

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT



For

JACKS POINT AND MERIDIAN ENERGY

NZBN: 9429037696863

Prepared by: Rebecca Elliot

Date audit commenced: 4 March 2024

Date audit report completed: 19 April 2024

Audit report due date: 30-May-24

TABLE OF CONTENTS

Executive summary	3
Audit summary	4
Non-compliances	4
Recommendations	5
Issues	5
1. Administrative.....	6
1.1. Exemptions from Obligations to Comply with Code	6
1.2. Structure of Organisation	6
1.3. Persons involved in this audit.....	7
1.4. Hardware and Software	7
1.5. Breaches or Breach Allegations.....	7
1.6. ICP Data	7
1.7. Authorisation Received	7
1.8. Scope of Audit	7
1.9. Summary of previous audit	8
1.10. Distributed unmetered load audits (Clause 16A.26 and 17.295F).....	9
2. DUML database requirements.....	10
2.1. Deriving submission information (Clause 11(1) of Schedule 15.3)	10
2.2. ICP identifier and items of load (Clause 11(2)(a) and (aa) of Schedule 15.3)	11
2.3. Location of each item of load (Clause 11(2)(b) of Schedule 15.3)	12
2.4. Description and capacity of load (Clause 11(2)(c) and (d) of Schedule 15.3)	12
2.5. All load recorded in database (Clause 11(2A) of Schedule 15.3)	13
2.6. Tracking of load changes (Clause 11(3) of Schedule 15.3)	14
2.7. Audit trail (Clause 11(4) of Schedule 15.3).....	15
3. Accuracy of DUML database	16
3.1. Database accuracy (Clause 15.2 and 15.37B(b))	16
3.2. Volume information accuracy (Clause 15.2 and 15.37B(c))	19
Conclusion	22
Participant response	23

EXECUTIVE SUMMARY

This audit of the **Jacks Point streetlight** 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.

Jacks Point is a private subdivision, and the streetlights are owned and managed separately to the surrounding Queenstown Lakes District Council streetlights. Due to the lighting design these lights will never be accepted by the council as they do not meet the lighting requirements, hence they are managed separately. The database is managed by Aurora and the data is held in their GIS system. A monthly report from GIS is provided to Meridian to calculate the kW value.

The field audit was undertaken of a statistical sample of 154 items of load on 1 April 2024. This found a new development that has had 22 additional lights installed that are not in the database and there will be more added as the development continues. There is no process in place to track changes for this database and I recommend that Meridian liaise with the relevant parties to address this.

The additional lights found have resulted in the database not being within the allowable +/-5% accuracy threshold and under submission is likely to be occurring as a result:

- there is a 95% level of confidence that the installed capacity is up to 1 kW higher than the database,
- in absolute terms, total annual consumption is estimated to be 5,800 kWh higher than the DUML database indicates, and
- there is a 95% level of confidence that the annual consumption is between 800 kWh to 17,000 kWh p.a. higher than the database indicates.

This audit found four non-compliances and the future risk rating of 16 indicates that the next audit be completed in six months. I have considered this in conjunction with Meridian's responses, the impact to the market and recommend that the next audit be in nine months.

The matter raised is 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	Database is not confirmed as accurate with a 95% level of confidence. In absolute terms the total annual consumption is estimated to be 5,800 kWh higher than the DUML database indicates. Submission is based on a snapshot and does not consider the dates of changes during the month.	Weak	Low	3	Identified
All load recorded in the database	2.5	11(2A) of Schedule 15.3	23 additional lights found in the field.	None	Low	5	Identified
Database accuracy	3.1	15.2 and 15.37B(b))	Database is not confirmed as accurate with a 95% level of confidence. In absolute terms the total annual consumption is estimated to be 5,800 kWh higher than the DUML database indicates. New lights connected during the audit period not added to the database.	None	Low	5	Identified
Volume information accuracy	3.2	15.2 and 15.37B(c))	Database is not confirmed as accurate with a 95% level of confidence. In absolute terms the total annual consumption is estimated to be 5,800 kWh higher than the DUML database indicates. Submission is based on a snapshot and does not consider the dates of changes during the month.	Weak	Low	3	Identified
Future Risk Rating						16	

