

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT



For

METLIFECARE GREENWOOD RETIREMENT
VILLAGE TAURANGA
AND MERIDIAN ENERGY

Prepared by: Steve Woods

Date audit commenced: 6 August 2024

Date audit report completed: 21 August 2024

Audit report due date: 26-Aug-24

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EXECUTIVE SUMMARY

This audit of the **Metlifecare Greenwood Retirement Village (Greenwood)** Unmetered Streetlights DUML database and processes was conducted at the request of **Meridian Energy Limited (Meridian)**, 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.

Meridian has an excel spreadsheet to track the lamps at Greenwood. A 100% field audit was undertaken on 6 August 2024, which identified the following discrepancies.

Discrepancy	Quantity
Lights replaced with solar powered fittings	19
Additional lights not in the database	3
Lights in the database not in the field	4

The field audit found that many of the lights had been replaced by solar powered lights, which are not connected to the streetlight circuit. There were also some other changes not recorded in the spreadsheet. The details are in **section 3.1**. In summary, over submission has occurred by 2,015 kWh per annum, which is a 15.63% difference. The Maintenance Manager indicated the changes occurred within the last 12 months.

I recommend Meridian develops a process to check with the Maintenance Manager periodically to confirm if there have been any changes to the installed lighting.

Meridian reconciles this DUML load using the UML profile and are using the registry information, which is updated to match the database kW multiplied by an estimated 11.5 hours per day. The methodology is correct.

The future risk rating of 20 indicates that the next audit be completed in three months. I recommend that the next audit is conducted in 24 months for the following reasons:

- the Maintenance Manager indicated the solar light rollout is now complete,
- Meridian intends to conduct periodic checks with the Village to identify changes,
- Correspondence has been provided demonstrating agreement to the checking process and showing that revisions will be conducted, and
- the impact on kWh is minor.

The matters raised are detailed in the table below.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Deriving submission information	2.1	11(1) of schedule 15.3	Over submission of 2,015 kWh per annum due to changes not being reflected in the database.	None	Low	5	Identified
All load recorded in database	2.5	11(2A) of schedule 15.3	Three additional items of load identified.	None	Low	5	Identified
Database accuracy	3.1	15.2 and 15.37B(b)	Database inaccurate leading to over submission of 2,015 kWh per annum.	None	Low	5	Identified
Volume information accuracy	3.2	15.2 & 15.37B(c)	Over submission of 2,015 kWh per annum due to changes not being reflected in the database.	None	Low	5	Identified
Future Risk Rating						20	

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
Tracking of load changes	3.1	Periodically check with the Village Maintenance Manager whether any changes have been made to the installed lights, which need to be updated in the spreadsheet.

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

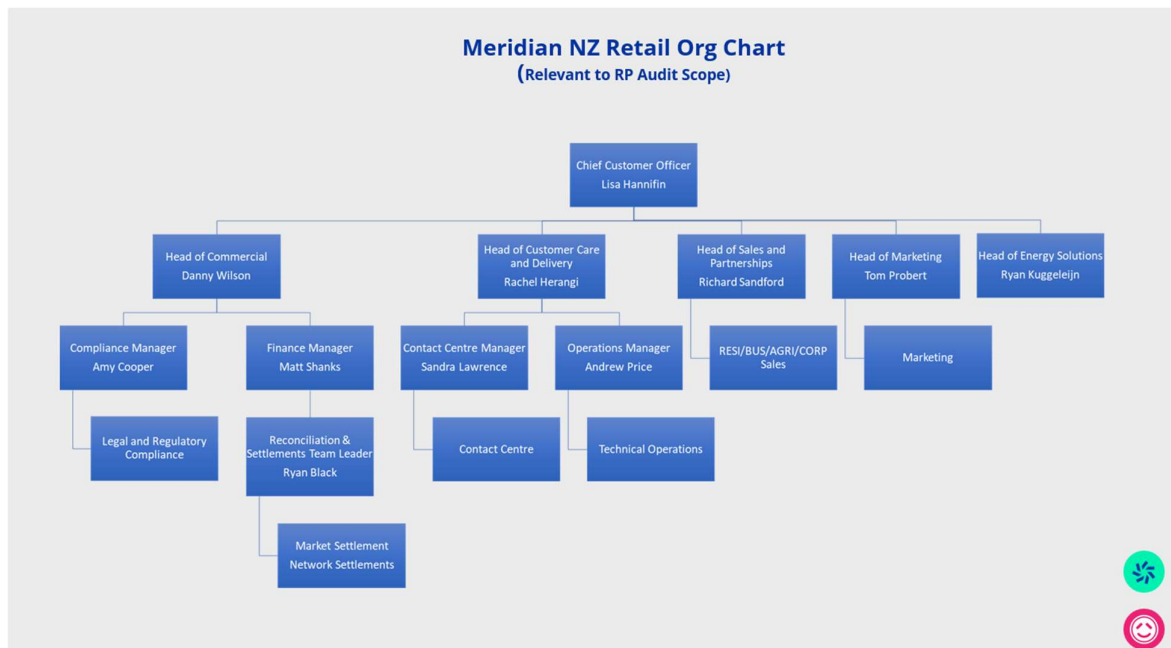
Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit commentary

