete.

Outage patrols are conducted irregularly when staff are working within the area. Lamp outages are notified to MDC by residents and work requests are made to NETcon personnel.

Private lights

There are no private MDC Mountain Power streetlights.

Festive lights

No festive lights are installed for MDC Mountain Power streetlights.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 01-Mar-20 To: 01-Mar-20	It is likely that the database is still not accurate within ± 5%, because no corrections were made following the 2018 audit. The database accuracy is assessed to be 108.6% indicating an estimated under submission of 800 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). Light ID 973 is recorded 36w Low Pressure Sodium (45W total) but is expected to be 35W Low Pressure Sodium (44W total). Potential impact: Low Actual impact: Unknown Audit history: Once Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate because of the number of incorrect lamp type and wattage differences. The impact is low, because the estimated under submission for database inaccuracies is 800 kWh per annum.

Actions taken to resolve the issue	Completion date	Remedial action status
Contact will work with MDC's agent Timaru DC to get the database updated with the correct values and attributes. We will also back date this correction and also adjust our submission volumes to ensure all consumption volume is accounted for since the previous audit. Unfortunately due to a restructure within Contact at the time of the previous audit this interaction was not followed up at Contacts end resulting in this non-compliance remaining.	Dec 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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

Code reference

Clause 15.2 and 15.37B(c)

Code related audit information

The audit must verify that:

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

Audit observation

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

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

Audit commentary

Submission

Contact reconciles the DUML load as NHH using the RPS profile, and the profiles are correctly recorded on the registry.

Submissions are based on the daily unmetered kWh recorded on the registry, which is calculated from the trader unmetered load details on the registry. I compared the registry information used for submission and the database values, and found that the wattage and kWh applied for submission were consistent with the database values.

Field as at 01/03/20	0000010005MO321	0000020005MO20D
Registry wattage (recorded in the trader unmetered load details)	306	1,849
Database extract wattage	306	1,849
Registry average daily kWh	3.7	22.2
Database average daily kWh (calculated based on database wattage and 12 hours)	3.7	22.2

Accuracy of the database information used for submission

The review of database accuracy in **section 3.1** found it is likely that the database is still not accurate within ± 5%. The 2018 audit found that the field data was 108.6% of the database data, and I confirmed no corrections were made following the 2018 audit. No changes were made to the database during the audit period, and it is believed that no changes have been made in the field.

Sources of inaccuracy are as follows:

Issue	Estimated volume information impact (annual kWh)
Light ID 973 is recorded as 36w Low Pressure Sodium (45W total) but is expected to be 35W Low Pressure Sodium (44W total).	Over submission of 4 kWh

The database extract is provided as a snapshot, which only shows the database values on the date that the extract is created. The database records installation and replacement dates.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clauses 15.2 and 15.37B(c) From: 01-Feb-20 To: 29-Feb-20	Submissions are not calculated based on database information, but there is no impact because the values used for submission match the database. It is likely that the database is still not accurate within ± 5%, because no corrections were made following the 2018 audit. The database accuracy is assessed to be 108.6% indicating an estimated under submission of 800 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). Light ID 973 is recorded 36w Low Pressure Sodium (45W total) but is expected to be 35W Low Pressure Sodium (44W total), which could result in over submission of 4 kWh per annum. Potential impact: Low Actual impact: Unknown Audit history: Once Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as weak because the database information is not used for submission. The controls over database accuracy are rated as moderate. The impact is assessed to be low because: • there is no difference between the database wattages and the wattages used for submission, and • the estimated under submission for database inaccuracies is 800 kWh p.a.

Actions taken to resolve the issue	Completion date	Remedial action status
Contact will engage with TDC to ensure a monthly report of DUML is received and validates our submission volumes on an ongoing basis	Mar 2021	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

CONCLUSION

A RAMM database is held by TDC on behalf of MDC.

New connection, fault and maintenance work is completed by NETcon. Paperwork for new connections, removals and changes is provided to TDC, who make the changes in the RAMM database.

TDC provide a monthly report to Contact from the database, but this is not used for submission. Contact reconciles the DUML load using the RPS profile, based on the registry unmetered load details. Contact intends to change their process to base submissions on the database information.

The audit was largely conducted in accordance with the audit guidelines for DUML audits version 1.1. A field audit was not undertaken due to the restrictions imposed by the Covid-19 lockdown.

I found it is likely that the database is still not accurate within ± 5%. The 2018 audit found that the field data was 108.6% of the database data, and I confirmed no corrections were made following the 2018 audit. No changes were made to the database during the audit period, and it is believed that no changes have been made in the field.

The future risk rating of ten indicates that the next audit be completed in 12 months. I recommend that the next audit is completed in a minimum of 15 months (01/09/2021 at the earliest), because Contact intends to resolve the non-compliances and the issues have a low impact.

PARTICIPANT RESPONSE

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