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	Recommendation	Remedial outcome
Database accuracy	3.1	I recommend that Meridian review the change management processes with all relevant parties.	Identified

ISSUES

Subject	Section	Description	Issue
		Nil	

1. ADMINISTRATIVE

1.1. Exemptions from Obligations to Comply with Code

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

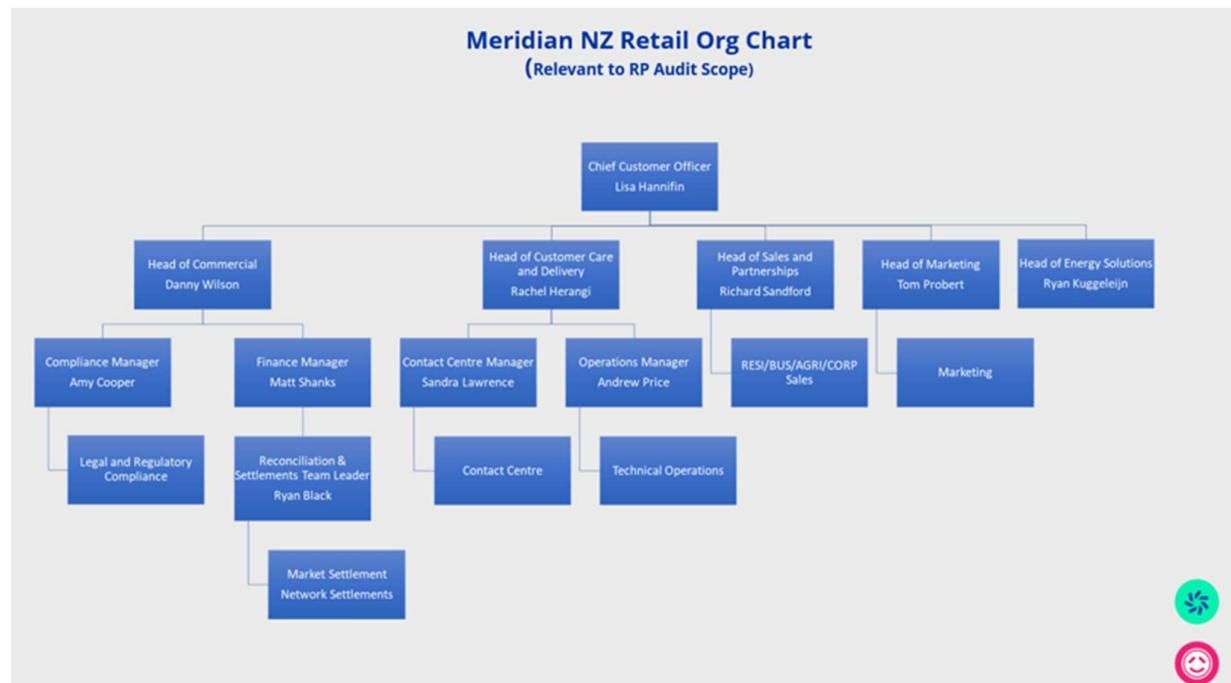
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

Audit commentary

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

1.2. Structure of Organisation

Meridian provided a copy of their organisational structure:



1.3. Persons involved in this audit

Auditor:

Name	Company	Role
Rebecca Elliot	Veritek Limited	Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Melanie Matthews	Quality and Compliance Advisor	Meridian Energy Ltd
Simeon Dwyer	Network Billing Analyst	Aurora Energy Ltd

1.4. Hardware and Software

The GIS database used for the management of DUML is managed by Aurora.

The database back up is in accordance with standard industry procedures. Access to the database is secure by way of password protection.

Systems used by the trader and their agent 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	NSP	Number of items of load	Database wattage (watts)
0000486616CEC8C	JACKS POINT STREET LIGHTING	FKN0331	341	8,226

The six lights not found in the field from the last audit have been removed hence the reduction in recorded lights since the last audit.

1.7. Authorisation Received

All information was provided directly by Meridian and Aurora.

