

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT



VERITEK

For

NAPIER CITY COUNCIL AND
GENESIS ENERGY

Prepared by: Steve Woods

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Audit report due date: 01-Jun-20

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EXECUTIVE SUMMARY

This audit of the Napier City Council Unmetered Streetlights (**NCC**) 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 largely conducted in accordance with the audit guidelines for DUML audits version 1.1. A field audit was not undertaken due to the restrictions imposed by the Covid-19 lockdown; therefore, I checked the results of the 2019 field audit and I checked “streetview” records for six streets where LED upgrades had occurred and six streets where new connections had occurred. Completion plans were not available because the contractor enters the information directly into RAMM.

The scope of the audit encompasses the collection, security, and accuracy of the data, including the preparation of submission information. The database is remotely hosted by RAMM Software Ltd and is managed by Power Solutions on behalf of NCC, who is Genesis’ customer. The fieldwork and asset data capture is conducted by Pope Electrical. Reporting is provided to NCC, Unison and Genesis monthly.

This audit found five non-compliances and makes no recommendations. The main issues are as follows:

1. The load for two ICPs is only on for half of the night (turned off at midnight), but submission occurs using the NSP profile, which is a full night profile, therefore the load is spread over the whole night when it should not be.
2. ICP 0000939920HB224 has consumption calculated based on “half night” but Power Solutions advised this ICPs is a “full night” ICP. Under submission of 442 kWh has occurred for March 2020 which could be approx. 5,000 kWh for the year.
3. ICP identifiers are linked to pole information not light information in RAMM, therefore PSL makes an adjustment in the monthly report to correct the ICP. Manual manipulation of the database output can lead to errors and I strongly recommend the database is corrected and manual manipulation ceases as soon as possible.
4. Submission is not occurring for 170 private lights recorded in the database, 49 of the 170 have NCC ICP identifiers.
5. 12 of 25 discrepancies from the last audit were not corrected.
6. Six new streets with streetlights are not recorded in the database.

The future risk rating of 17 indicates that the next audit be completed in 6 months.

The matters raised are detailed below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Deriving submission information	2.1	11(1) of Schedule 15.3	<p>NSP profile used for ICPs 0000939921HBE61 and 0000939923HBEE4 which are turned off at midnight.</p> <p>Under submission for ICP 0000939920HB224 due to the use of "half night" hours instead of "full night" hours.</p> <p>Six new roads missing from the database.</p> <p>Corrections not made for 12 of 25 discrepancies identified during the last audit.</p> <p>Database reporting is a monthly snapshot and does not record historic changes.</p> <p>49 private lights with ICP identifiers are excluded from monthly reporting.</p>	Moderate	Medium	4	Investigating
ICP identifier and items of load	2.2	11(2)(a) and (aa) of Schedule 15.3	ICP identifiers in the database are not correct.	Weak	Low	3	Investigating
All load recorded in database	2.5	11(2A) of Schedule 15.3	24 items of load not recorded in the database.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Database accuracy	3.1	15.2 and 15.37B(b)	<p>Incorrect ICP identifiers because they are against the pole not the light.</p> <p>Six new roads missing from the database.</p> <p>Database reporting is a monthly snapshot and does not record historic changes.</p> <p>49 private lights with ICP identifiers are excluded from monthly reporting.</p>	Moderate	Medium	4	Investigating
Volume information accuracy	3.2	15.2 and 15.37B(c)	<p>NSP profile used for ICPs 0000939921HBE61 and 0000939923HBEE4 which are turned off at midnight.</p> <p>Under submission for ICP 0000939920HB224 due to the use of "half night" hours instead of "full night" hours.</p> <p>Six new roads missing from the database.</p> <p>Corrections not made for 12 of 25 discrepancies identified during the last audit.</p> <p>Database reporting is a monthly snapshot and does not record historic changes.</p> <p>49 private lights with ICP identifiers are excluded from monthly reporting</p>	Moderate	Medium	4	Investigating
Future Risk Rating						17	

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	Action
		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