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

1.2. Structure of Organisation

Meridian provided a copy of their 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
Melanie Matthews	Quality and Compliance Advisor	Meridian Energy

1.4. Hardware and Software

The streetlight data is held in an excel spreadsheet. This is backed up in accordance with standard industry procedures. Access to the spreadsheet is restricted by way of user log into the computer drive.

Systems used by the trader to calculate submissions are assessed as part of their reconciliation participant audits.

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	Profile	Database number of items of load	Database wattage (watts)
0000544421TU1DA	GREENWOOD PARK LANE ST LIGHTS	UML	144	3,552
Total			144	3,552

1.7. Authorisation Received

All information was provided directly by Meridian.

1.8. Scope of Audit

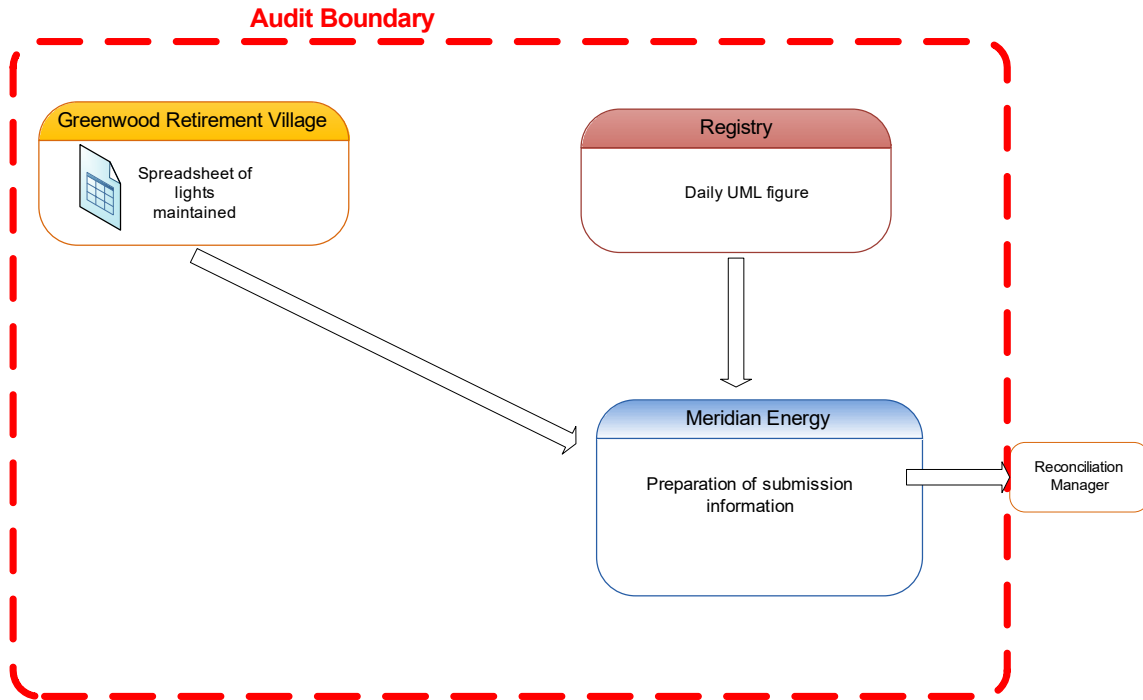
This audit of the Metlifecare Greenwood Retirement Village DUML database and processes was conducted at the request of Meridian, in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

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

An excel spreadsheet is in place to track the lamps at Greenwood. The information from this is updated in the registry and this is being used for submission.

