

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT



For

WHAKAPAPA VILLAGE – DOC AND
GENESIS ENERGY
NZBN:9429037696863

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Date audit commenced: 1 May 2024

Date audit report completed: 15 May 2024

Audit report due date: 1 June 2024

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EXECUTIVE SUMMARY

This audit of the **Whakapapa Village - DoC 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.

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

The Whakapapa Village – DoC DUML ICP switched from Meridian Energy to Genesis effective from 1 November 2023. The **Department of Conservation (DoC)** manages the streetlights directly. Genesis requested a dataset on switch in, but this has not been received.

The previous trader, Meridian, maintained their own DUML database in a spreadsheet. They checked with DoC monthly to request any changes to the unmetered load, and updated the registry unmetered load details to be consistent with the database. The unmetered daily kWh currently recorded is based on Meridian's last recorded database wattage and 11.9 on hours per day.

Genesis submits the DUML load as NHH using the RPS profile. Until a dataset is received volumes are calculated using the daily unmetered kWh recorded on the registry. An error resulted in the daily kW being accidentally applied as the daily kWh when calculating submissions from November 2023 to April 2024 which resulted in under submission of 42.62 kWh per day or 7,756.84 kWh in total. Genesis corrected the error during the audit and provided evidence that revised submission information has been calculated and will be washed up. Once a dataset is received from DoC, Genesis will wash up any further volume differences.

Because submission is based on the registry unmetered daily kWh, the field audit was conducted using Meridian's most recent copy of the database which the value was calculated from. All 41 items of load were surveyed and a net seven additional 80W mercury vapour lights were found, and one light appears to have an incorrect location recorded. The field wattage was estimated to be 116.1% of the database wattage, indicating that the installed capacity is 16.1% higher than the database. This falls outside the allowable $\pm 5.0\%$ accuracy level and could result in estimated under submission of 2,736.4 kWh per annum.

This audit found six non-compliances and makes no recommendations. The future risk rating of 20 indicates that the next audit be completed in three months. Taking into consideration that this is a very small database, and the impact of the submission accuracy issues is low, I recommend that the next audit is completed in a minimum of nine months to allow time for Genesis to obtain or create a DUML database for this load.

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	<p>A copy of the DUMML database has not been provided by DoC, and changes are not tracked.</p> <p>Accuracy of the registry value used for submission was checked by reviewing Meridian's DUMML database, which this value is based on. The field audit found that the best available estimate indicates that the database which the submission value is based on is not accurate within $\pm 5.0\%$. Total annual consumption is estimated to be 2,736 kWh higher than the DUMML database indicates.</p> <p>An error resulted in the daily kW being accidentally applied as the daily kWh when calculating submissions from November 2023 to April 2024 which resulted in under submission of 42.62 kWh per day or 7,756.84 kWh in total. Genesis corrected the error during the audit and provided evidence that revised submission information has been calculated and will be washed up.</p>	Weak	Low	3	Investigating
All load recorded in the database	2.5	Clause 11(2A) of Schedule 15.3	A net seven additional lights were identified in the field, and one light appears to have an incorrect location recorded.	Weak	Low	3	Investigating
Tracking of load changes	2.6	Clause 11(3) of Schedule 15.3	A copy of the DUMML database has not been provided by DoC, and changes are not tracked.	None	Low	5	Investigating
Audit trail	2.7	11(4) of Schedule 15.3	A copy of the DUMML database has not been provided by DoC, and changes are not tracked.	Weak	Low	3	Investigating
Database accuracy	3.1	15.2 and 15.37B(b)	The field audit found that the best available estimate indicates that the database is not accurate within $\pm 5.0\%$. Total annual consumption is estimated to be 2,736 kWh higher than the DUMML database indicates.	Weak	Low	3	Investigating
Volume information accuracy	3.2	15.2 and 15.37B(c)	<p>A copy of the DUMML database has not been provided by DoC, and changes are not tracked.</p> <p>Accuracy of the registry value used for submission was checked by reviewing Meridian's DUMML database, which this</p>	Weak	Low	3	Investigating

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			<p>value is based on. The field audit found that the best available estimate indicates that the database which the submission value is based on is not accurate within $\pm 5.0\%$. Total annual consumption is estimated to be 2,736 kWh higher than the DUML database indicates.</p> <p>An error resulted in the daily kW being accidentally applied as the daily kWh when calculating submissions from November 2023 to April 2024 which resulted in under submission of 42.62 kWh per day or 7,756.84 kWh in total. Genesis corrected the error during the audit and provided evidence that revised submission information has been calculated and will be washed up.</p>				
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	Recommendation	Issue
		Nil	