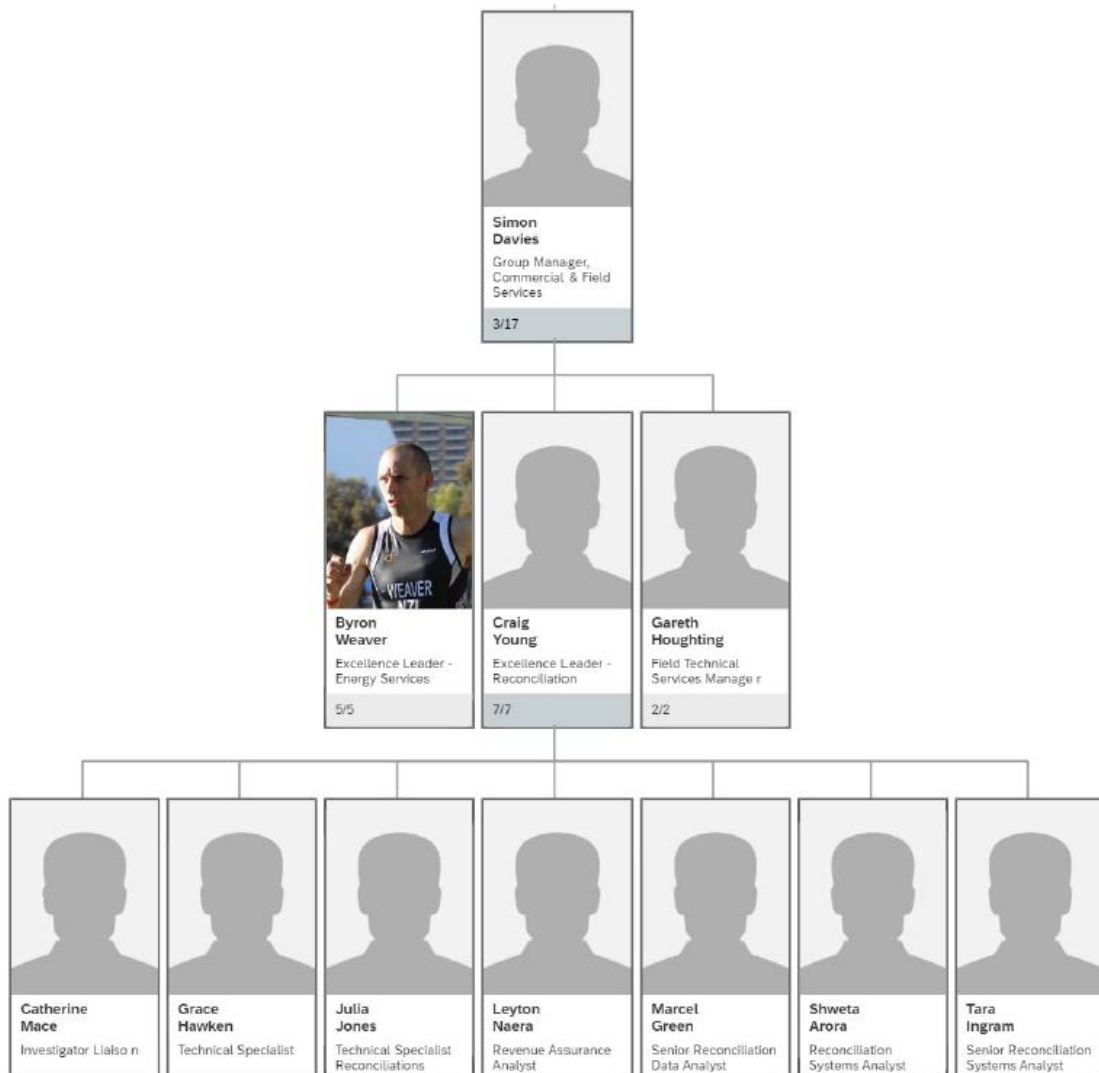
Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

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	Title
Steve Woods	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
Jon Stevens	Projects Engineer	Power Solutions

1.4. Hardware and Software

A Rooding Asset and Maintenance Management database, commonly known as RAMM continues to be used the management of DUML. This is remotely hosted by RAMM Software Ltd. The specific module used for DUML is called "SLIMM" which stands for "Streetlighting Inventory Maintenance Management".

