ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

WAIPA DISTRICT COUNCIL AND GENESIS ENERGY NZBN:9429037706609

Prepared by: Steve Woods

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Date audit report completed: 27 May 2024

Audit report due date: 30-May-24

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EXECUTIVE SUMMARY

This audit of the **Waipa District Council Unmetered Streetlights (WDC)** DUML database and processes was conducted at the request of **Genesis Energy Ltd (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 database is remotely hosted by thinkproject New Zealand Ltd and is managed by Waipa DC. McKay Electrical enters details of changes directly into the database using pocket RAMM for maintenance. As reported in the last audit, the database accuracy indicates that changes made are not being updated accurately.

I have repeated the recommendation from the last audit to undertake a full field audit to bring the database up to date. I have also recommended that quality control processes are put in place to better manage the data quality so that changes going forward are accurate.

Waipa DC provides reporting to Genesis on a monthly basis, and this includes any changes made during the month so that change is calculated on a daily basis as required by the code. New lights are recorded on the monthly report, but I recommend that a field in RAMM is used to indicate the correct date of electrical connection.

The field audit identified the following discrepancies, leading to over submission of 87,300 kWh per annum.

Discrepancy	Quantity
Items of load in the field not in the database	15
Items of load in the database not in the field	1
Incorrect wattages	56

This audit found four non-compliances and makes four recommendations. The future risk rating of 30 indicates that the next audit be completed in three months. I have considered this in conjunction with the comments from Genesis and recommend that the next audit is conducted in six months' time.

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
Deriving submission information	2.1	11(1) of Schedule 15.3	Non-compliant NST profile is still being used. The database is outside of the allowable +/-5% threshold. In absolute terms the total annual consumption is estimated to be 87,300 kWh per annum lower than the database indicates.	Weak	High	9	Identified
All load recorded in database	2.5	11(2A) of Schedule 15.3	15 additional items of load were found in the field.	Weak	Low	3	Identified
Database accuracy	3.1	15.2 and 15.37B(b)	The database is outside of the allowable +/-5% threshold. There is a 95% level of confidence that the annual consumption is between 18,200 kWh p.a. to 170,500 kWh p.a. lower than the database indicates. Over submission of 16,000 kWh per annum due to incorrect wattages for 60-watt MH lights.	Weak	High	9	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Volume information accuracy	3.2	15.2 and 15.37B(c)	Non-compliant NST profile is still being used. The database is outside of the allowable +/-5% threshold. In absolute terms the total annual consumption is estimated to be 87,300 kWh per annum lower than the database indicates.	Weak	High	9	Identified
Future Risk Rating						30	

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
Location of each item of load	2.3	Add GPS co-ordinates for three items of load in the McKinnon car park.
Database accuracy	3.1	Undertake 100% field audit to bring database up to date, including resurveying the Te Awamutu under verandah lighting and plotting these correctly.
		Put quality control processes in place to improve data accuracy from the field.
		Use one of the fields in RAMM to record the electrical connection date of new streetlights.

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

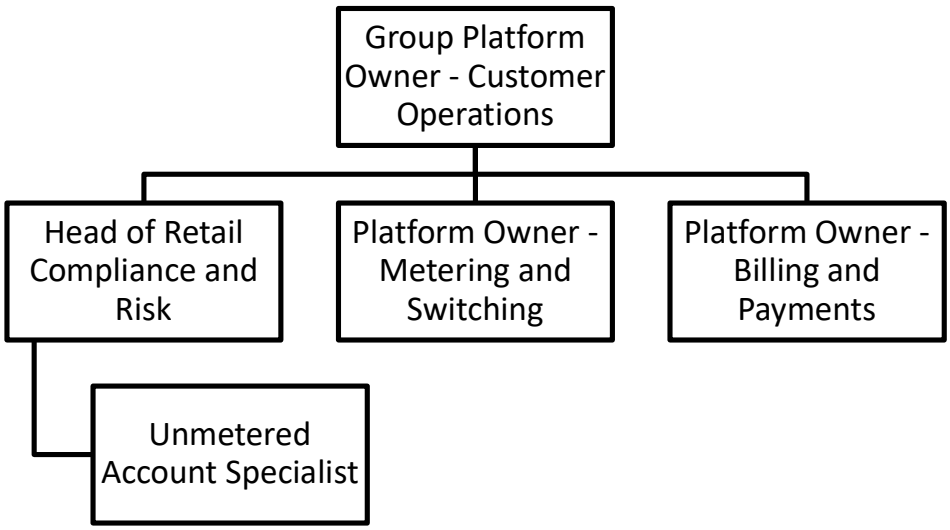
Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit 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:

Name	Company	Role
Steve Woods	Veritek Limited	Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Brittany Dowsett	Asset Information Officer - Transportation	Waipa District Council
Alysha Majury	Unmetered Account Specialist	Genesis Energy

1.4. Hardware and Software

Section 1.8 shows that the SQL database used for the management of DUML is remotely hosted by thinkproject New Zealand 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.

