

**ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTED UNMETERED LOAD AUDIT REPORT**

For

**FAR NORTH DISTRICT COUNCIL  
AND GENESIS ENERGY**

Prepared by: Rebecca Elliot

Date audit commenced: 18 February 2019

Date audit report completed: 22 February 2019

Audit report due date: 1 March 2019

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## EXECUTIVE SUMMARY

This audit of the Far North District Council (**FNDC**) DUMML 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 DUMML audits version 1.1.

A RAMM database is held by FNDC, who is Genesis' customer. This database is hosted by RAMM Software Limited. FNDC engages McKay Ltd as their fieldwork and asset data capture service provider.

This audit found four non-compliances relating to minor inaccuracies in the database and makes two recommendations. The field audit found 100% accuracy and overall the database has a high level of accuracy and robust controls to manage change.

The future risk rating of eight indicates that the next audit be completed in 18 months and I agree with this recommendation.

The matters raised are detailed below:

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Deriving submission information	2.1	11(1) of Schedule 15.3	<p>Seven lights with no input wattage being recorded resulting in under submission of an estimated 2,481 kWh if the database were used for submission.</p> <p>One item of load has the incorrect ballast applied in the DUML database which would result in over submission of 428.15 kWh per annum if used for submission.</p>	Moderate	Low	2	Identified
Description and capacity of load	2.4	11(2)(c) and (d) of Schedule 15.3	<p>16 items of load recorded with an "Unknown" or blank lamp model.</p> <p>Seven lights with no input wattage being recorded resulting in under submission of an estimated 2,481 kWh if the database were used for submission.</p>	Moderate	Low	2	Identified
Database accuracy	3.1	15.2 and 15.37B(b)	<p>One item of load has the incorrect ballast applied in the DUML database which would result in over submission of 428.15 kWh per annum if used for submission.</p> <p>Seven lights with no input wattage being recorded resulting in under submission of an estimated 2,481 kWh if the database were used for submission.</p>	Moderate	Low	2	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)	<p>Incorrect status recorded for ICP 0000003759TEF13.</p> <p>Seven lights with no input wattage being recorded resulting in under submission of an estimated 2,481 kWh if the database were used for submission.</p> <p>One item of load has the incorrect ballast applied in the DUML database which would result in over submission of 428.15 kWh per annum if used for submission.</p>	Moderate	Low	2	Investigating
Future Risk Rating						8	

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

## RECOMMENDATIONS

Subject	Section	Description	Recommendation
Deriving submission information	2.1	Clause 11(1) of schedule 15.3	Confirm cause of light count difference for ICP 0000003546TE067 between December and January.
Tracking of load changes	2.6	Clause 11(3) of schedule 15.3	Field check that the light type provided in the "as built" is what is installed in the field.

## 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

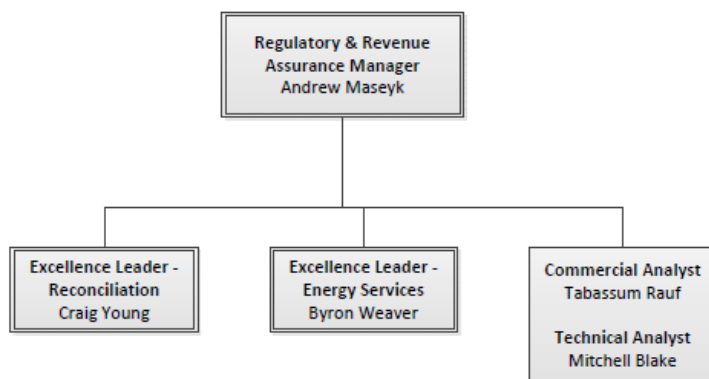
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

#### 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:

**Rebecca Elliot**

**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	Excellence Leader - Reconciliation	Genesis Energy
Grace Hawken	Technical Specialist - Reconciliations Team	Genesis Energy
Aaron Reilly	Lighting & Transport Operations Specialist	Far North District Council

#### 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".

There are also 35 amenity lights not recorded in RAMM which are recorded separately in a spreadsheet and added manually to the billing report.

