ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

For

NZTA NORTHLAND DISTRIBUTED UNMETERED LOAD

GENESIS ENERGY

Prepared by: Steve Woods

Date audit commenced: 8 September 2022

Date audit report completed: 24 October 2022

Audit report due date: 15 April 2022

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EXECUTIVE SUMMARY

This audit of the **NZTA Northland Streetlight** DUML database and processes was conducted at the request of **Genesis Energy Limited (Genesis)** 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 Northland NZTA DUML ICPs are managed in an excel spreadsheet by Genesis. Genesis has been working with NZTA Northland to be able to utilise their RAMM database information. A planned field audit by NZTA Northland to improve the accuracy of its database has not been completed, so the audit was undertaken using the spreadsheet held by Genesis. The Genesis database combines information provided by both Top Energy and NZTA Northland which has not been updated since 2020. There is no process for recording any changes made to lights in the field. This was evident in the field audit which found a high number of lamps which had been replaced with LEDs and the changes were not recorded in the database.

The future risk rating of 31 indicates that the next audit be completed in three months, but I recommend that the next audit be in six months to allow time for Genesis to work with NZTA to improve the accuracy of the database.

This audit found five non-compliances and makes no recommendations. The matters raised are detailed in the table below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
DUML Audit	1.10	17.295F of part 17	Audit not completed within the required timeframe.	Strong	Low	1	Cleared
Deriving submission information	2.1	11(1) of Schedule 15.3	Database is not confirmed as accurate with a 95% level of confidence as recorded in section 3.1. The data used for submission does not track changes at a daily basis and is provided as a snapshot.	Weak	High	9	Investigating
All load recorded in database	2.5	11(2)(b) of Schedule 15.3	Nine additional lights were found in the field.	Weak	Low	3	Investigating
Database accuracy	3.1	15.2 and 15.37B(b)	Database is not confirmed as accurate with a 95% level of confidence.	Weak	High	9	Investigating
Volume information accuracy	3.2	15.2 and 15.37B(c)	Database is not confirmed as accurate with a 95% level of confidence as recorded in section 3.1. The data used for submission does not track changes at a daily basis and is provided as a snapshot.	Weak	High	9	Investigating
Future Risk Rating						31	

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

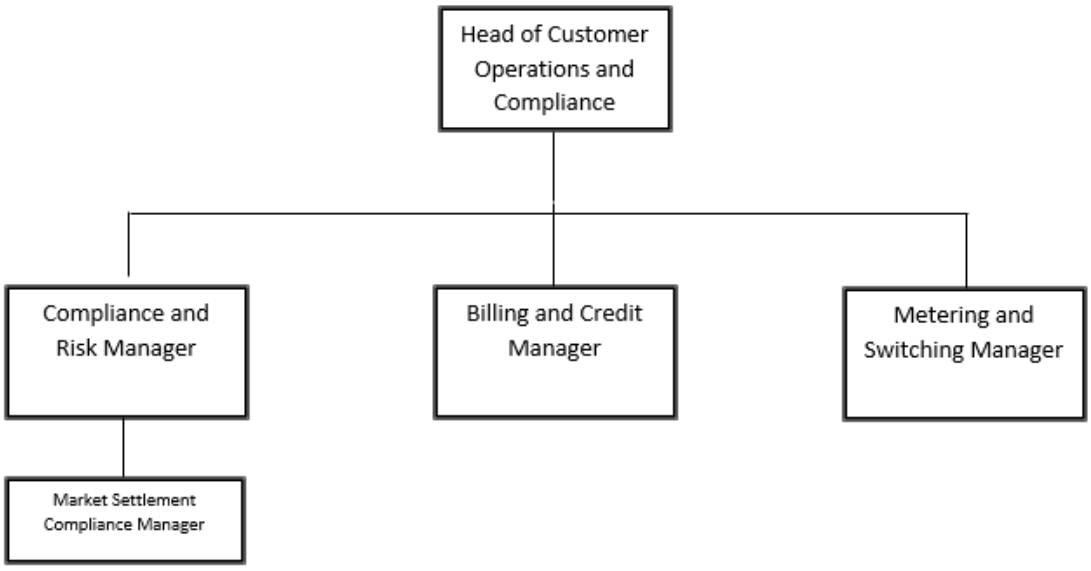
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

Audit commentary

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

1.2. Structure of Organisation

Genesis provided the relevant organisational structure:



1.3. Persons involved in this audit

Auditor:

Steve Woods

Veritek Limited

Electricity Authority Approved Auditor

Supporting Auditor:

Brett Piskulic

Veritek Limited

Electricity Authority Approved Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Craig Young	Market Settlement Compliance Manager	Genesis Energy
Nirav Teli	DUML Data & Stakeholder Lead	Genesis Energy

1.4. Hardware and Software

The streetlight data is held in an excel spreadsheet by Genesis. This is backed up in accordance with standard industry procedures. Access to the spreadsheet is restricted by way of user log-in to the computer drive.