Power Solutions confirmed that the database back-up is in accordance with standard industry procedures. Access to the database is secure by way of password protection.

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)
0000939920HB224	Marine Parade Lighting	RDF0331	NST	21	2,108
0000939921HBE61	Carriageway Lighting	RDF0331	NST	162	24,420
0000939923HBEE4	Amenity Lighting	RDF0331	NST	82	5,419
0000939906HBEFE	Road Lighting	RDF0331	NST	7,469	636,612
0000939908HBD65	Amenity Lighting	RDF0331	NST	1,131	98,516
Total				8,869	767,235

As reported in the last audit report there are 170 lights where the ICP is reported as private. This is discussed in **section 2.2**.

1.7. Authorisation Received

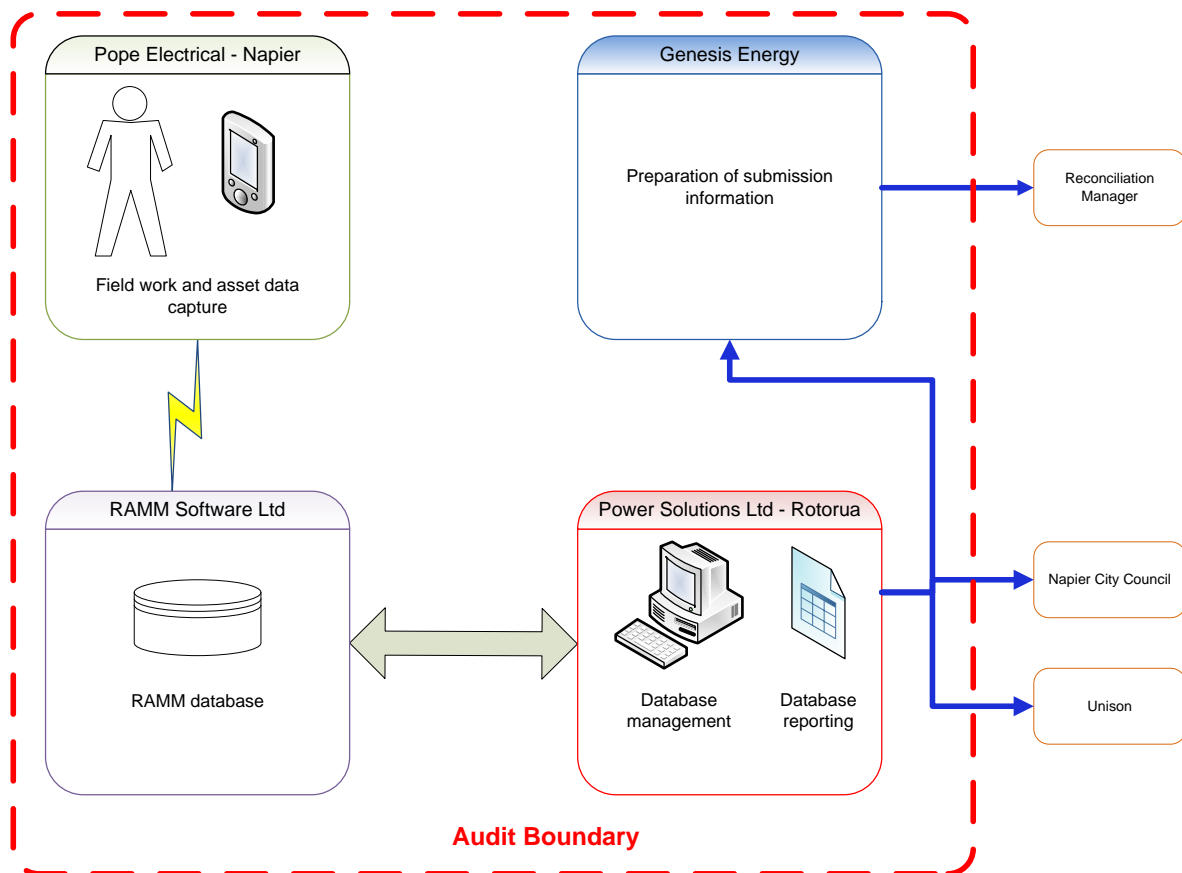
All information was provided directly by Genesis or Power Solutions.

