

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT



For

TAURANGA CITY COUNCIL PARKS AND
RESERVES AND MANAWA ENERGY
LIMITED

NZBN: 9429038917912

Prepared by: Steve Woods

Date audit commenced: 4 October 2023

Date audit report completed: 3 November 2023

Audit report due date: 23 November 2023

TABLE OF CONTENTS

Executive summary	3
Audit summary	3
Non-compliances	3
Recommendations	4
Issues 4	
1. Administrative	5
1.1. Exemptions from Obligations to Comply with Code	5
1.2. Structure of Organisation	5
1.3. Persons involved in this audit.....	6
1.4. Hardware and Software	6
1.5. Breaches or Breach Allegations.....	6
1.6. ICP Data	6
1.7. Authorisation Received	6
1.8. Scope of Audit	7
1.9. Summary of previous audit	8
1.10. Distributed unmetered load audits (Clause 16A.26 and 17.295F).....	9
2. DUML database requirements.....	10
2.1. Deriving submission information (Clause 11(1) of Schedule 15.3)	10
2.2. ICP identifier and items of load (Clause 11(2)(a) and (aa) of Schedule 15.3)	11
2.3. Location of each item of load (Clause 11(2)(b) of Schedule 15.3)	11
2.4. Description and capacity of load (Clause 11(2)(c) and (d) of Schedule 15.3)	12
2.5. All load recorded in database (Clause 11(2A) of Schedule 15.3)	12
2.6. Tracking of load changes (Clause 11(3) of Schedule 15.3)	12
2.7. Audit trail (Clause 11(4) of Schedule 15.3).....	13
3. Accuracy of DUML database	15
3.1. Database accuracy (Clause 15.2 and 15.37B(b))	15
3.2. Volume information accuracy (Clause 15.2 and 15.37B(c))	16
Conclusion	18
Participant response	19

EXECUTIVE SUMMARY

This audit of the **Tauranga City Council Parks and Reserves (TCC P&R)** DUML database and processes was conducted at the request of **Manawa Energy Limited (Manawa)** in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

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

The database used for submission is called Accela and is managed by TCC P&R. The field work and asset data capture are conducted by McKay Electrical, and they provide hard copy updates to TCC P&R. Reporting is provided to Manawa on a monthly basis.

The field audit found that all data in the database was accurate. The seven discrepancies identified during the last audit have been corrected.

Examination of the database found that changes made in the Accela database can only be applied from the day of being changed and not the date of the light install. One example was checked, which was asset ID 2379, identified as an additional light during the 2022 audit conducted on 17 May 2022. The data in the database is the date of data entry which is 25 May 2022 and it's likely the light was installed prior to 17 May 2022. The impact of this non-compliance is minor whilst there are very few changes being made to the database.

The audit found three non-compliances, all related to the matter mentioned above. The future risk rating of nine indicates that the next audit be completed in 12 months. I have considered this along with the materiality of the non-compliances found, and I recommend that the next audit be in 24 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	Database does not track changes from the correct effective date, they are only recorded from the date of data entry.	Moderate	Low	2	Investigating
Tracking of load change	2.6	11(3) of Schedule 15.3	Database does not track changes from the effective date.	None	Low	5	Investigating
Volume information accuracy	3.2	15.2 and 15.37B(c)	Database does not track changes from the correct effective date, they are only recorded from the date of data entry.	Moderate	Low	2	Investigating
Future Risk Rating						9	

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	Clause	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