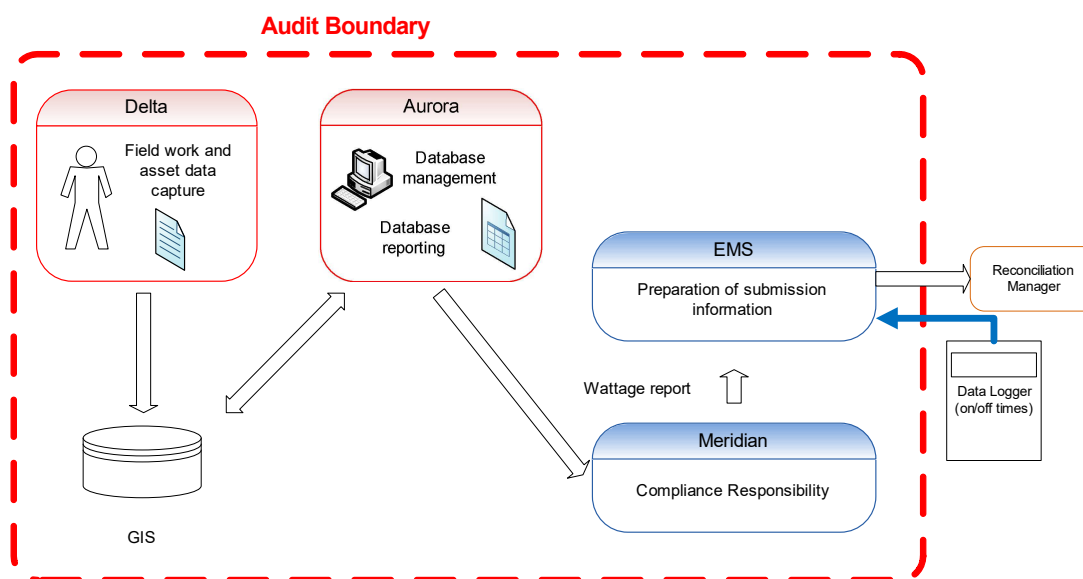
1.8. Scope of Audit

This audit of the Jacks Point streetlight 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.

Jacks Point is a private subdivision, and the streetlights are owned and managed separately to the surrounding Queenstown Lakes District Council streetlights. The database is managed by Aurora and the data is held in their GIS system. Delta is thought to be the field contractor, but this is being confirmed.

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



The field audit was undertaken of a statistical sample of 154 items of load on 1 April 2024.

1.9. Summary of previous audit

The previous audit was completed in May 2022 by Steve Woods of Veritek Limited. That audit found three non-compliances and one recommendation was made. The current status of compliance against these clauses is detailed below:

Table of Non-Compliance

Subject	Section	Clause	Non compliance	Status
Deriving submission information	2.1	Clause 11(1) of Schedule 15.3	Total annual consumption is estimated to be 1,900 kWh lower than the DUML database indicates.	Still existing
Database accuracy	3.1	Clause 15.2 and 15.37B(b))	In absolute terms, total annual consumption is estimated to be 1,900 kWh lower than the DUML database indicates.	Still existing
Volume information accuracy	3.2	Clause 15.2 and 15.37B(c))	Total annual consumption is estimated to be 1,900 kWh lower than the DUML database indicates.	Still existing

Table of Recommendation

Subject	Section	Recommendation	Status
Location of each item of load	2.3	Correct incorrect street names.	Not repeated

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 has requested Veritek to undertake this streetlight audit.

Audit commentary

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

Audit outcome

Compliant

2. 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 database was checked for accuracy.

Audit commentary

Meridian reconciles this DUML load using the DST profile. The on and off times are derived from a data logger read by EMS. This information is used to create a shape file. Meridian supplies EMS with the capacity information and EMS calculates the kWh figure for the ICP and includes this in the relevant AV080 file. This process was audited during Meridian's reconciliation participant audit, and the EMS agent audit. Compliance was confirmed for both.

I checked the submission for the month of February 2024 and found that the loads matched with the database.

I confirmed that the errors found in field from the last audit have been corrected.

The field audit found that the database was not within the allowable +/-5% accuracy threshold. In absolute terms, total annual consumption is estimated to be 5,800 kWh higher than the DUML database indicates. This is largely due to the new streetlights identified during the field audit that have not been added to the database. I recommend in **section 3.1**, that the change management processes are reviewed.