1.8. Scope of Audit

This audit of the Napier City Council Unmetered Streetlights (**NCC**) 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 largely conducted in accordance with the audit guidelines for DUML audits version 1.1. A field audit was not undertaken due to the restrictions imposed by the Covid-19 lockdown; therefore, I checked the results of the 2019 field audit and I checked “streetview” records for six streets where LED upgrades had occurred and six streets where new connections had occurred. Completion plans were not available because the contractor enters the information directly into RAMM.

The database is remotely hosted by RAMM Software Ltd and is managed by Power Solutions on behalf of NCC, who is Genesis’ customer. The fieldwork and asset data capture is conducted by Pope Electrical. Reporting is provided to NCC, Unison and 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 reporting. The diagram below shows the audit boundary for clarity.



1.9. Summary of previous audit

Genesis provided a copy of the last audit report undertaken by Steve Woods of Veritek Limited in April 2019. The findings are shown in the tables below.

Table of Non-Compliance

Subject	Section	Clause	Non-Compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	NST profile used for ICPs 0000939921HBE61 and 0000939923HBEE4 which are turned off at midnight. Ballast information in RAMM not used for submission.	Still existing
ICP identifier and items of load	2.2	11(2)(a) and (aa) of Schedule 15.3	ICP identifiers in the database are not correct.	Still existing
All load recorded in database	2.5	11(2A) of Schedule 15.3	One item of load not recorded in the database.	Cleared for this item of load
Volume information accuracy	3.2	15.2 and 15.37B(c)	NST profile used for ICPs 0000939921HBE61 and 0000939923HBEE4 which are turned off at midnight.	Still existing

Table of Recommendations

Subject	Section	Clause	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 DUMML database audits are completed:

- 1. by 1 June 2018 (for DUMML that existed prior to 1 June 2017)*
- 2. within three months of submission to the reconciliation manager (for new DUMML)*
- 3. within the timeframe specified by the Authority for DUMML 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. Compliance is confirmed

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 and the application of profiles was checked. The database was checked for accuracy.

Audit commentary

Genesis reconciles this DUMML load using the NST profile. 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 Unison network. The methodology is compliant for the “full night” items of load but there are 244 items of load subject to “half night” switching. These lights are turned off at midnight, but the kWh is allocated over the entire night period. This does not achieve compliance with the rules of the profile. ICP 0000939920HB224 has consumption calculated based on “half night” but Power Solutions advised this ICPs is a “full night” ICP. Under submission of 442 kWh has occurred for March 2020 which could be approx. 5,000 kWh for the year.

The report for March 2020 was examined and it was found that the report did not match the content of the database. ICP identifiers are linked to pole information not light information, therefore PSL makes an adjustment in the monthly report to correct the ICP. There are 49 private lights with ICPs recorded against them, but they are excluded from reconciliation. The other 121 private lights do not have ICPs recorded.

As recorded in Section 2.5, six new roads are missing from the database, leading to under submission of approx. 2,000 kWh per annum. 12 of 25 errors from the last audit have not been updated in the database.