Far North DC confirmed that the database back-up is in accordance with standard industry procedures.

#### 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)
0000003756TE0CD	UNMETERED DECORATIVE LIGHTING	KOE1101	NST	10	676
0000910800TE359	SOUTHERN UNMETERED GROUP LIGHTING	KOE1101	NST	28	2,324
0000003545TECA7	PAI001 CARPARK DOUBLEHEADED	KOE1101	NST	36	3,316
0000910300TE057	SL1298 SOUTHERN CARPARK	KOE1101	NST	962	46801
0000911400TEEF5	SOUTHERN UNMETERED STREETLIGHTS ON TE POLES FNDC	KOE1101	NST	273	10311

ICP Number	Description	NSP	Profile	Number of items of load	Database wattage (watts)
0000003546TE067	TRIPLE HEAD STREETLIGHTS FNDC	KOE1101	NST	7	852
0000003757TEC88	DECORATIVE LIGHTING NORTHERN AREA	KOE1101	NST	3	249
0000910900TEA5D	NORTHERN UNMETERED GROUP LIGHTING	KOE1101	NST	7	581
0000003758TE356	STREETLIGHTS DOUBLE HEADS FNDC	KOE1101	NST	4	175
0000003759TEF13	STREETLIGHTS DOUBLE HEAD X 1 RECORD FNDC	KOE1101	NST	-	Reconciled under ICP 0000003758TE356
0000910200TE953	NORTHERN UNMETERED STREETLIGHTS FNDC	KOE1101	NST	481	16861
0000911000TE2F4	NORTHERN UNMETERED STREETLIGHTS ON TE POLES FNDC	KOE1101	NST	119	4763
Total				1,930	87,130

The ballast values are included in the wattage totals.

The data for ICPs 0000910800TE359 and 0000910900TEA5D (35 items in total) are recorded on an excel spreadsheet. These relate to amenity lighting in the rural areas. The intention is that when any changes are made to these lights the records will be added to RAMM. This data was provided after the field audit was completed and therefore, they were not included in the field sample.

The load associated with ICP 0000003759TEF13 is reconciled under ICP 0000003758TE356. This ICP should be recorded as status "inactive -reconciled elsewhere" with ICP 0000003758TE356 referenced. This is recorded as non-compliance in **section 3.2**.

ICP 0000004228TE76E previously recorded as part of this DUML load has been confirmed to be part of the Northland NZTA database and has been included in that report.



## 1.7. Authorisation Received

All information was provided directly by Genesis and FNDC.

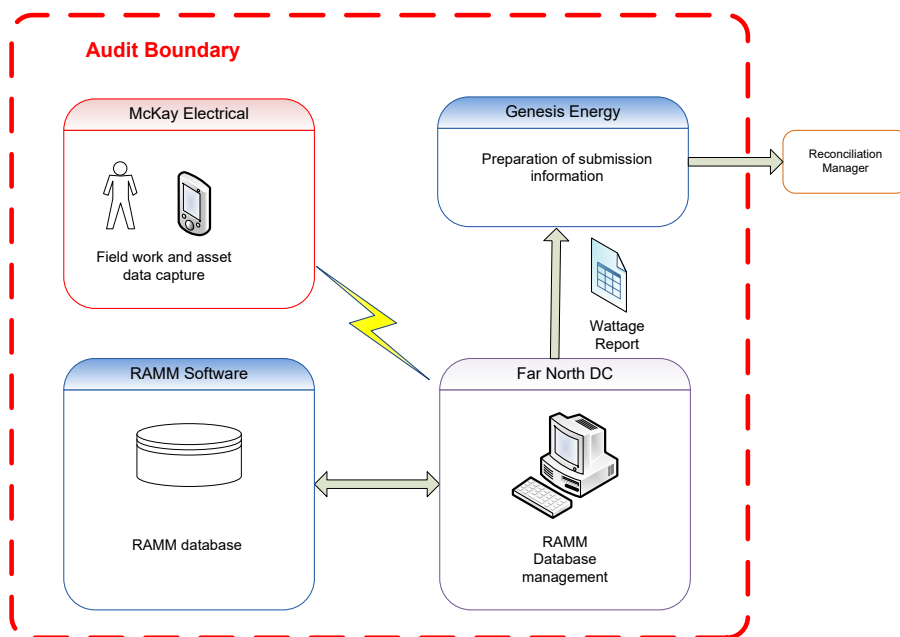
## 1.8. Scope of Audit

This audit of the Far North District Council (**FNDC**) 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.