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)
0000912700TEF16	TRANSIT UNMETERED STREETLIGHTS	KOE1101	NST	-	Reconciled under ICP 0000913800TE1B9
0000004228TE76E	STREETLIGHT	KOE1101	NST	-	Reconciled under ICP 0000913800TE1B9
0000911600TE4F2	TRANSIT UNMETERED STREETLIGHTS	KOE1101	NST	-	Reconciled under ICP 0000913800TE1B9
0000913800TE1B9	UNMETERED STREETLIGHTS	KOE1101	NST	493	82,575
0000913600TE7B2	STREETLIGHTS ON TE POLES	KOE1101	NST	50	25,117

The ballast values are included in the wattage totals.

1.7. Authorisation Received

All information was provided directly by Genesis.

1.8. Scope of Audit

This audit of the NZTA Northland area DUML database and processes was conducted at the request of Genesis Energy (Genesis), 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 ICPs are each managed in an excel spreadsheet held by Genesis.

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 field audit was undertaken of a statistical sample of 106 items of load on 16th September 2022.

1.9. Summary of previous audit

The previous audit was completed in October 2021 by Steve Woods of Veritek Limited. The current status of that audit's findings is detailed below:

Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
DUML Audit	1.10	17.295F of part 17	Audit not completed within the required timeframe.	Cleared
Deriving submission information	2.1	11(1) of Schedule 15.3	Database is not confirmed as accurate with a 95% level of confidence as recorded in section 3.1. The data used for submission does not track changes at a daily basis and is provided as a snapshot.	Still existing
Description and capacity of load	2.4	11(2A) and (d) of Schedule 15.3	164 lights with no input wattage being recorded resulting in under submission of an estimated 117,675 kWh if the database were used for submission.	Cleared
All load recorded in database	2.5	11(2)(b) of Schedule 15.3	16 additional lights were found in the field.	Still existing
Database accuracy	3.1	15.2 and 15.37B(b)	Database is not confirmed as accurate with a 95% level of confidence.	Still existing

Subject	Section	Clause	Non-compliance	Status
Volume information accuracy	3.2	15.2 and 15.37B(c)	Database not used for submission resulting in a potential over submission of 20,929.15 kWh per annum. 164 items of load have no recorded wattage recorded in the DUML database which would result in under submission of 117,675 kWh per annum if used for submission. 410 items of permanent load have the incorrect ballast applied indicating over submission of 7,142 kWh per annum if it were used for submission. Database is not confirmed as accurate with a 95% level of confidence as recorded in section 3.1. The data used for submission does not track changes at a daily basis and is provided as a snapshot.	Still existing

Table of Recommendations

Subject	Section	Recommendation for Improvement	Status
		Nil	

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

Genesis 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. Genesis was unable to complete this audit by the required timeframe as an accurate database extract was not able to be obtained from NZTA Northland in time to complete the audit by the due date.

Genesis has been working with NZTA Northland to be able to utilise their database information. A planned field audit by NZTA Northland to improve the accuracy of its database has not been completed so the audit was undertaken using the spreadsheet held by Genesis. The Genesis database combines information provided by both Top Energy and NZTA Northland.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 1.10 Clause 17.295F of part 17 From: 15-Apr-22 To: 26-Sep-22	Audit not completed within the required timeframe. Potential impact: Low Actual impact: Low Audit history: Three times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong, as Genesis are reliant on the database provider to supply the data and in this case the delay caused this report to be late. The impact is assessed to be low, as this has no direct impact on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis has appointed a Data and Stakeholder Lead to have the audits performed in a timely manner and brought upto speed.	21/10/2022	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Genesis has appointed a Data and Stakeholder Lead to have the audits performed in a timely manner and brought upto speed.	21/10/2022	

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

Genesis reconciles this DUML load using the NST profile. The total volume submitted to the Reconciliation Manager is based on historic data recorded received some years ago. NZTA have a RAMM database, but this is not being used for submission purposes as the data needs to be updated. As recorded in the previous three audits NZTA had committed to undertaking a 100% field audit of the RAMM database so that Genesis can use this for submission going forward. The field audit has yet to be completed.

I confirmed that the spreadsheet data provided by Genesis is used to calculate submission totals, therefore the database total matches submission total.

