

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

MOUNT COOK DOC
AND
GENESIS ENERGY

Prepared by: Rebecca Elliot

Date audit commenced: 20 October 2018

Date audit report completed: 15 November 2018

Audit report due date: 15-Dec-18

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EXECUTIVE SUMMARY

This audit of the DOC Aoraki Mount Cook Village (**MCV**) Unmetered Streetlights 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.

Genesis have developed a spreadsheet to track the items of load at MCV. This information is matched to the values held on the registry which in turn is used for submission.

The field audit was undertaken of the entire MCV spreadsheet, consisting of 55 items of load on 27th October 2018 and was confirmed to be accurate. The database contains 83 lamps but 28 of these are solar powered so are not included in this audit.

The submission was found to match the spreadsheet provided and also the Registry.

The future risk rating of zero indicates that the next audit be completed in 36 months and I agree with this recommendation.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Future Risk Rating						Nil	

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

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

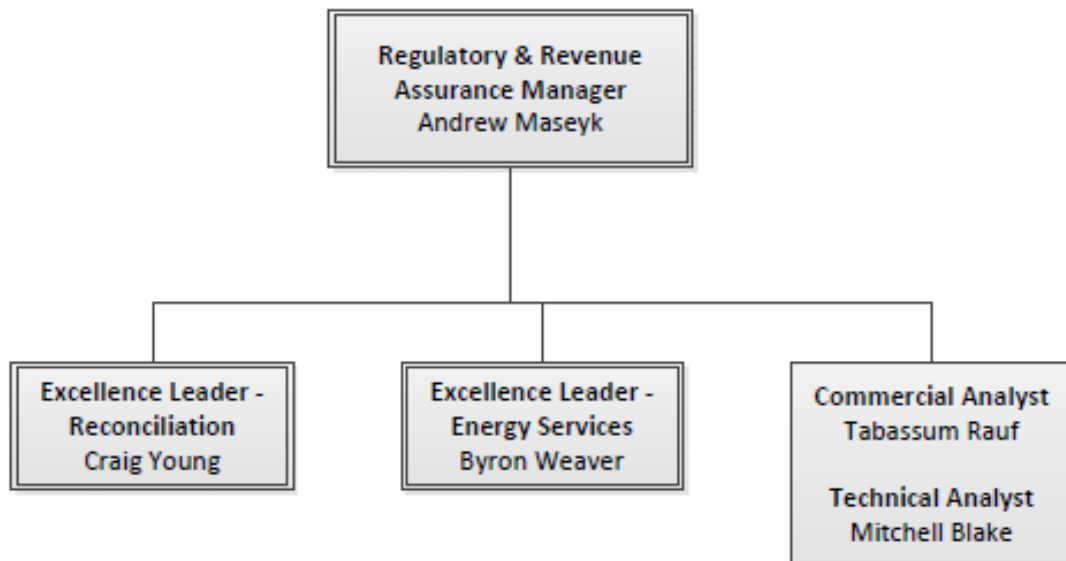
Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit commentary

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

1.2. Structure of Organisation

Genesis provided a copy of their organisational structure:



1.3. Persons involved in this audit

Auditor:

Name	Title
Rebecca Elliot	Lead Auditor
Debbie Anderson	Supporting Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Craig Young	Excellence Leader – Reconciliation	Genesis Energy
Shweta Arora	Reconciliation Systems Analyst	Genesis Energy
Brent Swanson	Local Body Infrastructure & Services	DOC
Garry Malcolm	Local Body Infrastructure & Services	DOC

1.4. Hardware and Software

An excel spreadsheet has been constructed to track the items of load at Aoraki Mt Cook Village. The UML figure from this is recorded in the registry and is used to derive submission.

The spreadsheet is password protected and access to the directory where the spreadsheet is saved is restricted by way of user permissions. Genesis confirmed that this directory is backed up as part of the BAU processes in place.

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	Number of items of load	Database wattage (watts)
0000000004AL7A8	Streetlighting	TKA0331	55	862
Total			55	862

I note that the database contains 83 items of load, but the remaining 28 items of load are solar powered so are not included in this audit.

1.7. Authorisation Received

All information was provided directly by Genesis.

1.8. Scope of Audit

This audit of the MCV DUML database and processes was conducted at the request of 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.

Genesis have developed a spreadsheet to track the items of load at MCV. This information is matched to the values held on the registry which in turn is used for submission.

Alpine Energy's contracting company, NetCon is the contractor for streetlight maintenance and new connections. Any new streetlight connections or removals follow the "new connections" process and a "streetlight movements" form is required to be completed. Any changes made to the field are notified by the Village Manager to Genesis who then update the spreadsheet.