Database reporting is a monthly snapshot and does not record historic changes.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 2.1</p> <p>With: Clause 11(1) of Schedule 15.3</p> <p>From: 01-Oct-18</p> <p>To: 11-May-20</p>	<p>NSP profile used for ICPs 0000939921HBE61 and 0000939923HBEE4 which are turned off at midnight.</p> <p>Under submission for ICP 0000939920HB224 due to the use of “half night” hours instead of “full night” hours.</p> <p>Six new roads missing from the database.</p> <p>Corrections not made for 12 of 25 discrepancies identified during the last audit.</p> <p>Database reporting is a monthly snapshot and does not record historic changes.</p> <p>49 private lights with ICP identifiers are excluded from monthly reporting.</p> <p>Potential impact: High</p> <p>Actual impact: Medium</p> <p>Audit history: Twice</p> <p>Controls: Moderate</p> <p>Breach risk rating: 4</p>		
Audit risk rating	Rationale for audit risk rating		
<p>Medium</p>	<p>The controls are rated as moderate, because they are sufficient to ensure that settlement is correct most of the time.</p> <p>The impact is assessed to medium due to the impact on settlement accuracy.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>ICPs 0000939921HBE61 and 0000939923HBEE4 there seems to be no standard profile that caters for this scenario, the use of RPS/UNM will have the same outcome as it spreads the load across the 24hr period for submission although this seems to meet compliance.</p> <p>ICP 0000939920HB224 has had the wrong logger assigned and has now been corrected, Genesis will be reviewing the historical periods to cater for the addition load.</p> <p>Genesis will request the council to amend the ICP allocation and/or Light owner to clarify the “private lighting” with the intent to ensure the distributor is aware these connections exist, and the information is appropriately populated.</p> <p>Tracking of changes will need to be addressed with the council and the contracted maintenance party.</p>		<p>01/06/2021</p>	<p>Investigating</p>
Preventative actions taken to ensure no further issues will occur		Completion date	

2.2. ICP identifier and items of load (Clause 11(2)(a) and (aa) of Schedule 15.3)

Code reference

Clause 11(2)(a) and (aa) of Schedule 15.3

Code related audit information

The 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 an ICP is recorded against each item of load.

Audit commentary

As reported the last audit, there are 170 items of load where the ICP is recorded as Private and these are not reconciled as part of the council load. These are being investigated in conjunction with Unison and if found to belong to the council the correct ICP will be added.

All records have an ICP, but as recorded in **section 2.1**, the ICP is against the pole not the light and PSL adjusts the kWh per ICP to cater for this. The ICPs in the database are therefore not correct. This is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.2 With: Clause 11(2)(a) and (aa) of Schedule 15.3 From: 01-Oct-18 To: 01-May-20	ICP identifiers in the database are not correct. Potential impact: Medium Actual impact: Low Audit history: Twice Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as weak because the design of the database does not ensure ICP identifiers are correct. The audit risk rating is low because the total kWh is correct and there is only one relevant GXP.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis relies on the customer to correctly assign the correct ICP. Genesis will be requesting the customer to correct the ICP for those assets identified. Genesis will raise the adjustment with PSL to not adjust volumes due to administration errors.		01/03/2021	Investigating

Preventative actions taken to ensure no further issues will occur	Completion date	

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 contains the nearest street address, displacement value and pole numbers and Global Positioning System (GPS) coordinates for majority of items of load and users in the office and field can view these locations on a mapping system.

There are four items of load that that do not have either displacement or pole number, but they do have GPS co-ordinates in addition to the road name.

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 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. Analysis of the database found no blank records and no discrepancies.

As discussed in **section 2.1**, the ballast in RAMM is not used for submission even though it is present and is correct in the database. The correct wattages are added in the monthly report. This is recorded as non-compliance in **sections 2.1 and 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 in 2019 was undertaken of a statistical sample of 384 items of load. During this audit I checked that the previous field audit findings were updated in the database.

Audit commentary

The field audit discrepancies from 2019 are detailed in the table below, which shows that some updates are still outstanding. The additional light found in Pukekura Place is now in the database, therefore compliance is confirmed for this section.