Any changes made to the field are updated in the spreadsheet maintained by the Village Manager and these updates are expected to be provided to Meridian as changes occur.

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



A 100% field audit was undertaken of the Greenwood Village streetlights on 6 August 2024.

1.9. Summary of previous audit

The previous audit was conducted in December 2021 by Rebecca Elliot of Veritek Limited. The table below details the current status of that audit’s non-compliances.

Subject	Section	Clause	Non-Compliance	Status
Volume information accuracy	3.2	15.2 & 15.37B(c)	Registry had the incorrect daily kWh value from 1 April 2021 to 21 July 2021.	Non-compliance recorded for a different reason.

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

Meridian have requested Veritek to undertake this streetlight audit.

Audit commentary

This audit report confirms that the requirement to conduct an audit has been met for this database.

Audit outcome

Compliant

2. DUML DATABASE REQUIREMENTS

2.1. Deriving submission information (Clause 11(1) of Schedule 15.3)

Code reference

Clause 11(1) of schedule 15.3

Code related audit information

The retailer must ensure the:

- DUML database is up to date,
- methodology for deriving submission information complies with schedule 15.5.

Audit observation

The process for calculation of consumption was examined and the application of profiles was checked. The database was checked for accuracy.

Audit commentary

Meridian reconciles this DUML load using the UML profile and are using the registry information, which is updated to match the database kW multiplied by an estimated 11.5 hours per day. The methodology is correct.

The field audit found that many of the lights had been replaced by solar powered lights, which are not connected to the streetlight circuit. There were also some other changes not recorded in the spreadsheet. The details are in **section 3.1**. In summary, over submission has occurred by 2,015 kWh per annum, which is a 15.63% difference. The Maintenance Manager indicated the changes occurred within the last 12 months.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3 From: 01-Aug-23 To: 06-Aug-24	Over submission of 2,015 kWh per annum due to changes not being reflected in the database. Potential impact: Low Actual impact: Low Audit history: None Controls: None Breach risk rating: 5
Audit risk rating	Rationale for audit risk rating
Low	There doesn't appear to be a process for the notification of changes by the Village to Meridian. The impact on settlement is minor; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status	
The database and registry have now been updated accordingly. Meridian has revised historic submissions for the last 12 months and will submit the correction.	16/08/2024	Identified	
Preventative actions taken to ensure no further issues will occur	Completion date		
Meridian and Greenwood Village have agreed on a notification process to say if there are any replacements, new installations or lights and connections no longer in use. In the first instance, Greenwood Village will notify Meridian via email. If Meridian has not had any update from the village for 6 months, Meridian will send an email requesting for any updates.	20/08/2024		

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

Code reference

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

Code related audit information

The DUML database must contain:

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

Audit observation

The database was checked to confirm an ICP was recorded.

Audit commentary

The database has only one ICP associated with it, and this is recorded in the spreadsheet.

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 street name, location description for all items of load, and GPS coordinates for all items of load. The descriptions are sufficient to locate them.

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, lamp wattage and lamp ballast fields. These fields are populated for every item in the spreadsheet.

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

A 100% field audit was undertaken on 6 August 2024.

Audit commentary

The field audit found three additional items of load not recorded in the database. The details have been provided to Meridian.

The accuracy of the database is detailed in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.5 With: Clause 11(2A) of schedule 15.3 From: 01-Aug-23 To: 06-Aug-24	Three additional items of load identified. Potential impact: Low Actual impact: Low Audit history: None Controls: None Breach risk rating: 5		
Audit risk rating	Rationale for audit risk rating		
Low	There doesn't appear to be a process for the notification of changes by the Village to Meridian. The impact on settlement is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The database and registry have now been updated accordingly. Meridian has revised historic submissions for the last 12 months and will submit the correction.		16/08/2024	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Meridian and Greenwood Village have agreed on a notification process to say if there are any replacements, new installations or lights and connections no longer in use. In the first instance, Greenwood Village will notify Meridian via email. If Meridian has not had any update from the village for 6 months, Meridian will send an email requesting for any updates.		20/08/2024	

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

This clause is concerned with the ability to track changes. The maintenance of the Greenwood Village lights is managed privately. The Village Manager is expected to provide updates in relation to these

lights as they occur, and Meridian will then maintain separate versions of the spreadsheet to show the changes.