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 audit.

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)
0000041292WEDF7	Waipa District Council - Tamahere	HAM0331	NST	104	7,532
0000041294WEC78	Oaklands Drive	OAK0111	NST	50	2,927
0000400319WA4CA	Waipa DC TMU0111 S/L	TMU0111	NST	2,323	87,780
0000806500WA13E	Waipa DC CBG0111 S/L	CBG0111	NST	2,943	135,545
Total				5,420	233,784

1.7. Authorisation Received

All information was provided directly by Genesis or WDC.

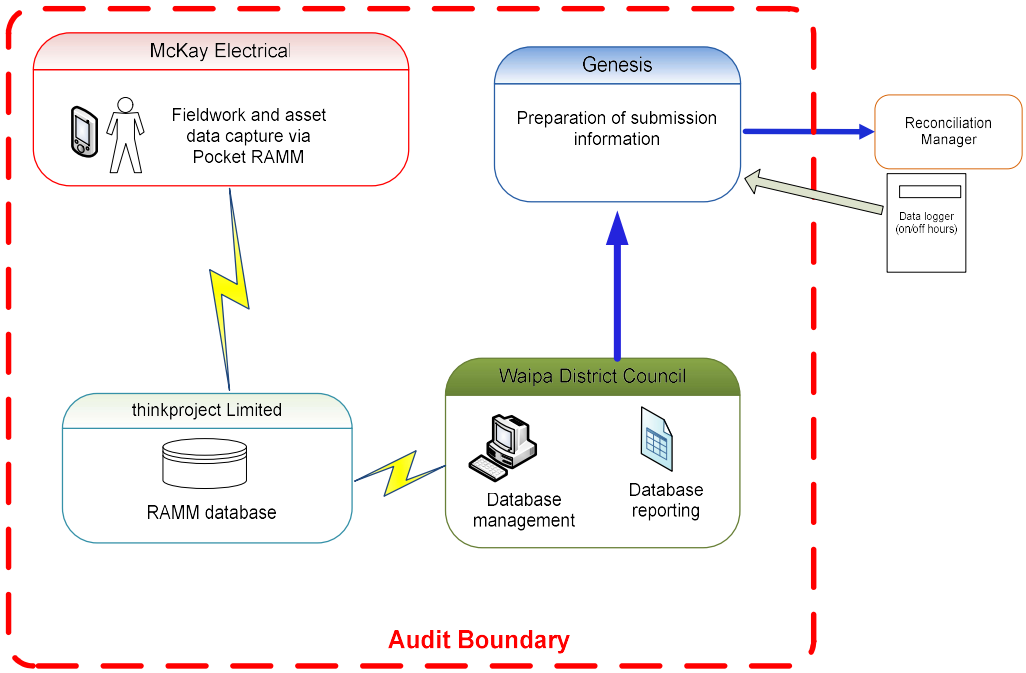
1.8. Scope of Audit

This audit of the Waipa District Council Unmetered Streetlights (WDC) 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 database is remotely hosted by thinkproject New Zealand Ltd and is managed by Waipa DC. McKay Electrical conducts the installation fieldwork and maintenance. They provide information on all work carried out back to Waipa DC and this is then loaded into RAMM. Waipa DC provides reporting to Genesis on a monthly basis.

The scope of the audit encompasses the collection, security and accuracy of the data, including the preparation of submission information based on the database contents. The diagram below shows the audit boundary for clarity.



The field audit was undertaken of a statistical sample of 268 items of load on 21 April 2024.

1.9. Summary of previous audit

The previous audit was conducted in May 2023 by Rebecca Elliot of Veritek Limited. The status of compliance against the clauses are detailed in the table below.

Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	The database is outside of the allowable +/-5% threshold. There is a 95% level of confidence that the annual consumption is between 4,900 kWh p.a. lower to 166,300 kWh p.a. higher than the database indicates.	Still existing
All load recorded in database	2.5	11(2A) of Schedule 15.3	Three additional items of load were found in the field.	Still existing
Database accuracy	3.1	15.2 and 15.37B(b)	The database is outside of the allowable +/-5% threshold. There is a 95% level of confidence that the annual consumption is between 4,900 kWh p.a. lower to 166,300 kWh p.a. higher than the database indicates. One light recorded with the incorrect light type.	Still existing
Volume information accuracy	3.2	15.2 and 15.37B(c)	The database is outside of the allowable +/-5% threshold. There is a 95% level of confidence that the annual consumption is between 4,900 kWh p.a. lower to 166,300 kWh p.a. higher than the database indicates.	Still existing

Table of Recommendations

Subject	Section	Recommendation	Status
Location of each item of load	2.3	Add GPS co-ordinates for three items of load in the McKinnon car park.	Still existing
Database accuracy	3.1	Undertake 100% field audit to bring database up to date, including resurveying the Te Awamutu under verandah lighting and plotting these correctly.	Repeated
		Confirm the correct lamp wattage for all lights labelled 60W MH in the field but recorded as 70W HPS in the database in Leamington.	Now recorded as non-compliance
		Put quality control processes in place to improve data accuracy from the field.	Repeated
		Use one of the fields in RAMM to record the electrical connection date of new streetlights.	Repeated

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.

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

Genesis reconciles the DUML load as NHH using the NST profile. The recent profile audit, finalised in September 2023, concluded that the NST, CST and SST profile rules were not fit for purpose because they allow the shape files for each profile to be different to actual on/off times by up to 29 minutes at the start and end of each streetlight "on" period. The Authority allowed Genesis until the end of March 2024 to move all relevant ICPs onto a compliant profile, which has not yet occurred.

A RAMM extract is sent each month, and this includes changes made during the month, so changes are calculated on a daily basis. The total volume submitted to the Reconciliation Manager is based on a monthly database report derived from RAMM and the "burn time" which is sourced from data loggers installed on the WEL and Waipa networks.

I recalculated the submissions for February 2024 using the data logger and the database information and the submission figures matched.

As recorded in **section 3.1**, the database is outside of the allowable +/-5% threshold. In absolute terms the total annual consumption is estimated to be 87,300 kWh per annum lower than the database indicates.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11(1) of schedule 15.3 From: 01-Jun-23 To: 29-Feb-24	Non-compliant NST profile is still being used. The database is outside of the allowable +/-5% threshold. In absolute terms the total annual consumption is estimated to be 87,300 kWh per annum lower than the database indicates. 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 processes in relation to submission are strong but there are no controls in place to ensure the database is accurate, so the overall rating is assessed to be weak. The impact is assessed to be high, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis continues to work on its application for a new profile. Waipa DC are aware of the outcome and findings; they are also aware of the requirements to resolve. Genesis continues to work with Waipa DC to ensure accuracy of their database.	Continuous Improvement	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Genesis continues to work with Waipa DC to ensure accuracy of their database.	Continuous Improvement	

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 was recorded against each item of load.

Audit commentary

All items of unmetered load in RAMM have an ICP number recorded. There are 18 items of load with no ICP recorded but these are all solar lights, so are not in the scope of this audit.

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 the nearest street address for all items of load and all but four items of load have a GPS location recorded. One item of load on Bank St (pole no. 53148) has the distance from the end of the road recorded which is sufficient. The remaining three items of load are recorded as McKinnon car park and are the only three lights associated with this car park, so the location is sufficient, but I recommend that the GPS co-ordinates are added for completeness. Section 3.1 discusses the accuracy of some under veranda locations.

Recommendation	Description	Audited party comment	Remedial action
Location of each item of load	Add GPS co-ordinates for three items of load in the McKinnon car park.	Waipa DC are aware of the findings and the recommendations. Genesis continues to work with Waipa DC on this recommendation.	Investigating

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 each item of load had a value recorded in these fields.

Audit commentary

The database contains two records for wattage, firstly the lamp wattage and secondly the gear wattage, which represents ballast losses. The accuracy of the ballast values applied is discussed in **section 3.1**.

The previous audits found that the lamp type descriptions for LEDs was insufficient to determine the correct wattage was applied. I confirmed in this audit that these are recorded in the database, but that the data hadn't been supplied previously. These are sufficient to determine the correct lamp wattage.

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 268 items of load.

Audit commentary

The field audit discrepancies are detailed in the table below.

Discrepancy	Quantity
Items of load in the field not in the database	15
Items of load in the database not in the field	1
Incorrect wattages	56

I rechecked the discrepancies from the last audit and found all have been corrected.

The field audit found 15 additional lamps in the field.