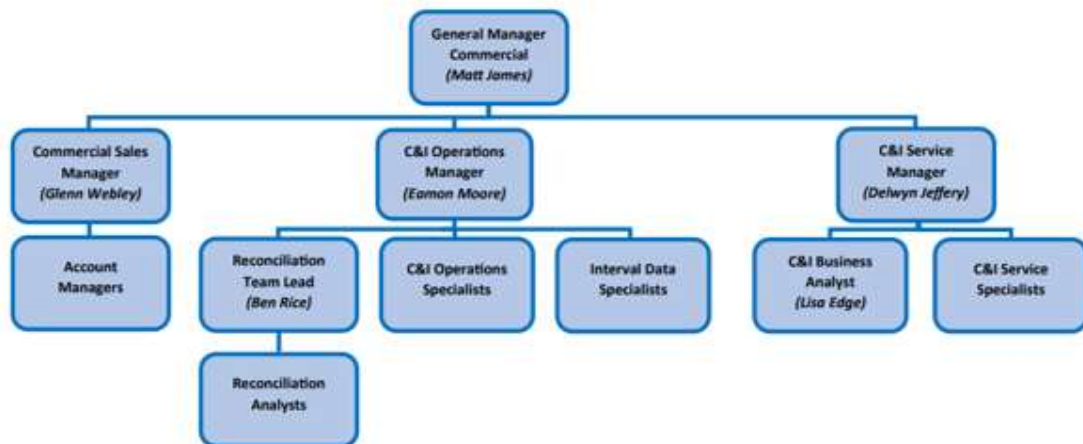
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

Audit commentary

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

1.2. Structure of Organisation

Manawa provided a copy of their organisational structure.



1.3. Persons involved in this audit

Auditor:

Steve Woods

Veritek Limited

Electricity Authority Approved Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Eamon Moore	C&I Operations Manager	Manawa
Jamie Watts	Commercial and Industrial Operations Specialist	Manawa
Kyle Willoughby	TTOC Engineer: ITS & Lighting	TCC

1.4. Hardware and Software

The Accela database used for the management of DUML is managed by TCC P&R.

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

Systems used by the trader 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)
1000525003PCF31	Tauranga District Council Parks Streetlights (KMO)	KMO0331	STL	3	143
1000525000PC3F1	Tauranga District Council Parks Streetlights (MTM)	MTM0331	STL	64	6,134
1000525002PC374	Tauranga District Council Parks Streetlights (TGA11)	TGA0111	STL	53	3,652
1000525001PCFB4	Tauranga District Council Parks Streetlights (TGA33)	TGA0331	STL	141	6,701
Total				261	16,630

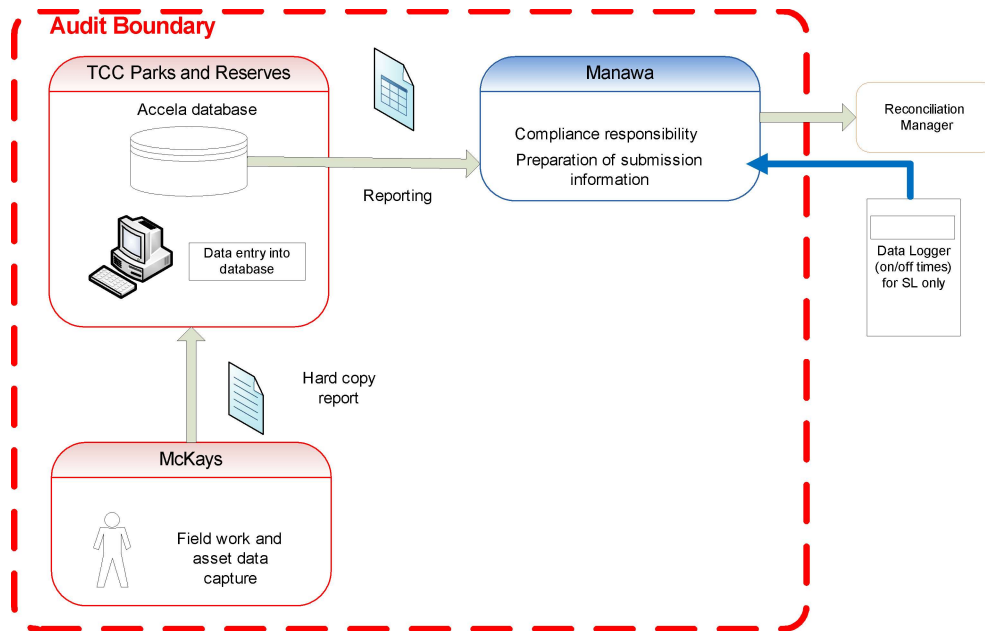
1.7. Authorisation Received

All information was provided directly by Manawa and TCC P&R.