The database reporting to Meridian does not identify the date lights were removed or the date lights were installed, which means submission is based on a snapshot at the end of the month. This is not considered compliant.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3 From: 19-Jan-22 To: 01-Apr-24	Database is not confirmed as accurate with a 95% level of confidence. In absolute terms the total annual consumption is estimated to be 5,800 kWh higher than the DUML database indicates. Submission is based on a snapshot and does not consider the dates of changes during the month. Potential impact: Low Actual impact: Low Audit history: Once previously Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as weak, as the process to track changes needs improvement. The impact is assessed to be low due to the impact on submission.		
Actions taken to resolve the issue		Completion date	Remedial action status
Meridian has informed Aurora of the inaccuracies and has requested for the database to be corrected.		17/04/2024	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Meridian will continue to follow up Aurora to ensure the corrections to the database are completed. Processes are in place to account for historical database corrections that have a material impact on settlement volumes.		30/08/2024 Ongoing	

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 is recorded for each item of load.

Audit commentary

All items of load had an ICP recorded as required by this clause.

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 Global Positioning System (GPS) for all items of load which meets the requirements of this clause. The street name was not correct in many instances, and it was recommended in the last audit that Aurora correct this, but this is unable to be adopted as their GIS system doesn't record the street address of the light but instead calculates and assigns the address of the nearest ICP using the GPS co-ordinates. A streetlight on a stretch of highway might be closest to a house a kilometre away. This means some address records will not match the location of the light exactly, but the GPS co-ordinates are accurate. The GIS system functionality is unlikely to be changed.

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.

Audit commentary

Lamp type description, lamp wattage and ballast wattage are included in the database. Examination of the database found this was populated for all items of load. The accuracy of this is examined 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 154 lights on 1 April 2024.

Audit commentary

The field audit found the following discrepancies:

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
McAdam Drive	18	17	-1		1 x 23W fluorescent light recorded in the database, but not located in the field at the GPS co-ordinates (actually on the corner of Lodge Road and Homestead Bay Road).
Falconer Rise	14	14	-1 +1		1 x 3W LED lights recorded in the database, but not located in the field. 1 x 23W additional fluorescent light found in the field.
Chapman Way	0	3	+3		3 x extra LEDs found in the field.
Inder Street	0	5	+5		5 x extra LEDs found in the field.
McGibbon Lane	0	1	+1		1 x extra LED found in the field.
Ti Kouka St	0	1	+1		1 x extra LED found in the field.
Mulholland Drive	0	2	+2		2 x extra LEDs found in the field.
Maori Jack Road	0	9	+9		9 x extra LEDs found in the field.
Chief Reko Rd	0	1	+1		1 x extra LED found in the field.
SAMPLE TOTAL	154	338	25(+23, -2)		

23 additional items of load were found in the field. 22 of these are located in a new development area in Jacks Point. These are likely to have been connected since March 2022 based on when the new ICPs on these roads started being electrically connected. The change management process is discussed in **section 3.1**.

The additional lights 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: 19-Jan-22 To: 01-Apr-24	23 additional lights found in the field. Potential impact: Low Actual impact: Low Audit history: None Controls: None Breach risk rating: 5	
Audit risk rating	Rationale for audit risk rating	
Low	Controls are rated as none as there is no process to capture new streetlights or any changes made in the field. The impact is assessed to be low due to the impact on submission.	
Actions taken to resolve the issue	Completion date	Remedial action status
Meridian has informed Aurora of the inaccuracies and has requested for the database to be corrected.	17/04/2024	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Meridian will continue to follow up Aurora to ensure the corrections to the database are completed.	30/08/2024	

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

The GIS database functionality achieves compliance with the code. There is an “installation date” used for the date of changes and the date of liveness for new installations.

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

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 database extract was provided, and I assessed the accuracy of this by using the DUML Statistical Sampling Guideline. The table below shows the survey plan.

Plan Item	Comments
Area of interest	Jacks Point private subdivision
Strata	<p>The database contains items of load in the Jacks Point subdivision just south of Queenstown.</p> <p>The processes for the management of the Jacks Point subdivision items of load are the same, but I decided to place the items of load into four strata, as follows:</p> <ol style="list-style-type: none"> 1. A-F, 2. G-McA, 3. McK-O, and 4. P- W.
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 19 sub-units.
Total items of load	154 items of load were checked.