Road Name	Pole ID	Database Watts	Field Watts	Notes	2020 Comments
LEE RD EAST TO OXFORD ST ACCESSWAY'	14656	22	45	35W MH	Not updated
LEE RD EAST TO OXFORD ST ACCESSWAY'	14657	22	45	35W MH	Not updated
LANARK CRESCENT	14063	45	83	70W HPS	Not updated
ALFRED STREET	10730	45	20	LED	Not updated
ALFRED STREET	10731	20	45	35W MH	Not updated
ESSEX STREET	1594	45	20	LED Estimate	Not updated
ESSEX STREET	1595	45	20	LED Estimate	Updated
ESSEX STREET	1596	45	20	LED Estimate	Updated
ESSEX STREET	1597	45	20	LED Estimate	Updated
ESSEX STREET	1598	45	20	LED Estimate	Updated
ESSEX STREET	1599	45	20	LED Estimate	Updated
ESSEX STREET	7535	45	20	LED Estimate	Updated
EWAN PLACE	1607	90	45	35W MH	Not updated
KAURI STREET	9946	45	20	20W LED	Updated
LANCASTER STREET	12453	45	20	LED Estimate	Not updated
LANCASTER STREET	14851	45	20	LED Estimate	Updated

LANCASTER STREET	14943	19	45	35W MH	Not updated
LANCASTER STREET	2887	45	20	LED Estimate	Updated
LANCASTER STREET	2889	45	20	LED Estimate	Not updated
LANCASTER STREET	5587	168	20	LED Estimate	Updated
LANCASTER STREET	7533	45	20	LED Estimate	Updated
LANCASTER STREET	7538	45	20	LED Estimate	Updated
MARINE PARADE PARKING PRECINCT	3289	278	0.001	Not there	Not updated
PUKEKURA PLACE			90	Extra	Updated
SHEEHAN STREET	10908	45	0.001	Not there	Not updated

I checked the livening dates for six new streets to ensure the database contained the correct information. Unison confirmed the livening dates for four of the six streets, as shown in the table below. It appears there are many new streets not recorded in the database.

Street	Livening date	Comments
Kaituna Place (Off Hurunui)	Unknown	No database records. Streetview shows 4 LED lights
Arrow Place (Off Hurunui)	25/02/2019	5 database records showing as "not connected"
Young Place (Off Guppy)	30/11/2018	No database records. Streetview shows 5 LED lights
Pelorus Ave	25/06/2019	6 database records. Streetview has 12 lights
Aspiring Drive	Unknown	6 database records. Livening date unknown
Ruahine Rd	27/02/2018	No database records. Streetview shows 4 LED lights

I checked six streets against streetview where partial LED upgrades had occurred and did not find any discrepancies.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: Clause 11(2A) of Schedule 15.3 From: 27-Feb-18 To: 04-May-20	24 items of load not recorded in the database. Potential impact: Medium Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.</p> <p>The impact on settlement and participants is minor because there will be under submission of approx. 2,500 kWh per annum; therefore, the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis has requested for the previously reported field discrepancies and the missing assets be added asap to enable Genesis to meet revision requirements.		01/12/2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis has requested a review of the new connection process to ensure its fit for purpose due to the number of new assets missing from the database and the continuation of tracking of change information continues.		01/03/2020	

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.

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

A RAMM database extract provided in April 2020 was checked for accuracy, along with the records for six streets where LED upgrades had occurred and six streets where new connections occurred.

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

The process to manage changes made in the field being updated in the database was examined.

Audit commentary

ICP identifiers

As mentioned in **Section 2.2**, All records have an ICP, but as recorded in **section 2.1**, the ICP is against the pole not the light and PSL adjusts the kWh per ICP to cater for this. The ICPs in the database are therefore not correct. This is recorded as non-compliance.

Wattage and ballast accuracy findings

The database contains two records for wattage, firstly the lamp wattage and secondly the gear wattage, which represents ballast losses. Analysis of the database found no blank records and no discrepancies.

The ballast in RAMM is now used for submission and are not added manually to the monthly report.

Field audit findings from 2019

As mentioned in Section 2.5, 12 of 25 discrepancies found during the 2019 field audit have not been updated in the database yet. This means there could still be over submission of approx. 47,000 kWh per annum based on 12 out of 25 as a proportion of the 97,300 kWh over submission reported in the previous audit.