The database is not confirmed as accurate with a 95% level of confidence as recorded 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: unknown To: 16-Sep-22	Database is not confirmed as accurate with a 95% level of confidence as recorded in **section 3.1**. The data used for submission does not track changes at a daily basis and is provided as a snapshot. Potential impact: High Actual impact: High Audit history: Multiple times Controls: Weak Breach risk rating: 9

Audit risk rating	Rationale for audit risk rating		
High	Controls are rated as weak as the database has a high level of inaccuracy indicating controls are weak. The impact is assessed to be high due to the kWh volumes.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**
Genesis has brought this to the Relationship Managers attention and work with NZTA to have the database updated and maintained.		01/01/2023	Investigating
Preventative actions taken to ensure no further issues will occur		**Completion date**	
NZTA will be notified of the auditor's findings. Genesis relies on NZTA to accurately maintain its database.		01/01/2023	

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

All items of load had an ICP recorded in the database.

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 has the nearest side street address and GPS location 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 lamp type and wattage capacity and included any ballast or gear wattage.

Audit commentary

The database contains the manufacturers rated wattage and the ballast wattage. Whilst all items of load have wattages recorded, the field audit found a high number of these were inaccurate. The database accuracy 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

The field audit was undertaken of a statistical sample of 106 items of load on 16th September 2022.

Audit commentary

The field audit discrepancies found are detailed in the table below.

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
RUSK Rd - SH1	1	1	-	1	Database = 1x 150W HPS. Field = 1x 71W LED.
BARNES Rd – SH1	1	1	-	1	Database = 1x 150W HPS. Field = 1x 71W LED.

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
MACKERETH Lane – SH1	1	1	-	1	Database = 1x 150W HPS. Field = 1x 71W LED.
TAUMATAMAKUKU Rd – SH1	1	2	+1	-	Database = 1x 150W HPS. Field = 2x 150W HPS.
SAIES Rd – SH1	8	8	-	3	Database = 8x 150W HPS. Field = 5x 150W HPS & 3x 71W LED.
MOEREWA SERVICE LANE – SH1	2	2	-	1	Database = 2x 150W HPS. Field = 1x 150W HPS & 1x 71W LED.
NISBET St – SH1	5	5	-	4	Database = 5x 150W HPS. Field = 1x 150W HPS & 4x 71W LED.
SKIPPERS Lane – SH10	3	3	-	3	Database = 3x 150W HPS. Field = 3x 71W LED.
PUNGAERE Rd – SH10	1	1	-	1	Database = 1x 150W HPS. Field = 1x 71W LED.
SCHOOL GULLEY Rd – SH10	7	7	-	1	Database = 7x 150W HPS. Field = 6x 150W HPS & 1x 71W LED.
BEACH Rd – SH10	5	5	-	2	Database = 5x 150W HPS. Field = 3x 150W HPS & 2x 71W LED.
CABLE BAY BLOCK Rd – SH10	1	1	-	1	Database = 1x 150W HPS. Field = 1x 71W LED.
TAIPA POINT Rd – SH10	3	3	-	3	Database = 3x 150W HPS. Field = 3x 71W LED.
DUKE St – SH10 & SH1	8	16	+8	2	Database = 8x 150W HPS. Field = 6x 150W HPS & 10x 71W LED.
COLLARD St – SH1	3	3	-	2	Database = 3x 150W HPS. Field = 1x 150W HPS & 2x 71W LED.
GILLS Rd – SH1	5	5	-	3	Database = 5x 150W HPS. Field = 2x 150W HPS & 3x 71W LED.
Grand Total	**106**	**115**	**+9**	**29**	

This clause relates to lights in the field that are not recorded in the database. As recorded in the table above there were nine lights found in the field that were not recorded in the database.

The database accuracy is discussed in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: Clause 11(2A) of Schedule 15.3 From: unknown To: 16-Sep-22	Nine additional lights were found in the field. Potential impact: High Actual impact: Low Audit history: Once Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as weak as the database has not been updated to reflect the field information. The impact is assessed to be low due to the kWh volumes.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis has brought this to the Relationship Managers attention and work with NZTA to have the database updated and maintained.	01/01/2023	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
NZTA will be notified of the auditor's findings. Genesis relies on NZTA to accurately maintain its database.	01/01/2023	

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 database has the ability to track additions and removals as required by this clause.

The accuracy of the database is discussed in **section 3.1.**

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 spreadsheet was checked for audit trails.

Audit commentary

The database has the ability to track additions and removals as required by this clause.

The accuracy of the database is discussed in **section 3.1.**

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	NZTA Northland Streetlights
Strata	The database contains items of load on the Northland state highway network. The processes for the management of all NZTA items of load are the same, but I decided to place the items of load into three strata as follows: 1. Road names A - K, 2. Road names L - Sc, and 3. Road names Se - Y.
Area units	I created a pivot table of the roads, and I used a random number generator in a spreadsheet to select a total of 39 sub-units.
Total items of load	106 items of load were checked.