1.8. Scope of Audit

The database used for submission is called Accela and is managed by TCC P&R. The field work and asset data capture are conducted by McKay Electrical, and they provide hard copy updates to TCC P&R. Reporting is provided to Manawa on a monthly basis.

The diagram below shows the current flow of information and the audit boundary for clarity.



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

The field audit was undertaken of the complete database on 4 October 2023.

1.9. Summary of previous audit

The previous audit was completed in May 2022 by Steve Woods of Veritek Limited. Four non-compliances were identified, and one recommendation was made. The statuses of the non-compliances and recommendations are described below.

Table of Non-compliance

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	Database does not track changes from the effective date. Submission is based on a snapshot of the database at the end of the month and does not consider historic adjustments or the fact that lights can be lived before they are entered into the database.	Still existing Cleared
All load recorded in database	2.5	11(2A) of Schedule 15.3	One additional light identified in Papamoa Domain.	Cleared
Tracking of load change	2.6	11(3) of Schedule 15.3	Database does not track changes from the effective date.	Still existing
Volume information accuracy	3.2	15.2 and 15.37B(c)	Database does not track changes from the effective date. Submission is based on a snapshot of the database at the end of the month and does not consider historic adjustments or the fact that lights can be lived before they are entered into the database.	Still existing Cleared

Table of Recommendations

Subject	Section	Clause	Recommendation	Status
Location of each item of load	2.3	11(2)(b) of Schedule 15.3	Include GPS coordinates in the database to assist with light location.	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

Manawa have requested Veritek to undertake this DUML 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

Manawa reconciles this DUML load using the STL profile. The on and off times are derived from data logger information.

I recalculated the submissions for August 2023 using the data logger and database information. I confirmed that the calculation method and result was correct.

The database does not allow changes to be loaded for the date of the change. This is recorded as non-compliance below and in **sections 2.6** and **3.2**.

The previous audit recorded that submission is based on a snapshot of the database at the end of the month and does not consider historic adjustments or the fact that lights can be livened before they are entered into the database. Manawa has a process to account for lights installed or removed during a month, but as mentioned above, sometimes the dates may be incorrect.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 2.1</p> <p>With: 11(1) of Schedule 15.3</p> <p>From: 01-Nov-21</p> <p>To: 24-Oct-23</p>	<p>Database does not track changes from the correct effective date, they are only recorded from the date of data entry.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>
Audit risk rating	Rationale for audit risk rating
<p>Low</p>	<p>Changes are made when required but cannot be applied for the correct date, therefore controls are rated as moderate overall for database and submission accuracy.</p> <p>Overall, the database accuracy is high; therefore, the audit risk rating is assessed to be low.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
Manawa to work with TCC to try and identify any historic changes that were recorded inaccurately and update them.	01/02/2024	Investigating
Preventative actions taken to ensure no further issues will occur	Completion date	
Manawa to work with TCC to identify whether there are any system or process changes that would allow us to accurately record the change date into the database	01/03/2024	

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 an ICP is recorded for each item of load.

Audit commentary

An ICP is recorded for each item of load. The accuracy of the ICP applied 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 database contains a field for the park or reserve and another field with a description. The items of load are also recorded in the GIS and access was provided to enable an accurate plot of these lights for the field audit.

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

The database contains a field for gear wattage and lamp wattage. All fields were populated, and the accuracy of the fields 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 of all 261 items of load recorded in the database was undertaken.

Audit commentary

The field audit found that all data in the database was accurate. The seven discrepancies identified during the last audit have been corrected.

This clause relates to items of load in the field not recorded in the database. No additional lights were found in the field.

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 ability of the database to track changes was assessed and the process for tracking of changes in the database was examined.

Audit commentary

Examination of the database found that changes made in the Accela database can only be applied from the day of being changed and not the date of light install. One example was checked, which was asset ID 2379, identified as an additional light during the 2022 audit conducted on 17 May 2022. The data in the database is the date of data entry which is 25 May 2022 and it's likely the light was installed prior to 17 May 2022.

