

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

WAIKATO DISTRICT COUNCIL AND
GENESIS ENERGY

Prepared by: Rebecca Elliot

Date audit commenced: 20 March 2018

Date audit report completed: 1 May 2018

Audit report due date: 01-Jun-18

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EXECUTIVE SUMMARY

This audit of the Waikato 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, which became effective on 1 June 2017.

The database is remotely hosted by RAMM Software Ltd and is the reporting from this is managed by Odyssey Energy Limited. The installation fieldwork and asset data capture is managed by Infrastructure Alliance. Infrastructure Alliance is a joint venture between Waikato DC and Downer to provide infrastructure management across all of Waikato DC assets.

WDC commenced an LED rollout in December 2017 to replace all of the streetlighting, and at the time of this audit they had changed 50% of the lights.

The number of errors found in the field suggest that changes are not being tracked accurately, especially in relation to new lights and I recommend that this process is reviewed.

The audit found five non-compliance issues and makes one recommendation. The future risk rating of 45 indicates that the next audit be completed in three months, and but I recommend that the next audit be undertaken in six months time so that the LED roll out process is completed. 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>The submission for ICP 0000011102WE267 was found to be incorrect and resulting in an estimated over submission of 47,300 kWh per annum.</p> <p>The database accuracy is assessed to be 90.9% indicating an estimated over submission of 153,900 kWh per annum.</p> <p>Analysis of the ballasts applied indicate a minor under submission of 508.25 kWh.</p>	Weak	High	9	Investigating
All load recorded in database	2.5	11(2A) of Schedule 15.3	16 items of load missing from the database.	Weak	High	9	Investigating
Tracking of load change	2.6	11(3) of Schedule 15.3	Tracking of load change not always capturing changes correctly.	Weak	High	9	Investigating
Database accuracy	3.1	15.2 and 15.37B(b)	<p>The database accuracy is assessed to be 90.9% indicating an estimated over submission of 153,900 kWh per annum.</p> <p>Analysis of the ballasts applied indicate a minor under submission of 508.25 kWh.</p>	Weak	High	9	Investigating

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)	The submission for ICP 0000011102WE267 was found to be incorrect and resulting in an estimated over submission of 47,300 kWh per annum. The database accuracy is assessed to be 90.9% indicating an estimated over submission of 153,900 kWh per annum. Analysis of the ballasts applied indicate a minor under submission of 508.25 kWh.	Weak	High	9	Investigating
Future Risk Rating						45	

Future risk rating	1-3	4-6	7-8	9-17	18-26	27+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Description	Action
All load recorded in database	2.5	Review and improve the notification process for new street light connections.	Investigating

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

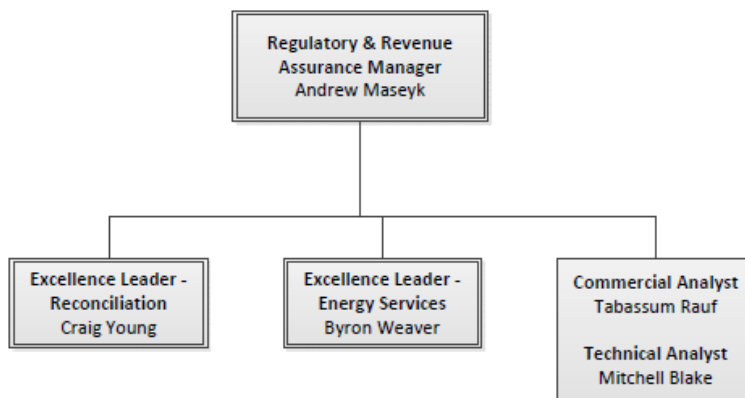
Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit commentary

Genesis confirms that 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

Other personnel assisting in this audit were:

Name	Title	Company
Craig Young	Excellence Leader- Reconciliation	Genesis Energy
Grace Hawken	Technical Specialist - Reconciliation Team	Genesis Energy
Zoran Draca	Director	Odyssey Energy Ltd

1.4. Hardware and Software

Section 1.8 shows that 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”. 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.