The scope of the audit encompasses the collection, security and accuracy of the data, including the preparation of submission information based on the database reporting.

The field audit was undertaken of the entire MCV spreadsheet, consisting of 55 items of load on 27th October 2018.

1.9. Summary of previous audit

The previous audit was completed in May 2017 by Rebecca Elliot of Veritek Limited. Six non-compliances were identified, and two recommendations were made. The statuses of the non-compliances and recommendations are described 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 database inaccuracies.	Cleared
ICP Identifier	2.2.1	11(2)(a) of schedule 15.3	The Alpine database did not contain the ICP per item of load.	Cleared
Location of items of load	2.2.2	11(2)(b) of schedule 15.3	The Alpine database did not contain the location of each item of load.	Cleared
Capacity of each item of load	2.2.4	11(2)(d) of schedule 15.3	The Alpine database does not contain the ballast in the load calculations.	Cleared
Tracking of load changes	2.3	11(3) of schedule 15.3	No changes of load tracked since May 2016. Database content inaccurate.	Cleared
Audit trail	2.4	11(4) of schedule 15.3	Audit trail does not exist.	Cleared

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Status
Data transmission	1.9	20 of schedule 15.2	Introduce password security to the monthly report sent once a new database is established.	N/A
Database contents	2.2	11(2)(b) of schedule 15.3	Establish a database for this DUML.	Cleared

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. 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 SST profile.

Genesis have created a spreadsheet in conjunction with DOC to track all of the lamps at MCV.

The information on the Registry matches to the values in the spreadsheet. I checked the submission calculation provided by Genesis against the data extract, and Registry, and it matches exactly.

The field audit confirmed that the database was accurate.

Audit outcome

Compliant

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 have an ICP recorded against them.

outcome

Compliant

2.3. Location of each item of load (Clause 11(2)(b) of Schedule 15.3)

Code reference

Clause 11(2)(b) of Schedule 15.3

Code related audit information

The DUML database must contain the location of each DUML item.

Audit observation

The database was checked to confirm the location is recorded for all items of load.

Audit commentary

The database has a field for 'Asset Location – Summary' and 'Asset Location – Address', both of which are populated for all items. There are also GPS co-ordinates for each item.

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 a Lamp Description, Model, Gear Wattage and Lamp Wattage. These fields are populated for every item in the spreadsheet.

As all lamps installed are LED all values in the Gear Wattage field are correctly zero.

The accuracy of wattage and ballasts in the database 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 the entire database of 55 items of load on 27th October 2018.

Audit commentary

The field audit findings are detailed in the table below:

Street/Area	Database Count	Field Count	Lamp no. difference	No of incorrect lamp wattage	Comments
Blackburn & Terrace	2	2			
Blackburn place	2	2			
Terrace road	1	1			
Bowen drive	11	11			
Broadleaf Path	17	17			
Mt Cook Lodge	4	4			
Sabastapol Drive	5	5			
Off Sabastapol	4	4			
Sealy place	1	1			
Du Faur Drive	1	1			
Mueller place	1	1			
Kea Place	1	1			
Visitor centre car park	10	10			
Wakefield place	2	2			
Grand Total	55	52	-3	0	

There were no items found that were missing, additional or incorrect in the database.

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 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 database is held by Genesis and DOC staff advise Genesis when any changes to items of load are made at the village, and the spreadsheet will be updated accordingly with a log of what changes have been made to the spreadsheet including a date and name of person updating the spreadsheet.

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 data is contained in a spreadsheet at summary level. There is a Maintenance tab which is populated to track changes made.

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 100% field audit was undertaken of the database.

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

Audit commentary

The 100% field audit found confirmed the database to be accurate.

Wattages for all items of load were checked against the published standardised wattage table produced by the Electricity Authority and found to be correct.

Audit outcome

Compliant

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 SST profile.

The information on the Registry matches to the values in the spreadsheet. I checked the submission calculation provided by Genesis against the data extract, and Registry, and it matches exactly.

The field audit confirmed the database was accurate.

Audit outcome

Compliant

CONCLUSION

Genesis have developed a spreadsheet to track the items of load at MCV. This information is matched to the values held on the registry which in turn is used for submission.

The field audit was undertaken of the entire MCV spreadsheet, consisting of 55 items of load on 27th October 2018 and was confirmed to be accurate. The database contains 83 lamps but 28 of these are solar powered so are not included in this audit.

The submission was found to match the spreadsheet provided and also the Registry.

The future risk rating of zero indicates that the next audit be completed in 36 months and I agree with this recommendation.

PARTICIPANT RESPONSE

Genesis have worked alongside Mt Cook Village DoC to ascertain the assets and management solutions. We are very elated with this audit outcome.