FNDC is located on the Top Energy network. McKay Electrical is engaged as the streetlighting maintenance contractor and FNDC maintain the RAMM database, which is used by Genesis to calculate submission information. FNDC 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 monthly reporting. The diagram below shows the flow of information and the audit boundary for clarity.



The field audit was undertaken of a statistical sample of 189 items of load between 15<sup>th</sup> and 18<sup>th</sup> February 2019.

## 1.9. Summary of previous audit

The previous audit was completed in May 2018 by Rebecca Elliot of Veritek Limited. The current status of that audit's findings is detailed below:

### Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	Accuracy ratio is 93.6% indicating over submission of 19,400 kWh per annum. 8 items of load with the incorrect ballast applied indicating an estimated over submission of 1,775.55kWh per annum. Combined estimated over submission of 21,175.55kWh.	Cleared  Still existing but reduced
All load recorded in the database	2.5	11(2A) of Schedule 15.3	Additional items of load in the field.	Cleared
Database accuracy	3.1	15.2 and 15.37B(b)	Accuracy ratio is 93.6% indicating over submission of 19,400 kWh per annum. 8 items of load with the incorrect ballast applied indicating an estimated over submission of 1,775.55kWh per annum. Combined estimated over submission of 21,175.55kWh.	Cleared  Still existing but reduced
Volume information accuracy	3.2	15.2 and 15.37(c)	DUML load not recorded in RAMM for ICP 0000910900TEA5D. Accuracy ratio is 93.6% indicating over submission of 19,400 kWh per annum. 8 items of load with the incorrect ballast applied indicating an estimated over submission of 1,775.55kWh per annum. Combined estimated over submission of 21,175.55kWh.	Cleared  Cleared  Still existing but reduced

### Table of Recommendations

Subject	Section	Recommendation for Improvement	Status
Tracking of load changes	2.6	Field check that the light type provided in the "as built" is what is installed in the field.	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**

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 within the required timeframe.

### **Audit outcome**

Compliant

## 2. DUMML 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:

- DUMML 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 DUMML load using the NST profile. Genesis derives the hours of operation information using a data logger. I checked the submission methodology and confirmed compliance. One ICP had a difference in light volume as detailed in the table below:

As discussed in **sections 3.1** and **3.2**, the database and associated processes to derive submission were found to contain some inaccuracies and missing data.

ICPs	Fittings number from December submission	Fittings number from January database extract	Difference	kWh value submitted	Calculated kWh value from database	kWh difference
0000003546TE067	40	7	33	851	256	596 over submission

This could be due to the timing between the December submission and the database extract supplied in late January, but the difference is greater than expected. I recommend this is investigated to determine what has caused this difference.

Recommendation	Description	Audited party comment	Remedial action
<b>Regarding:</b> Clause 11(1) of schedule 15.3	Confirm cause of light count difference for ICP 0000003546TE067 between December and January	This ICP has Rooding and amenity fittings attached totalling 40 fittings	Identified

Seven lights with no input wattage being recorded resulting in under submission of an estimated 2,481 kWh if the database were used for submission. This is detailed in **section 2.4**.

The lamp ballast is not recorded correctly for one lamp when compared to the standardised wattage table. The incorrect capacity would result in an estimated over submission of 428.15 kWh per annum (based on annual burn hours of 4,271 as is detailed in the DUMML database auditing tool) if used for submission. This is detailed in **section 3.1**.