Change management process findings

Any changes that are made during any given month take effect from the beginning of that month. 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 processes were reviewed for new lamp connections and the tracking of load changes due to faults and maintenance. All fault and maintenance work is controlled by PSL and conducted by Pope Electrical through "RAMM Contractor". Once each job is completed the database is updated via field PDA's. Paperwork is also provided to note materials used, and this is compared with the data in the database for each job. The monthly outage patrols also involve a check of database accuracy. For new subdivisions, NCC engages Pope to record the lighting details in the database. As recorded in Section 2.5, there are several new roads not recorded in the database.

NCC has had no Christmas lights for the past three years and there are no plans in the future to do this.

Private lights

There are 170 private lights in the database, which are excluded from reporting to Genesis. The total annual consumption is 78,500 kWh. These lights fit into many different categories, as follows:

- Rest home lighting
- Council flats lighting
- Flood lights mounted on the same pole as the streetlight for carpark lighting
- Commercial building forecourt decorative lighting

This matter was raised with Unison during their distributor audit and they had evidence for a small number of lights that they were originally owned by NCC when they were installed. Many of the lights in rest homes, council flats or commercial premises could be the responsibility of the owner of the customer network, depending on how they are connected. Unison is investigating the connection arrangements for 121 items of load, but 49 of the 170 are recorded against one of the NCC ICPs but are excluded from reconciliation. Most of the 49 are where additional lights have been connected to existing streetlights and are illuminating carparks or private properties, as shown in the two pictures below.





I've recorded non-compliance for the under submission, because these 49 items of load have ICPs, therefore alternative arrangements need to be made for reconciliation before Genesis excludes them from their reconciliation.

Audit outcome

Non-compliant

Non-compliance	Description
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Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 31-Mar-19 To: 11-May-20	Incorrect ICP identifiers because they are against the pole not the light. Six new roads missing from the database. Database reporting is a monthly snapshot and does not record historic changes. 49 private lights with ICP identifiers are excluded from monthly reporting. Potential impact: High Actual impact: Medium Audit history: None Controls: Moderate Breach risk rating: 4	
Audit risk rating	Rationale for audit risk rating	
Medium	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The overall rating of moderate take into account that the controls for new connections are weak but controls in other areas are much stronger The impact on settlement and participants is moderate because under submission will be occurring; therefore the audit risk rating is medium.	
Actions taken to resolve the issue	Completion date	Remedial action status
Genesis has requested the icp identifiers to be updated to ensure compliance is met. The private lights will be raised with the distributor to ensure the correct customer is made responsible for the asset(s). Genesis has requested for the missing assets be added asap to enable Genesis to meet revision requirements.	01/12/2020	Investigating
Preventative actions taken to ensure no further issues will occur	Completion date	
Genesis has requested a review of the new connection process to ensure its fit for purpose due to the number of new assets missing from the database and the continuation of tracking of change information continues.	01/03/2020	

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 this DUML load using the NST profile. 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 Unison network. The methodology is compliant for the “full night” items of load but there are 244 items of load subject to “half night” switching. These lights are turned off at midnight, but the kWh is allocated over the entire night period. This does not achieve compliance with the rules of the profile. ICP 0000939920HB224 has consumption calculated based on “half night” but Power Solutions advised this ICPs is a “full night” ICP. Under submission of 442 kWh has occurred for March 2020 which could be approx. 5,000 kWh for the year.

The report for March 2020 was examined and it was found that the report did not match the content of the database. ICP identifiers are linked to pole information not light information, therefore PSL makes an adjustment in the monthly report to correct the ICP. There are 49 private lights with ICPs recorded against them, but they are excluded from reconciliation. The other 121 private lights do not have ICPs recorded.

As recorded in Section 2.5, six new roads are missing from the database, leading to under submission of approx. 2,000 kWh per annum. 12 of 25 errors from the last audit have not been updated in the database.