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)
0000011102WE267	Waikato DC Streetlights (WEL Network)	HLY0331	NST	3,616	310,759
0007659000WAD19	Waikato DC Streetlights (Waipa Network)	CBG0111	NST	86	12,935
1099570058CN633	Waikato DC Streetlights (Counties Network)	BOB3301	NST	797	67,682
1099572699CN8DF	Waikato Streetlights GLN0332 (Counties Network)	GLN0332	NST	21	1,637
1099572700CN06D	Waikato Streetlights BOB1101 (Counties Network)	BOB1101	NST	13	1,844

1.7. Authorisation Received

All information was provided directly by Genesis or Odyssey.

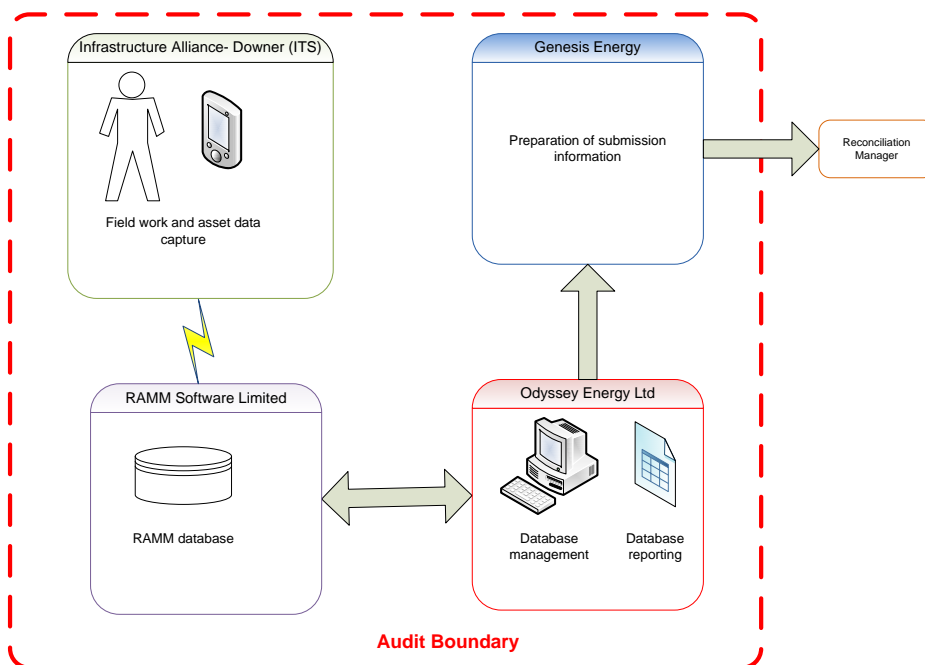
1.8. Scope of Audit

This audit of the Waikato 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, which became effective on 1 June 2017.

The database is remotely hosted by RAMM Software Ltd and is managed by Odyssey Energy Ltd (Odyssey) on behalf of Waikato DC, who is Genesis's customer. Infrastructure Alliance, who are contractors to Waikato DC, conduct the fieldwork and asset data capture.

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 515 items of load on 19th March 2018.

1.9. Summary of previous audit

Genesis provided a copy of the last audit report undertaken by Rebecca Elliot of Veritek Limited in March 2017 this audit report was undertaken for Genesis as part of their 2017 reconciliation participant audit. This audit wasn't submitted due to the audit regime change that occurred on 1st June 2017. For completeness I have included the findings for reference below:

Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Deriving Submission Information	2.1	11(1) of schedule 15.3	Inaccurate submission due to inaccurate database.	Still existing
Capacity of each item of load	2.2.4 refer section 2.4	11(2)(d) of schedule 15.3	Incorrect ballast applied to 174 lamps resulting in over submission of approximately 11,752 kWh.	Cleared
Tracking of load changes	2.3	11(3) of schedule 15.3	Some incorrect database records in both new and existing areas.	Still existing

Table of Recommendations

Subject	Section	Clause	Recommendation for Improvement	Status
ICP Identifier	2.2.1	1(2)(a) of schedule 15.3	Include the ICP as well as NSP in the monthly report.	Cleared
Tracking of load changes	2.3	11(3) of schedule 15.3	Review and improve the notification process for new street light connections.	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. Compliance is confirmed

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 this DUML load using the NST profile.