Wattages were checked for alignment with the published standardised wattage table produced by the Electricity Authority against the database or in the case of LED lights against the LED light specification.

The change management process and timeliness of database updates was evaluated.

Audit commentary

Field Audit Findings

A field audit was conducted of a statistical sample of 154 items of load. The “database auditing tool” was used to analyse the results, which are shown in the table below.

Result	Percentage	Comments
The point estimate of R	116.5	Wattage from survey is higher than the database wattage by 16.5%
R _L	102.4	With a 95% level of confidence, it can be concluded that the error could be between +2.4% and +48.4%
R _H	148.4	

These results were categorised in accordance with the “Distributed Unmetered Load Statistical Sampling Audit Guideline”, effective from 1 February 2019 and the table below shows that Scenario C (detailed below) applies.

The conclusion from Scenario C is that the variability of the sample results across the strata means that the true wattage (installed in the field) could be between 2.4% and 48.4% higher than the wattage recorded in the DUMML database. Non-compliance is recorded because the potential error is greater than 5.0%.

There is a 95% level of confidence that the installed capacity is up to 1 kW higher than the database.

In absolute terms, total annual consumption is estimated to be 5,800 kWh higher than the DUMML database indicates.

There is a 95% level of confidence that the annual consumption is between 800 kWh to 17,000 kWh p.a. higher than the database indicates.

Scenario	Description
A - Good accuracy, good precision	This scenario applies if: (a) R_H is less than 1.05; and (b) R_L is greater than 0.95 The conclusion from this scenario is that: (a) the best available estimate indicates that the database is accurate within +/- 5 %; and (b) this is the best outcome.
B - Poor accuracy, demonstrated with statistical significance	This scenario applies if: (a) the point estimate of R is less than 0.95 or greater than 1.05 (b) as a result, either R_L is less than 0.95 or R_H is greater than 1.05. There is evidence to support this finding. In statistical terms, the inaccuracy is statistically significant at the 95% level
C - Poor precision	This scenario applies if: (a) the point estimate of R is between 0.95 and 1.05 (b) R_L is less than 0.95 and/or R_H is greater than 1.05 The conclusion from this scenario is that the best available estimate is not precise enough to conclude that the database is accurate within +/- 5 %

I confirmed that the errors found in field from the last audit have been corrected.

Lamp description and capacity accuracy

Wattages for all items of load were checked against the published standardised wattage table produced by the Electricity Authority or the LED light specification and confirmed to be compliant for the existing lights.