Wattages were checked for alignment with the published standardised wattage table produced by the Electricity Authority against the database.

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

Audit commentary

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

Result	Percentage	Comments
The point estimate of R	87.3%	Wattage from survey is lower than the database wattage by 22.7%
R_L	79.4%	With a 95% level of confidence, it can be concluded that the error could be between -20.6% and 3.8%.
R_H	96.2%	

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 1 February 2019 and the table below shows that Scenario B (detailed below) applies.

The conclusion from Scenario B is that, the inaccuracy is statistically significant at the 95% level. The sample results across the strata means that the true wattage (installed in the field) could be between 3.8% and 20.6% lower than the wattage recorded in the DUML database. Non-compliance is recorded because the potential error is greater than 5.0%.

In absolute terms the installed capacity is estimated to be 14.0 kW lower than the database indicates.

There is a 95% level of confidence that the installed capacity is between 4 kW and 22 kW lower than the database.

In absolute terms, total annual consumption is estimated to be 58,400 kWh lower than the DUML database indicates.

There is a 95% level of confidence that the annual consumption is between 17,500 kWh p.a. to 94,900 kWh p.a. lower than 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

I checked the ballasts being applied in the database and found that there were no discrepancies when compared to the standardised wattage table.

Change management process findings

The Genesis database combines information provided by both Top Energy and NZTA Northland which has not been updated since 2020. There is no process for recording any changes made to lights in the field. This was evident in the field audit which found a high number of lamps which had been replaced with LEDs and the changes were not recorded in the database.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: unknown To: 16-Sep-22	Database is not confirmed as accurate with a 95% level of confidence. Potential impact: High Actual impact: High Audit history: Multiple times Controls: Weak Breach risk rating: 9
Audit risk rating	**Rationale for audit risk rating**
High	The controls are rated as weak as the database has not been updated to reflect the field information. The impact is assessed to be high due to the kWh volumes.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis has brought this to the Relationship Managers attention and work with NZTA to have the database updated and maintained.	01/01/2023	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
NZTA will be notified of the auditor's findings. Genesis relies on NZTA to accurately maintain its database.	01/01/2023	

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

Genesis reconciles this DUML load using the NST profile. The total volume submitted to the Reconciliation Manager is based on historic data recorded received some years ago. NZTA have a RAMM database, but this is not being used for submission purposes as the data needs to be updated. As recorded in the previous three audits NZTA had committed to undertaking a 100% field audit of the RAMM database so that Genesis can use this for submission going forward. The field audit has yet to be completed.

I confirmed that the spreadsheet data provided by Genesis is used to calculate submission totals, therefore the database total matches submission total.

The field audit against the database quantities found that the database is not confirmed as accurate with a 95% level of confidence. 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: unknown To: 31-Jul-20	Database is not confirmed as accurate with a 95% level of confidence as recorded in section 3.1. The data used for submission does not track changes at a daily basis and is provided as a snapshot. Potential impact: High Actual impact: High Audit history: Multiple times Controls: Weak Breach risk rating: 9
Audit risk rating	**Rationale for audit risk rating**

High	Controls are rated as weak as the database has a high level of inaccuracy indicating controls are weak, and there are no processes to update changes from the field. The impact is assessed to be high due to the kWh volumes.

Actions taken to resolve the issue	**Completion date**	**Remedial action status**
Genesis has brought this to the Relationship Managers attention and work with NZTA to have the database updated and maintained.	01/01/2023	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
NZTA will be notified of the auditor's findings. Genesis relies on NZTA to accurately maintain its database.	01/01/2023	

CONCLUSION

The Northland NZTA DUML ICPs are managed in an excel spreadsheet by Genesis. Genesis has been working with NZTA Northland to be able to utilise their RAMM database information. A planned field audit by NZTA Northland to improve the accuracy of its database has not been completed, so the audit was undertaken using the spreadsheet held by Genesis. The Genesis database combines information provided by both Top Energy and NZTA Northland which has not been updated since 2020. There is no process for recording any changes made to lights in the field. This was evident in the field audit which found a high number of lamps which had been replaced with LEDs and the changes were not recorded in the database.

The future risk rating of 31 indicates that the next audit be completed in three months, but I recommend that the next audit be in six months to allow time for Genesis to work with NZTA to improve the accuracy of the database.

PARTICIPANT RESPONSE

Genesis has brought this to the Relationship Managers attention and work with NZTA to have the database updated and maintained. Genesis will be assisting NZTA Northland in updating their dataset where possible with the intent that NZTA makes every effort to ensure this is rectified asap.