Database reporting is a monthly snapshot and does not record historic changes.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c) From: 01-Oct-18 To: 11-May-20	NSP profile used for ICPs 0000939921HBE61 and 0000939923HBEE4 which are turned off at midnight. Under submission for ICP 0000939920HB224 due to the use of “half night” hours instead of “full night” hours. Six new roads missing from the database. Corrections not made for 12 of 25 discrepancies identified during the last audit. Database reporting is a monthly snapshot and does not record historic changes. 49 private lights with ICP identifiers are excluded from monthly reporting. Potential impact: High Actual impact: Medium Audit history: Twice Controls: Moderate Breach risk rating: 4
Audit risk rating	Rationale for audit risk rating
Medium	The controls are rated as moderate, because they are sufficient to ensure settlement is accurate most of the time. The impact is assessed to medium because approx. 70,000 kWh per annum is submitted in the incorrect time period due to use of the incorrect profile.

Actions taken to resolve the issue	Completion date	Remedial action status
<p>ICPs 0000939921HBE61 and 0000939923HBEE4 there seems to be no standard profile that caters for this scenario, the use of RPS/UNM will have the same outcome as it spreads the load across the 24hr period for submission although this seems to meet compliance.</p> <p>ICP 0000939920HB224 has had the wrong logger assigned and has now been corrected, Genesis will be reviewing the historical periods to cater for the addition load.</p> <p>Genesis will request the council to amend the ICP allocation and/or Light owner to clarify the “private lighting” with the intent to ensure the distributor is aware these connections exist, and the information is appropriately populated.</p> <p>Tracking of changes well need to be addressed with the council and the contracted maintenance party.</p>	01/06/2021	Investigating
Preventative actions taken to ensure no further issues will occur	Completion date	
Genesis continues to work with the council to raise database accuracy levels.	Continuous improvement	

CONCLUSION

The audit was largely conducted in accordance with the audit guidelines for DUMML audits version 1.1. A field audit was not undertaken due to the restrictions imposed by the Covid-19 lockdown; therefore, I checked the results of the 2019 field audit and I checked “streetview” records for six streets where LED upgrades had occurred and six streets where new connections had occurred. Completion plans were not available because the contractor enters the information directly into RAMM.

The scope of the audit encompasses the collection, security and accuracy of the data, including the preparation of submission information. The database is remotely hosted by RAMM Software Ltd and is managed by Power Solutions on behalf of NCC, who is Genesis’ customer. The fieldwork and asset data capture is conducted by Pope Electrical. Reporting is provided to NCC, Unison and Genesis on a monthly basis.

This audit found five non-compliances and makes no recommendations. The main issues are as follows:

1. The load for two ICPs is only on for half of the night (turned off at midnight), but submission occurs using the NSP profile, which is a full night profile, therefore the load is spread over the whole night when it should not be.
2. ICP 0000939920HB224 has consumption calculated based on “half night” but Power Solutions advised this ICPs is a “full night” ICP. Under submission of 442 kWh has occurred for March 2020 which could be approx. 5,000 kWh for the year.
3. ICP identifiers are linked to pole information not light information in RAMM, therefore PSL makes an adjustment in the monthly report to correct the ICP. Manual manipulation of the database output can lead to errors and I strongly recommend the database is corrected and manual manipulation ceases as soon as possible.
4. Submission is not occurring for 170 private lights recorded in the database, 49 of the 170 have NCC ICP identifiers.
5. 12 of 25 discrepancies from the last audit were not corrected.
6. Six new streets with streetlights are not recorded in the database.

The future risk rating of 17 indicates that the next audit be completed in 6 months.

PARTICIPANT RESPONSE

Genesis has corrected the logger that was attached to the ICP 0000939920HB224 and will be revising the historical settlement figures.

Genesis is disputing the materiality of the half night assets on the NST profile, due to previously being settled on RPS where this was not an issue, although the load was spread over a 24hr period. If the Authority deems the use of NST as non-compliant then Genesis will be changing the profile.

Genesis will be working with the Council to ensure the accuracy of ICP assignment is upheld along with reviewing the new connections process to ensure it is fit for purpose. The additional streets have been requested by Genesis to be urgently inserted into the database and provide Genesis Energy data for historical revisions.

The remainder of the outstanding 12 discrepancies will be reviewed and the information corrected as required.