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 spreadsheet was checked for audit trails.

Audit commentary

The spreadsheet has a complete audit trail.

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 spreadsheet.

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

Audit commentary

The 100% field audit identified the following discrepancies.

Discrepancy	Quantity
Lights replaced with solar powered fittings	19
Additional lights not in the database	3
Lights in the database not in the field	4

I recommend Meridian develops a process to check with the Maintenance Manager periodically to confirm if there have been any changes to the installed lighting.

Description	Recommendation	Audited party comment	Remedial action
Tracking of load changes	Periodically check with the Village Maintenance Manager whether any changes have been made to the installed lights, which need to be updated in the spreadsheet.	Meridian and Greenwood Village have agreed on a notification process to say if there are any replacements, new installations or lights and connections no longer in use. In the first instance, Greenwood Village will notify Meridian via email. If Meridian has not had any update from the village for 6 months, Meridian will send an email requesting for any updates.	Identified

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

Non-compliant

Non-compliance	Description	
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 01-Aug-23 To: 06-Aug-24	Database inaccurate leading to over submission of 2,015 kWh per annum Potential impact: Low Actual impact: Low Audit history: None Controls: None Breach risk rating: 5	
Audit risk rating	Rationale for audit risk rating	
Low	There doesn't appear to be a process for the notification of changes by the Village to Meridian. The impact on settlement is minor; therefore, the audit risk rating is low.	
Actions taken to resolve the issue		Completion date
The database and registry have now been updated accordingly. Meridian has revised historic submissions for the last 12 months and will submit the correction.		16/08/2024
Preventative actions taken to ensure no further issues will occur		Completion date
Meridian and Greenwood Village have agreed on a notification process to say if there are any replacements, new installations or lights and connections no longer in use. In the first instance, Greenwood Village will notify Meridian via email. If Meridian has not had any update from the village for 6 months, Meridian will send an email requesting for any updates.		20/08/2024
Remedial action status		
Identified		

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 spreadsheet 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

Meridian reconciles this DUML load using the UML profile and are using the registry information, which is updated to match the database kW multiplied by an estimated 11.5 hours per day. The methodology is correct.

The field audit found that many of the lights had been replaced by solar powered lights, which are not connected to the streetlight circuit. There were also some other changes not recorded in the spreadsheet. The details are in **section 3.1**. In summary, over submission has occurred by 2,015 kWh per annum, which is a 15.63% difference. The Maintenance Manager indicated the changes occurred within the last 12 months.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.2 With: Clause 15.2 & 15.37B(c) From: 01-Aug-23 To: 06-Aug-24	Over submission of 2,015 kWh per annum due to changes not being reflected in the database. Potential impact: Low Actual impact: Low Audit history: None Controls: None Breach risk rating: 5		
Audit risk rating	Rationale for audit risk rating		
Low	There doesn't appear to be a process for the notification of changes by the Village to Meridian. The impact on settlement is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The database and registry have now been updated accordingly. Meridian has revised historic submissions for the last 12 months and will submit the correction.		16/08/2024	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Meridian and Greenwood Village have agreed on a notification process to say if there are any replacements, new installations or lights and connections no longer in use. In the first instance, Greenwood Village will notify Meridian via email. If Meridian has not had any update from the village for 6 months, Meridian will send an email requesting for any updates.		20/08/2024	

CONCLUSION

Meridian has an excel spreadsheet to track the lamps at Greenwood. A 100% field audit was undertaken on 6 August 2024, which identified the following discrepancies.

Discrepancy	Quantity
Lights replaced with solar powered fittings	19
Additional lights not in the database	3
Lights in the database not in the field	4

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The future risk rating of 20 indicates that the next audit be completed in three months. I recommend that the next audit is conducted in 24 months for the following reasons:

- the Maintenance Manager indicated the solar light rollout is now complete,
- Meridian intends to conduct periodic checks with the Village to identify changes,
- Correspondence has been provided demonstrating agreement to the checking process and showing that revisions will be conducted, and
- the impact on kWh is minor.

PARTICIPANT RESPONSE