The total volume submitted to the Reconciliation Manager is based on a monthly database report from RAMM and the “burn time” which is sourced from a data logger installed on the Powerco network. I checked the accuracy of the submission information by multiplying the total kW from the database by the total “on” time from the data logger file. The figures matched for all ICPs with the exception of ICP 0000011102WE267 which had the same number of lights in the database extract and the monthly wattage report but the wattage report was 13.42 kW more than the database extract or 3,941 kWh. This equates to an estimated over submission of 47,300.76 kWh per annum. This is recorded as non-compliance.

There is some inaccurate data within the database used to calculate submissions. This is recorded as non-compliance and discussed in **section 3.1** and **3.2**.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3 From: 01-Apr-17 To: 30-Apr-18	The submission for ICP 0000011102WE267 was found to be incorrect and resulting in an estimated over submission of 47,300 kWh per annum. The database accuracy is assessed to be 90.9% indicating an estimated over submission of 153,900 kWh per annum. Analysis of the ballasts applied indicate a minor under submission of 508.25 kWh. Potential impact: High Actual impact: High Audit history: None Controls: Weak Breach risk rating: 9		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as weak as the processes in place to capture change will not mitigate risk and remove errors especially in relation to new connections. The impact is assessed to be high, based on the kWh differences.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis has yet to liaise with WDC in regards to this report due to its timing. Genesis do plan to ensure WDC have a copy of this report to investigate remedial actions.		12/2018	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis will be working with WDC continuing our support in the administration of WDC duml database		12/2018	

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

Code reference

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

Code related audit information

The DUML database must contain:

- *each ICP identifier for which the retailer is responsible for the DUML*
- *the items of load associated with the ICP identifier.*

Audit observation

The database was checked to confirm the correct ICP was recorded against each item of load.

Audit commentary

The RAMM database contains the relevant ICP identifiers for all items of load.

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, pole numbers and Global Positioning System (GPS) coordinates for each item of load, and users in the office and field can view these locations on a mapping system.

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 gear wattage is recorded in the database which meets the requirements of this clause. I found no blank records. The accuracy of the description and wattages recorded is discussed in **section 3.1**.

Audit outcome

Compliant

2.5. All load recorded in database (Clause 11(2A) of Schedule 15.3)

Code reference

Clause 11(2A) of Schedule 15.3

Code related audit information

The retailer must ensure that each item of DUML for which it is responsible is recorded in this database.

Audit observation

The field audit was undertaken of a statistical sample of 270 items of load on 5th February 2018.

Audit commentary

The field audit findings are detailed in the table below:

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
Counties Network					
CRAIGHALL CRT	2	2			
GEORGE ST (TUAKAU)	55	54	-3 +2		3x HPS lights not found in the field & 2x 150W HPS lights found in the field (excludes metered supplies)
HALL RD (MERCER)	1	1			
PINNACLE HILL RD	1	1			
SCHOOL RD (TUAKAU)	1	1			
New					
BALMORE CRES	6	5	-1		1x 47W LED not found in the field
CAMBURN CRT	2	2			
DORNAL PL	1	2	1		1x extra LED found in the field
GALSTON CRT	2	2			
GATESHEAD RD	3	3			
GATEWAY PARK DR	7	7			
HELENSLEE RD	22	26	4		4x extra LED found in the field

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
HILLPARK DR/CAMBURN CRT RAB	3	3			
LOCHSIDE LANE	5	5			
MUIRHILL PL	4	4			
RAITHBURN TCE	11	11			
SPRINGBURN PL	2	2			
WAINAMU RD	3	3			
YASHILI DR	8	11	-2 +5		2x LED not found & 5x extra LED found in the field
Waipa Network					
DEVINE RD	16	16			
OAKLEA LANE	1	1			
PICKERING RD	7	7			
SANCTUARY LANE	3	3			
STRAWBERRY FIELDS LANE	2	2			
WEL Network					
ARKLE AVE	2	2			
AROHANUI ST	2	2			
DAISY ST	2	2			
HARLOCK PL HAMMERHEAD	5	5			
MARINE PDE	4	4			
ROTOWARO RD	19	19		4	4x LED found in the field HPS recorded in the database
SMITH ST	3	7	4		4x extra LED found in the field
TE IKA WAY (PRIVATE)	1	1			