This is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.6 With: Clause 11(3) of Schedule 15.3 From: 01-Nov-20 To: 24-Oct-23	Database does not track changes from the effective date. Potential impact: Low Actual impact: Low Audit history: Twice Controls: None Breach risk rating: 5		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as none as the database functionality prevents the loading of changes to the database for the date of install and changes can only be from the date the change is loaded. The audit risk rating is low as the number of lights in the database is small so any impact to reconciliation will be low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Manawa to work with TCC to try and identify any historic changes that were recorded inaccurately and update them.		01/02/2024	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Manawa to work with TCC to identify whether there are any system or process changes that would allow us to accurately record the change date into the database		01/03/2024	

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 contains a complete audit trail of all additions and changes.

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

A 100% audit was undertaken to determine the database wattage.

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

Field Audit Findings

The field audit found that all data in the database was accurate. The seven discrepancies identified during the last audit have been corrected.

Lamp description and capacity accuracy

There were no lamp description and capacity discrepancies found.

ICP accuracy

All items of load had an ICP recorded.

Location accuracy

The database contains fields for the street address and also GPS coordinates.

Change management process findings

McKay Electrical has the maintenance contract for streetlights and data is entered directly into the RAMM database via pocket RAMM. McKay Electrical submits Service Orders immediately after the work has been completed and this is in turn checked by Tauranga City Council to validate the claims. The only changes during the audit period were corrections from the last audit.

Audit outcome

Compliant

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

Manawa reconciles this DUML load using the STL profile. The on and off times are derived from data logger information.

I recalculated the submissions for August 2023 using the data logger and database information. I confirmed that the calculation method and result was correct.

The database does not allow changes to be loaded for the date of the change. This is recorded as non-compliance below and in **sections 2.1 and 2.6**.

The previous audit recorded that submission is based on a snapshot of the database at the end of the month and does not consider historic adjustments or the fact that lights can be livened before they are entered into the database. Manawa has a process to account for lights installed or removed during a month, but as mentioned above, sometimes the dates may be incorrect.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c) From: 26-Nov-19 To: 24-Oct-23</p>	<p>Database does not track changes from the correct effective date, they are only recorded from the date of data entry. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
<p>Low</p>	<p>Changes are made when required but cannot be applied for the correct date, therefore controls are rated as moderate overall for database accuracy. Overall, the database accuracy is high; therefore, the audit risk rating is assessed to be low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Manawa to work with TCC to try and identify any historic changes that were recorded inaccurately and update them.</p>		<p>01/02/2024</p>	<p>Investigating</p>
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Manawa to work with TCC to identify whether there are any system or process changes that would allow us to accurately record the change date into the database</p>		<p>01/03/2024</p>	

CONCLUSION

The database used for submission is called Accela and is managed by TCC P&R. The field work and asset data capture are conducted by McKay Electrical, and they provide hard copy updates to TCC P&R. Reporting is provided to Manawa on a monthly basis.

The field audit found that all data in the database was accurate. The seven discrepancies identified during the last audit have been corrected.

Examination of the database found that changes made in the Accela database can only be applied from the day of being changed and not the date of light install. One example was checked, which was asset ID 2379, identified as an additional light during the 2022 audit conducted on 17 May 2022. The data in the database is the date of data entry which is 25 May 2022 and it's likely the light was installed prior to 17 May 2022. The impact of this non-compliance is minor whilst there are very few changes being made to the database.

The audit found three non-compliances, all related to the matter mentioned above. The future risk rating of nine indicates that the next audit be completed in 12 months. I have considered this along with the materiality of the non-compliances found, and I recommend that the next audit be in 24 months.

PARTICIPANT RESPONSE

Manawa has a good working relationship with TCC, so we will work with them to identify a way to record change date information accurately in the database. TCC already have a strong system in place for their street lighting database, so we are confident that we can identify a way to rectify this moving forward.

We are currently working closely with TCC on Dimmable Street lighting, so improvements to the TCC P&R database will happen alongside this piece of work. Manawa supports a 24month audit period to allow us to work on both improvements simultaneously. Thank you Steve, and Veritek, for completing this audit and report for us.