The accuracy of the database 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: 01-Jun-23 To: 29-Feb-24	15 additional items of load were found in the field. Potential impact: Low Actual impact: Low Audit history: Three times previously Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as weak as there are no quality control processes in place to ensure data quality in the field. The impact on settlement and participants is minor; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Waipa DC are aware of the outcome and findings; they are also aware of the requirements to provide accurate datasets. Genesis continues to work with Waipa DC to ensure accuracy of their database and to provide any support required.	Continuous Improvement	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Waipa DC are aware of the findings and to take on the feedback to look at their process when updating their database for any changes/new connections.	Continuous Improvement	

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 Genesis 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 RAMM database has a complete audit trail of all additions and changes to the database information.

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	Te Awamutu and surrounds
Strata	The database contains items of load in Waipa District Council area. The processes for the management of WDC items of load are the same, but I decided to place the items of load into four strata, as follows: 1. Waipa A-C, 2. Waipa D-L, 3. Waipa M-S, and 4. Waipa T-Z.
Area units	I created a pivot table of the roads in each area, and I used a random number generator in a spreadsheet to select a total of 46 sub-units.
Total items of load	268 items of load were checked.

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 based on the field audit

A field audit was conducted of a statistical sample of 268 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	91.3	Wattage from survey is lower than the database wattage by 8.7%
R_L	82.9	With a 95% level of confidence, it can be concluded that the error could be between-1.8% and -17.1%
R_H	98.2	

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 1 February 2019. The conclusion from Scenario B is that the variability of the sample results across the strata with statistical significance means that the true wattage (installed in the field) could be between 1.8% lower and 17.1% lower than the wattage recorded in the DUML database. Non-compliance is recorded because the error is greater than 5.0%.

- In absolute terms the installed capacity is estimated to be 20.0 kW lower than the database indicates.
- There is a 95% level of confidence that the installed capacity is between 4 kW lower to 40 kW lower than the database.
- In absolute terms, total annual consumption is estimated to be 83,700 kWh lower than the DUML database indicates.
- There is a 95% level of confidence that the annual consumption is between 18,200 kWh p.a. lower to 170,500 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 %

I repeat the last audit's recommendation that a full field audit is undertaken to correct the data.

Recommendation	Description	Audited party comment	Remedial action
Database accuracy	Undertake 100% field audit to bring database up to date, including resurveying the Te Awamutu under verandah lighting and plotting these correctly.	Waipa DC are aware of the findings, they are aware that a field audit has been recommended and they will take away this recommendation.	Investigating

Lamp description and capacity accuracy

Wattage accuracy

The database contains two records for wattage, firstly the lamp wattage and secondly the gear wattage, which represents ballast losses.

As reported in the last audit, there are approximately 221 lights in the Leamington area that are labelled as 60W metal halide but are recorded in the database as 70-watt HPS. These may be 60-watt Philips Cosmo Polis lights with 6-watt electronic ballasts.

This matter has been present for the last two audits, and the recommendation to investigate what these lights are, has not been conducted, therefore I have assumed they are Cosmo Polis lights until it is confirmed they are something different, because these are the only 60-watt metal halide lights I'm aware of. This issue may have led to over submission by 16,000 kWh per annum.

NZTA lighting

NZTA lights are not included in the load recorded by WDC. These are managed by NZTA directly.

Private lights

No private lights are recorded in the database.

ICP accuracy

All items of load have the correct ICP recorded.

Location accuracy

The under-verandah lighting in Te Awamutu identified in the last audit still has the incorrect the GPS coordinates. I recommend that all the under-verandah lighting is resurveyed and plotted correctly as part of the 100% field audit recommended above.

Change management process findings

Processes to track changes to the database were reviewed.

McKay Electrical enters details of changes directly into the database using pocket RAMM for maintenance. As reported in the last audit, the database accuracy indicates that changes made are not being updated accurately. I repeat the last audit's recommendation that quality control processes be put in place such as reviewing who has entered incorrect data and working with the contractor to address this.

Recommendation	Description	Audited party comment	Remedial action
Database accuracy	Put quality control processes in place to improve data accuracy from the field.	Waipa DC are aware of the findings and have confirmed they now go into the field to plot new assets and verify details however these have yet to be re-visited. Waipa DC are aware of the requirement for accurate data and Genesis continues to work with them to ensure there is accuracy of their datasets.	Investigating

Subdivision information comes from developers via "as built" plans. Waipa DC go out into the field to plot the new assets and verify the details. Waipa Network advise when new connections have been completed. This is noted on the monthly report to Genesis, and they use this when calculating the monthly submission. The code requires that this information is recorded in the database. I recommend using one of the available fields such as light install date in RAMM to record the electrical connection date.