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
TE PUEA AVE	31	30	-1		1x LED not found in the field
VIOLET ST	4	4		2	2x LED found in the field HPS recorded in the database
WAERENGA RD HLA (#82 - #94)	1	1			
Grand Total	242	251	16	6	

I found 16 additional lights in the field than recorded in the database. The differences found in the field are recorded as non-compliance in **section 3.1**. The items missing from the RAMM database are recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.5 With: Clause 11(2A) of Schedule 15.3 From: 01-Apr-17 To: 30-Apr-18	16 items of load are missing from the database. Potential impact: High Actual impact: High Audit history: None 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 capture change will not mitigate risk and remove errors especially in relation to new connections. The impact is assessed to be high, based on the kWh differences as detailed in section 3.1.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis has yet to liaise with WDC in regards to this report due to its timing. Genesis do plan to ensure WDC have a copy of this report to investigate remedial actions.		12/2018	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis will be working with WDC continuing our support in the administration of WDC duml database		12/2018	

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 DUMML 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 20th September 2012, the Authority sent a memo to Retailers and auditors advising that tracking of load changes at a daily level was not required as long as 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.

The processes were reviewed for ensuring that changes in the field are notified through to Infrastructure Alliance and subsequently Odyssey Energy Limited. All work in the field is entered directly into “Pocket RAMM”. Infrastructure Alliance carry out an annual audit which checks both quality of workmanship and accuracy of asset capture. Any errors found are corrected. The audit of data in the database suggests that the information going in is of mixed quality.

Infrastructure Alliance have a dedicated resource in place to manage all aspects of new subdivisions being vested to the council. Notification of these to Odyssey are provided through bi-monthly meeting with Infrastructure Alliance. Odyssey undertakes a field audit once notified. The field findings found new lights that were not captured in RAMM. Odyssey are not always advised of the new street light connections. If Odyssey is never advised of new assets, then they cannot verify them. I recommend below that the process of notification of living of new lights be reviewed to ensure all new lights are captured accurately and efficiently.

Recommendation	Description	Audited party comment	Remedial action
Regarding: Clause 11(3) of schedule 15.3	Review and improve the notification process for new street light connections.	Genesis will raise this with WDC and request further improvements of the notification processes	Investigating

WDC have commenced their LED rollout for street lighting and this is about 50% complete. They use the same Infrastructure Alliance resource as Hamilton City Council to update the LEDs. Due to the volume occurring there is up to a three-week delay from the date of the light being installed and it being updated in the database. This will be contributing to the wattage discrepancies found in the field audit and I note this will only be for the duration of the LED rollout which is expected to be completed by September 2018.

There are no outage patrol processes in place. Any street light replacements are made on a reactive basis generated from public requests.

I was advised that there are no festival lights being connected to the street light circuits for the Waikato DC area.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.6 With: 11(3) of Schedule 15.3 From: 01-Apr-17 To: 30-Apr-18	Tracking of load change not always capturing changes correctly. Potential impact: High Actual impact: High Audit history: Once 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 capture change will not mitigate risk and remove errors especially in relation to new connections. The impact is assessed to be high, based on the kWh differences as detailed in section 3.1.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis has yet to liaise with WDC in regards to this report due to its timing. Genesis do plan to ensure WDC have a copy of this report to investigate remedial actions.		12/2018	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis will be working with WDC continuing our support in the administration of WDC duml database		12/2018	

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	The rural Waikato District from north of Hamilton to Pokeno
Strata	<p>The database contains items of load in Waikato District Council area.</p> <p>The council area covers three different networks of Counties Network, Waipa and WEL network.</p> <p>The processes for the management of varies in relation to the network it is connected to, so I decided to place the items of load into four strata, as follows:</p> <ol style="list-style-type: none"> 1. Counties Network 2. New (across Counties and WEL network) 3. Waipa Network 4. WEL Network.
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 35 sub-units.
Total items of load	242 items of load were checked.