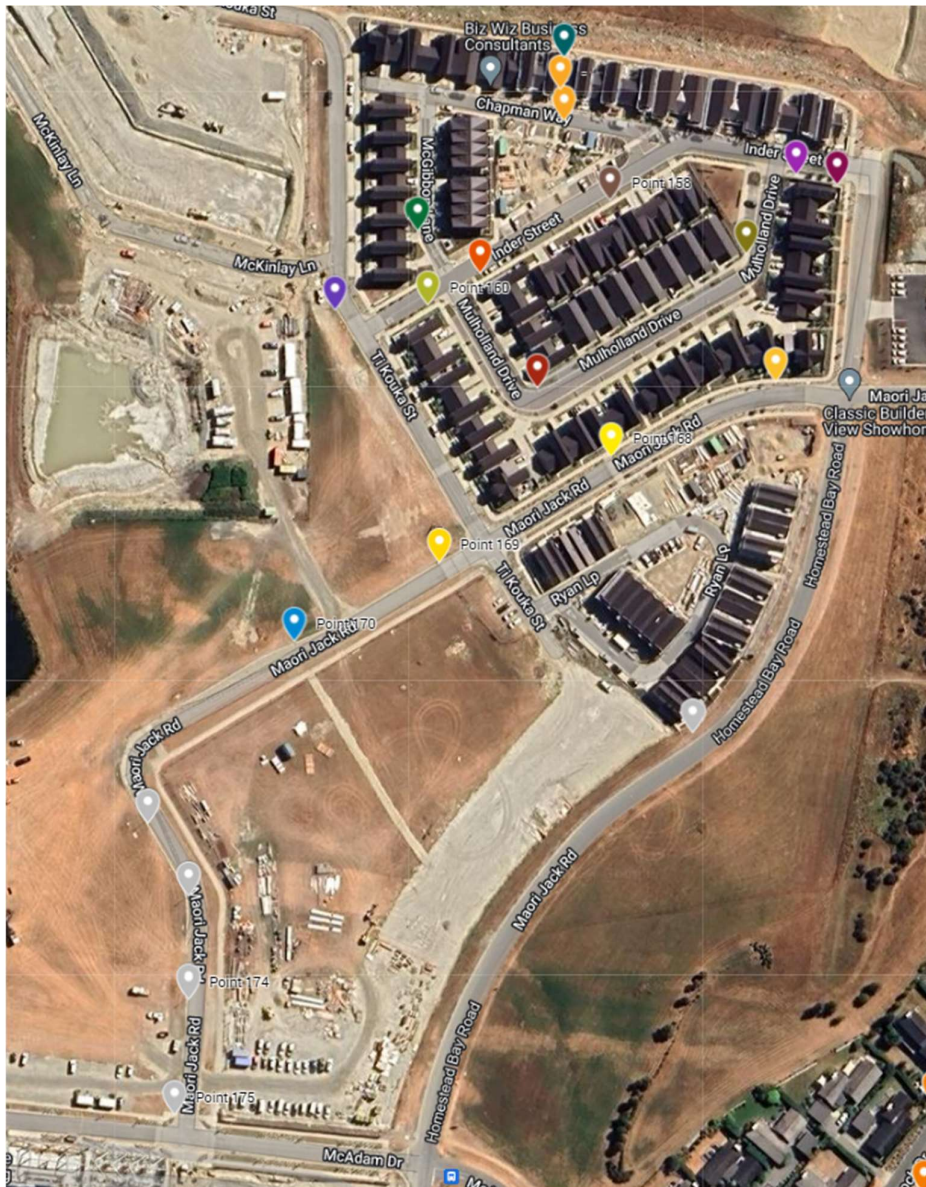
Change management process findings

The change management processes were discussed. The database is managed by Aurora and the data is held in their GIS system. The fieldwork is thought to be managed by Delta, but no updates have been

received. I recommend that the field management processes including the connection of new streetlight circuits is reviewed to confirm that Delta is still the field contractor.

Recommendation	Description	Audited party comment	Remedial action
Database accuracy	I recommend that Meridian review the change management processes with all relevant parties.	Meridian has worked with Aurora and Delta to identify the gap in the New Connections process for Jacks Point. The outline of the process is in Participant Response.	Identified

The field audit identified a new area of development with 22 streetlights which have not been added to the database as shown below:



The Jacks Point subdivision has a lot of development in progress. I recommend above that the change management processes are reviewed as these additions are not being captured. As detailed in **section 2.5**, these are expected to have been electrically connected since March 2022 based on when the new ICPs on the network started being electrically connected.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 19-Jan-22 To: 01-Apr-24	Database is not confirmed as accurate with a 95% level of confidence. In absolute terms the total annual consumption is estimated to be 5,800 kWh higher than the DUML database indicates. New lights connected during the audit period not added to the database. Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: None Breach risk rating: 5		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as none as there is no process to capture new streetlights or any changes made in the field. The impact is assessed to be low due to the impact on submission.		
Actions taken to resolve the issue		Completion date	Remedial action status
Meridian has informed Aurora of the inaccuracies and has requested for the database to be corrected.		17/04/2024	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Meridian will continue to follow up Aurora to ensure the corrections to the database are completed.		30/08/2024	

3.2. Volume information accuracy (Clause 15.2 and 15.37B(c))

Code reference

Clause 15.2 and 15.37B(c)

Code related audit information

The audit must verify that:

- volume information for the DUML is being calculated accurately,
- profiles for DUML have been correctly applied.

Audit observation

The submission was checked for accuracy for the month the database extract was supplied. This included:

- checking the registry to confirm that all ICPs have the correct profile and submission flag, and
- checking the database extract combined with the burn hours against the submitted figure to confirm accuracy.