Recommendation	Description	Audited party comment	Remedial action
Database accuracy	Use one of the fields in RAMM to record the electrical connection date of new streetlights.	Waipa DC are aware of findings and recommendation. Genesis continues to work with Waipa DC to ensure accuracy of their database.	Investigating

There are no festive lights connected to the streetlight circuits.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 01-Jun-23 To: 29-Apr-24	The database is outside of the allowable +/-5% threshold. There is a 95% level of confidence that the annual consumption is between 18,200 kWh p.a. to 170,500 kWh p.a. lower than the database indicates. Over submission of 16,000 kWh per annum due to incorrect wattages for 60-watt MH lights. Potential impact: High Actual impact: High Audit history: Three times previously Controls: Weak Breach risk rating: 9
Audit risk rating	**Rationale for audit risk rating**
High	The controls are rated as weak as the processes in place to track changes requires improvement. The impact is assessed to be high, based on the estimated kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
Waipa DC are aware of the outcome and findings; they are also aware of the requirements to resolve. Genesis continues to work with Waipa DC to ensure accuracy of their database and they are aware of the recommendation for a field audit.	Continuous Improvement	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Genesis continues to work with Waipa DC to ensure accuracy of their database.	Continuous Improvement	

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 burn hours against the submitted figure to confirm accuracy.

Audit commentary

Genesis reconciles the DUML load as NHH using the NST profile. The recent profile audit, finalised in September 2023, concluded that the NST, CST and SST profile rules were not fit for purpose because they allow the shape files for each profile to be different to actual on/off times by up to 29 minutes at the start and end of each streetlight "on" period. The Authority allowed Genesis until the end of March 2024 to move all relevant ICPs onto a compliant profile, which has not yet occurred.

A RAMM extract is sent each month, and this includes changes made during the month, so changes are calculated on a daily basis. The total volume submitted to the Reconciliation Manager is based on a monthly database report derived from RAMM and the "burn time" which is sourced from data loggers installed on the WEL and Waipa networks.

I recalculated the submissions for February 2024 using the data logger and the database information and the submission figures matched.

As recorded in **section 3.1**, the database is outside of the allowable +/-5% threshold. In absolute terms the total annual consumption is estimated to be 87,300 kWh per annum lower than the database indicates.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c) From: 01-Jun-23 To: 29-Feb-24	Non-compliant NST profile is still being used. The database is outside of the allowable +/-5% threshold. In absolute terms the total annual consumption is estimated to be 87,300 kWh per annum lower than the database indicates. 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 processes in relation to submission are strong but there are no controls in place to ensure the database is accurate, so the overall rating is assessed to be weak. The impact is assessed to be high, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis continues to work on its application for a new profile. Waipa DC are aware of the outcome and findings; they are also aware of the requirements to resolve. Genesis continues to work with Waipa DC to ensure accuracy of their database.	Continuous Improvement	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Genesis continues to work with Waipa DC to ensure accuracy of their database.	Continuous Improvement	

CONCLUSION

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

The database is remotely hosted by thinkproject New Zealand Ltd and is managed by Waipa DC. McKay Electrical enters details of changes directly into the database using pocket RAMM for maintenance. As reported in the last audit, the database accuracy indicates that changes made are not being updated accurately.

I have repeated the recommendation from the last audit to undertake a full field audit to bring the database up to date. I have also recommended that quality control processes are put in place to better manage the data quality so that changes going forward are accurate.

Waipa DC provides reporting to Genesis on a monthly basis, and this includes any changes made during the month so that change is calculated on a daily basis as required by the code. New lights are recorded on the monthly report, but I recommend that a field in RAMM is used to indicate the correct date of electrical connection.

The field audit identified the following discrepancies, leading to over submission of 87,300 kWh per annum.

Discrepancy	Quantity
Items of load in the field not in the database	15
Items of load in the database not in the field	1
Incorrect wattages	56

This audit found four non-compliances and makes four recommendations. The future risk rating of 30 indicates that the next audit be completed in three months. I have considered this in conjunction with the Genesis' comments and recommend that the next audit is conducted in six months time.

PARTICIPANT RESPONSE

Genesis agrees with the findings and recommendations.

Waipa DC are aware of all the findings and recommendations that have been given. Waipa DC will take away the recommendation of a field audit and look at uploading the GPS co-ordinations.

Genesis continues to work with Waipa DC to ensure accuracy of their database.