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

Audit commentary

The field data was 90.9% of the database data for the sample checked. The total wattage recorded in the database for the sample was 23,161 watts. The estimated total wattage found in the field for the sample checked was 57,508 watts, a difference of 13,258 watts. This will result in estimated over submission of 153,900 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

The database was checked and found all ballasts were applied correctly, with the exception of a very small number of incorrect ballasts found as detailed in the table below:

Light Type	Ballast Applied (W)	Correct Ballast	Quantity of lamps	Watts Variance
58W Fluorescent single	7	14	9	63
58W Fluorescent double	14	28	4	56
Total				508.25

This is resulting in an estimated a minor under submission of 508.25 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool). I recommend that the LED light descriptions be updated to include the make, model, milliamp figure so that the wattage can be confirmed.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 01-Apr-17 To: 30-Apr-18	The database accuracy is assessed to be 90.9% indicating an estimated over submission of 153,900 kWh per annum. Analysis of the ballasts applied indicate a minor under submission of 508.25 kWh. Potential impact: High Actual impact: High Audit history: None 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 capture change will not mitigate risk and remove errors especially in relation to new connections. The impact is assessed to be high, based on the kWh differences.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis has yet to liaise with WDC in regards to this report due to its timing. Genesis do plan to ensure WDC have a copy of this report to investigate remedial actions.		12/2018	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis will be working with WDC continuing our support in the administration of WDC duml database		12/2018	

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
- 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 on and off times are derived from data logger information. Genesis receive a monthly database extract, and this is used to derive submission.

I checked the accuracy of the submission information by multiplying the total kW from the database by the total “on” time from the data logger file. The figures matched for all ICPs with the exception of ICP 0000011102WE267 which had the same number of lights in the database extract and the monthly wattage report, but the wattage report was 13.42 kW more than the database extract or 3,941 kWh. This equates to an estimated over submission of 47,300.76 kWh per annum. This is recorded as non-compliance.

There is some inaccurate data within the database used to calculate submissions. This is recorded as non-compliance and discussed in **sections 2.1** and **3.1**.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c)</p> <p>From: 01-Apr-17 To: 30-Apr-18</p>	<p>The submission for ICP 0000011102WE267 was found to be incorrect and resulting in an estimated over submission of 47,300 kWh per annum.</p> <p>The database accuracy is assessed to be 90.9% indicating an estimated over submission of 153,900 kWh per annum.</p> <p>Analysis of the ballasts applied indicate a minor under submission of 508.25 kWh.</p> <p>Potential impact: High</p> <p>Actual impact: High</p> <p>Audit history: None</p> <p>Controls: Weak</p> <p>Breach risk rating: 9</p>		
Audit risk rating	Rationale for audit risk rating		
<p>High</p>	<p>The controls are rated as weak as the processes in place to capture change will not mitigate risk and remove errors especially in relation to new connections.</p> <p>The impact is assessed to be high, based on the kWh differences.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Genesis has yet to liaise with WDC in regards to this report due to its timing. Genesis do plan to ensure WDC have a copy of this report to investigate remedial actions.</p>		<p>12/2018</p>	<p>Investigating</p>
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Genesis will be working with WDC continuing our support in the administration of WDC duml database</p>		<p>12/2018</p>	

CONCLUSION

The database is remotely hosted by RAMM Software Ltd and is the reporting from this is managed by Odyssey Energy Limited. The installation fieldwork and asset data capture is managed by Infrastructure Alliance. Infrastructure Alliance is a joint venture between Waikato DC and Downer to provide infrastructure management across all of Waikato DC assets.

WDC commenced an LED rollout in December 2017 to replace all of the streetlighting, and at the time of this audit they had changed 50% of the lights.

The number of errors found in the field suggest that changes are not being tracked accurately, especially in relation to new lights and I recommend that this process is reviewed.

The audit found five non-compliance issues and makes one recommendation. The future risk rating of 45 indicates that the next audit be completed in three months, and I agree with this recommendation.

PARTICIPANT RESPONSE

Genesis exercise open communication with contracted parties, Genesis will always insist on best practices to ensure accuracy.