The field audit against the database quantities found that the database records were 100% accurate. This is detailed in **section 3.1**.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3  From: 01-Feb-18 To: 31-Jan-19	Seven lights with no input wattage being recorded resulting in under submission of an estimated 2,481 kWh if the database were used for submission.  One item of load has the incorrect ballast applied in the DUMML database which would result in over submission of 428.15 kWh per annum if used for submission.  Potential impact: Low  Actual impact: Low  Audit history: Once previously  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate, as they are sufficient to mitigate the risk most of the time, but there is room for improvement.  The impact is assessed to be low due to the kWh volumes.		
Actions taken to resolve the issue		Completion date	Remedial action status
FNDC are providing the information monthly. Genesis are reviewing and feeding back any potential database improvements		01/06/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis to monitor the information provided by FNDC monthly.		01/06/2019	

## 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 DUMML database must contain:*

- each ICP identifier for which the retailer is responsible for the DUMML
- 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.

### **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 DUMML database must contain the location of each DUMML 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 street address and Global Positioning System (GPS) coordinates for each item 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 DUMML 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 lamp model and this is populated appropriately for all items of load except 16 items of load recorded with an "Unknown" or blank lamp model.

The database contains two records for wattage, firstly the lamp wattage and secondly the total wattage including any gear wattage, which represents ballast losses. All had a value populated except for seven items of load, resulting in an estimated annual under submission of 2,481 kWh.

### **Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 2.4 With: Clause 11(2)(c) and (d) of Schedule 15.3 From: 01-Feb-18 To: 31-Jan-19	16 items of load recorded with an "Unknown" or blank lamp model. Seven lights with no input wattage being recorded resulting in under submission of an estimated 2,481 kWh if the database were used for submission. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as moderate, as they are sufficient to mitigate the risk most of the time, but there is room for improvement. The risk is low due to the impact on submission.		
Actions taken to resolve the issue		Completion date	Remedial action status
FNDC are providing the information monthly. Genesis are reviewing and feeding back any potential database improvements		01/06/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis to monitor the information provided by FNDC monthly.		01/06/2019	

## 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 189 items of load between 15<sup>th</sup> and 18<sup>th</sup> February 2019.

### Audit commentary

The field audit found no discrepancies between the database records and the lamps installed in the field. The 35 amenity lights referred to in **section 1.6** were not included in the field sample as they were provided post the field audit being completed. These are expected to be added to the RAMM database in the future.

Details of the field audit are listed in the table below.

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
<b>Far North – Ahipara, Awanui, Cable Bay, Coopers Beach, Kaitaia, Taipa, Taupo Bay, Waipapakauri, Whatuwhiwhi</b>					
AKEAKE CRESCENT	4	4			
BAY HEIGHTS DRIVE	9	9			
BROOKE ROAD	5	5			
COLLARD STREET	2	2			
DUDLEY CRESCENT	7	7			
HARBOUR VIEW ROAD	2	2			
HIBISCUS AVENUE	2	2			
JUNIPER LANE	1	1			
KAKAPO STREET	6	6			
PAPARORE ROAD	1	1			
PEREHIPE ROAD	1	1			
RONGOPAI PLACE (SOUTH)	1	1			
TAIPA POINT ROAD	5	5			
TAUPATA STREET	4	4			
TAUPO BAY ROAD	1	1			
TORSBY ROAD	4	4			
TUI STREET (AHIPARA)	1	1			
WAIPAPAKAURI DOMAIN ROAD	1	1			
WALTERS WAY	2	2			
WATTS STREET	1	1			
WEBER PLACE	1	1			
<b>North West – Broadwood, Kaikohe, Okaihau</b>					
BELMONT STREET	1	1			
BROADWOOD ROAD	8	8			



Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
DICKESON STREET	2	2			
HEKE STREET	7	7			
HONGI STREET	7	7			
NOVA STREET	1	1			
ROUTLEY AVENUE	5	5			
SERVICE LANE #2 (KAIKOHE)	3	3			
TUI STREET (OKAIHAU)	1	1			
WINDSOR ROAD	5	5			
<b>North East – Haruru Falls, Kaeo, Kawakawa, Matauri Bay, Moerewa, Paihia</b>					
CAUSEWAY ROAD	2	2			
CHURCH STREET (KAWAKAWA)	5	5			
FALLS VIEW ROAD	2	2			
JOYCES ROAD	3	3			
PEMBROKE STREET	7	7			
SELWYN ROAD (PAIHIA)	5	5			
SELWYN ROAD SRVC LANE	1	1			
SMEATH ROAD (KAWAKAWA)	3	3			
TAHUNA ROAD (PAIHIA)	7	7			
TE TAPUI ROAD	2	2			
THE ANCHORAGE EAST	1	1			
WAIKARE AVENUE	3	3			
WILLIAMS STREET (MOEREWAWA)	1	1			
<b>Kerikeri –Kapiro, Kerikeri, Skudders Beach</b>					
BLUE PENGUIN DRIVE	5	5			
COBHAM COURT	5	5			

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
GOLF VIEW ROAD	3	3			
HONE HEKE ROAD	13	13			
KAPIRO ROAD	4	4			
KING STREET	3	3			
LANARK ROAD	2	2			
MILL LANE	3	3			
ORIPIRO ROAD	1	1			
PICKMERE LANE	1	1			
RIVERBANK DRIVE - THROUGH ROAD	4	4			
ST ANDREWS PLACE	1	1			
STELLA DRIVE (EAST)	1	1			
<b>Grand Total</b>	<b>189</b>	<b>189</b>			

### Audit outcome

Compliant

## 2.6. Tracking of load changes (Clause 11(3) of Schedule 15.3)

### Code reference

*Clause 11(3) of Schedule 15.3*

### Code related audit information

*The DUML database must track additions and removals in a manner that allows the total load (in kW) to be retrospectively derived for any given day.*

### Audit observation

The process for tracking of changes in the database was examined.

### Audit commentary

Any changes that are made during any given month take effect from the beginning of that month. The information is available which would allow for the total load in kW to be retrospectively derived for any day. On 20 September 2012, the Authority sent a memo to Retailers and auditors advising that tracking of load changes at a daily level was not required if the database contained an audit trail. I have interpreted this to mean that the production of a monthly “snapshot” report is sufficient to achieve compliance.

As changes occur the contractor, McKay Electrical, provides the information to FNDC directly from the field using Pocket RAMM. The database is checked for accuracy as part of the lamp replacement process.

As detailed in **section 1.6**, there are 35 amenity lights recorded separately in an excel spreadsheet. The intention is that when any changes are made to these lights the records will be added to RAMM.

For new subdivisions, of which there are few, the lighting information is provided by the developer to FNDC as part of the vesting process. They are added to RAMM prior to livening and will not be livened until the Council has given their approval. It is at this point that they are added to the monthly reporting to Genesis. FNDC accept that the “as built” are what is installed in the field. I repeat the last audit’s recommendation that a check in the field is added to confirm that this is correct.

Recommendation	Description	Audited party comment	Remedial action
<b>Regarding:</b> Clause 11(3) of schedule 15.3	Field check that the light type provided in the “as built” is what is installed in the field.	Genesis can request that a control is in place to measure the as built accuracy.	Investigating

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 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.

There are also 35 amenity lights not recorded in RAMM which are recorded separately in a spreadsheet and there has been no change to these lights for some years, so no changes have been logged. The intention is that when any changes are made to these lights the records will be added to RAMM.

**Audit outcome**

Compliant

### 3. ACCURACY OF DUMML 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 DUMML database is complete and accurate.

##### Audit observation

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

Plan Item	Comments
Area of interest	Far North District Council area
Strata	The database contains items of load in the Far North District Council area.  The processes for the management of all FNDC items of load are the same, but I decided to place the items of load into four strata based on their location:  <ol style="list-style-type: none"><li>1. Far North</li><li>2. North West</li><li>3. North East</li><li>4. Kerikeri</li></ol>
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 57 sub-units.
Total items of load	189 items of load were checked.

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

##### Audit commentary

A statistical sample of 189 items of load found that the field data was 100% of the database data for the sample checked.