Audit commentary

Meridian reconciles this DUMML load using the DST profile. The on and off times are derived from a data logger read by EMS. This information is used to create a shape file. Meridian supplies EMS with the capacity information and EMS calculates the kWh figure for the ICP and includes this in the relevant AV080 file. This process was audited during Meridian's reconciliation participant audit, and the EMS agent audit. Compliance was confirmed for both.

I checked the submission for the month of February 2024 and found that the loads matched with the database.

I confirmed that the errors found in field from the last audit have been corrected.

The field audit found that the database was not within the allowable +/-5% accuracy threshold. In absolute terms, total annual consumption is estimated to be 5,800 kWh higher than the DUMML database indicates. This is largely due to the new streetlights identified during the field audit that have not been added to the database. I recommend in **section 3.1**, that the change management processes are reviewed.

The database reporting to Meridian does not identify the date lights were removed or the date lights were installed, which means submission is based on a snapshot at the end of the month. This is not considered compliant.

Audit outcome

Non-compliant

Non-compliance	Description			
<p>Audit Ref: 3.2</p> <p>With: Clause 15.2 and 15.37B(c)</p> <p>From: 19-Jan-22</p> <p>To: 01-Apr-24</p>	<p>Database is not confirmed as accurate with a 95% level of confidence. In absolute terms the total annual consumption is estimated to be 5,800 kWh higher than the DUML database indicates.</p> <p>Submission is based on a snapshot and does not consider the dates of changes during the month.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once previously</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>			
Audit risk rating	Rationale for audit risk rating			
<p>Low</p>	<p>Controls are rated as weak, as the process to track changes needs improvement.</p> <p>The impact is assessed to be low due to the impact on submission.</p>			
Actions taken to resolve the issue		Completion date	Remedial action status	
<p>Meridian has informed Aurora of the inaccuracies and has requested for the database to be corrected.</p>		<p>17/04/2024</p>	<p>Identified</p>	
Preventative actions taken to ensure no further issues will occur		Completion date		
<p>Meridian will continue to follow up Aurora to ensure the corrections to the database are completed.</p> <p>Processes are in place to account for historical database corrections that have a material impact on settlement volumes.</p>		<p>30/08/2024</p> <p>Ongoing</p>		

CONCLUSION

Jacks Point is a private subdivision, and the streetlights are owned and managed separately to the surrounding Queenstown Lakes District Council streetlights. Due to the lighting design these lights will never be accepted by the council as they do not meet the lighting requirements. The database is managed by Aurora and the data is held in their GIS system. A monthly report from GIS is provided to Meridian to calculate the kW value.

The field audit was undertaken of a statistical sample of 154 items of load on 1 April 2024. This found a new development that has had 22 additional lights installed that are not in the database and there will be more added as the development continues. There is no process in place to track changes for this database and I recommend that Meridian liaise with the relevant parties to address this.

The additional lights found have resulted in the database not being within the allowable +/-5% accuracy threshold and under submission is likely to be occurring as a result:

- there is a 95% level of confidence that the installed capacity is up to 1 kW higher than the database,
- in absolute terms, total annual consumption is estimated to be 5,800 kWh higher than the DUML database indicates, and
- there is a 95% level of confidence that the annual consumption is between 800 kWh to 17,000 kWh p.a. higher than the database indicates.

This audit found four non-compliances and the future risk rating of 16 indicates that the next audit be completed in six months. I have considered this in conjunction with Meridian's responses, the impact to the market and recommend that the next audit be in nine months.

PARTICIPANT RESPONSE

The New Connection Process between Meridian Aurora/Delta for Jacks Point Village:

1. Delta has issued a form to approved contractors and sub-contractors, that they must apply to Aurora before connecting new streetlights to non-council owned networks like Jacks Point. (this is the gap identified in the process)
2. Aurora/Delta notifies Meridian of the new lights/connection and requests acceptance.
3. Meridian confirms with our customer. If the customer advises that the developer is responsible for the connection until vested, it needs to be established, who that developer is choosing as their retailer to take first responsibility.
4. Meridian responds back to the network – yes or no and if no, the reason why.
5. Delta advises the database manager for Jacks Point and Meridian that the lights/connection are live and from what date.
6. The database manager updates the database and notifies Meridian of the changes and dates on the next month's extract sent through.