I checked the ballasts being applied in the database and found that one lamp had a discrepancy when compared to the standardised wattage table. This is detailed in the table below:

Lamp Type	Database Total Lamp Wattage	EA Standardised Total Wattage	Variance	Database Quantity	Estimated Annual kWh effect on consumption
150w HPSV	270	168	102	1	428.15
Total estimated annual effect on submission					428.15

The incorrect capacity would result in an estimated over submission of 428.15 kWh per annum (based on annual burn hours of 4,271 as is detailed in the DUMML database auditing tool) if used for submission.

As recorded in **section 2.4** there are seven lights with no wattage recorded in the database.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b)  From: 01-Feb-18 To: 31-Jan-19	One item of load has the incorrect ballast applied in the DUMML database which would result in over submission of 428.15 kWh per annum if used for submission.  Seven lights with no input wattage being recorded resulting in under submission of an estimated 2,481 kWh if the database were used for submission.  Potential impact: Low  Actual impact: Low  Audit history: Once  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate, as they are sufficient to mitigate the risk most of the time, but there is room for improvement.  The impact is assessed to be low due to the kWh volumes.		
Actions taken to resolve the issue		Completion date	Remedial action status
FNDC are providing the information monthly. Genesis are reviewing and feeding back any potential database improvements		01/06/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis to monitor the information provided by FNDC monthly.		01/06/2019	

### 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
- checking the database extract combined with the burn hours against the submitted figure to confirm accuracy.

#### Audit commentary

As detailed in **section 1.6**, the load associated with ICP 0000003759TEF13 is reconciled under ICP 0000003758TE356. This ICP should be recorded as status “inactive -reconciled elsewhere” with ICP 0000003758TE356 referenced.

Genesis reconciles this DUML load using the NST profile.

The total volume submitted to the Reconciliation Manager is based on the most recently received database report provided by FNDC.

Seven lights with no input wattage being recorded resulting in under submission of an estimated 2481 kWh if the database were used for submission. This is detailed in **section 2.4**.

One item of load has the incorrect ballast applied in the DUML database which would result in over submission of 428.15 kWh per annum if used for submission. This is detailed in **section 3.1**.

The field audit found no discrepancies between the database records and the lamps installed in the field. This is detailed in **section 3.1**.

#### Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.2</p> <p>With: Clause 15.2 and 15.37B(c)</p> <p>From: 01-Feb-18</p> <p>To: 31-Jan-19</p>	<p>Incorrect status recorded for ICP 0000003759TEF13.</p> <p>Seven lights with no input wattage being recorded resulting in under submission of an estimated 2,481 kWh if the database were used for submission.</p> <p>One item of load has the incorrect ballast applied in the DUML database which would result in over submission of 428.15 kWh per annum if used for submission.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once previously</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
<p><b>High</b></p>	<p>Controls are rated as moderate, as they are sufficient to mitigate the risk most of the time, but there is room for improvement.</p> <p>The impact is assessed to be low due to the kWh volumes.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>FNDC are providing the information monthly. Genesis are reviewing and feeding back any potential database improvements</p>		<p>01/06/2019</p>	<p>Investigating</p>
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Genesis to monitor the information provided by FNDC monthly. Genesis are investigating whether the status can be updated for icp 0000003759TEF13 as it being reconciled under icp 0000003758TE356, however are investigating to make sure that this does not upset the current statementing of the customer's account.</p>		<p>01/06/2019</p>	

## CONCLUSION

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

A RAMM database is held by FNDC, who is Genesis' customer. This database is hosted by RAMM Software Limited. FNDC engages McKay Ltd as their fieldwork and asset data capture service provider.

This audit found four non-compliances relating to minor inaccuracies in the database and makes two recommendations. The field audit found 100% accuracy and overall the database has a high level of accuracy and robust controls to manage change.

The future risk rating of eight indicates that the next audit be completed in 18 months and I agree with this recommendation.



## PARTICIPANT RESPONSE

Genesis are receiving and reviewing the information provided by FNDC. Genesis are investigating the “status” issue with ICP 0000003759TEF13. Genesis will continue to work with the council on the accuracy level of information supplied.