ISSUES

Subject	Section	Description	Issue
		Nil	

1. ADMINISTRATIVE

1.1. Exemptions from Obligations to Comply with Code

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

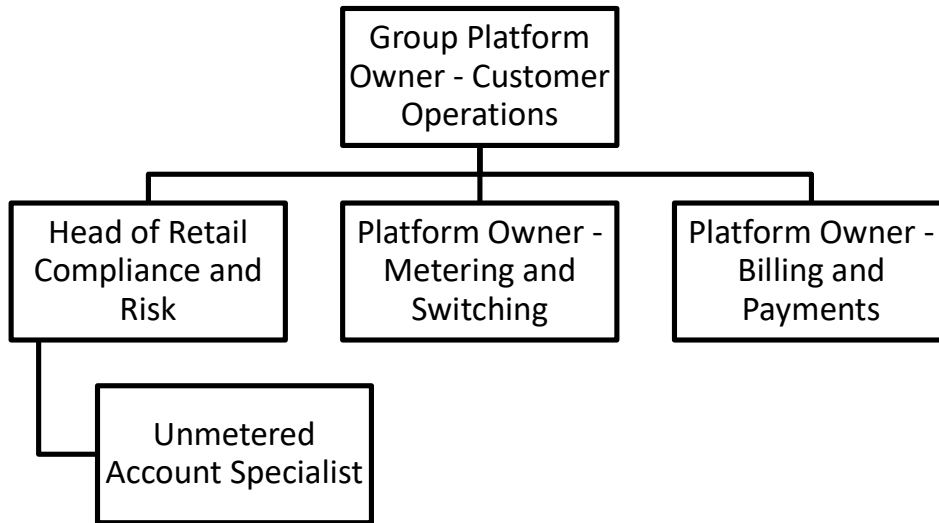
Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit commentary

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

1.2. Structure of Organisation

Genesis provided a copy of their organisational structure.



1.3. Persons involved in this audit

Auditor:

Name	Role	Company
Tara Gannon	Auditor	Provera

Other personnel assisting in this audit were:

Name	Title	Company
Alysha Majury	Unmetered Account Specialist	Genesis Energy

1.4. Hardware and Software

The DUML load is settled using the registry average daily kWh value, which is based on a historic database which was maintained by Meridian. Genesis is awaiting a dataset from DoC.

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

This is based on Meridian’s database which the registry unmetered load details used for submission are determined from.

ICP Number	Description	NSP	Number of items of load	Database wattage (watts)
0088055801WMB6F	Streetlighting	NPK0331	41	3,910
Total			41	3,910

1.7. Authorisation Received

All information was provided directly by Genesis and Meridian.

1.8. Scope of Audit

This audit of the Whakapapa Village - DoC 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.

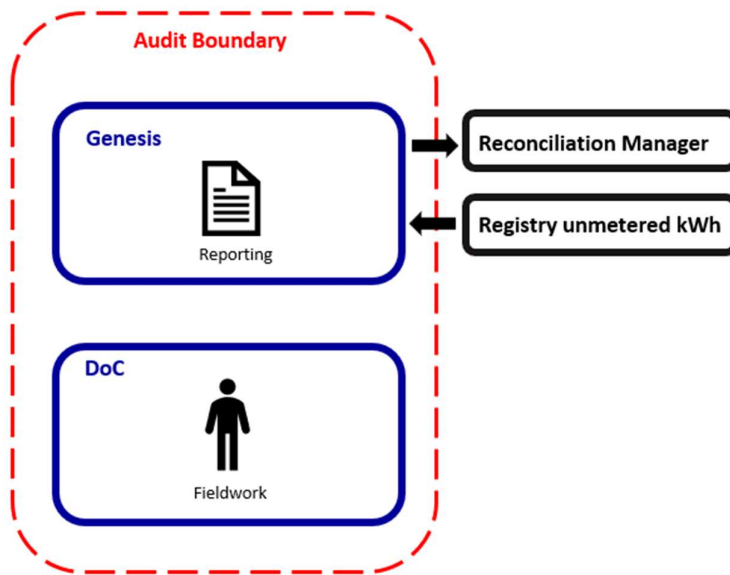
The Whakapapa Village – DoC DUML ICP switched from Meridian Energy to Genesis effective from 1 November 2023. DoC manages the streetlights directly. Genesis requested a dataset on switch in, but this has not been received.

The previous trader, Meridian, maintained their own DUML database in a spreadsheet. They checked with DoC monthly to request any changes to the unmetered load, and updated the registry unmetered load details to be consistent with the database. The unmetered daily kWh currently recorded is based on Meridian’s last recorded database wattage and 11.9 on hours per day.

Genesis submits the DUML load as NHH using the RPS profile. Until a dataset is received volumes are calculated using the daily unmetered kWh recorded on the registry. Once a dataset is received from DoC, Genesis will wash up any further volume differences.

Because submission is based on the registry unmetered daily kWh, the field audit was conducted using Meridian’s most recent copy of the database which the value was calculated from.

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



A field audit was undertaken of all 41 items of load on 7 May 2024.

1.9. Summary of previous audit

The previous audit of this database was undertaken by Rebecca Elliot of Veritek Limited in November 2022. The summary table below shows the statuses of the non-compliances raised in the previous audit. Further comment is made in the relevant sections of this report.

Table of Non-compliances

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	The database is not up to date resulting in an estimated minor under submission of 1,025 kWh p.a.	Still existing
			Changes are not tracked at a daily level as required by the code.	Cleared
Description and capacity of load	2.4	11(2)(c) and (d) of Schedule 15.3	Two LED driver notification signs do not have wattage information recorded.	Cleared
All load recorded in the database	2.5	Clause 11(2A) of Schedule 15.3	Two additional lights were found in the field.	Still existing
Database accuracy	3.1	15.2 and 15.37B(b)	The database is not up to date resulting in an estimated minor under submission of 1,025 kWh p.a.	Still existing
Volume information accuracy	3.2	15.2 and 15.37B(c)	The database is not up to date resulting in an estimated minor under submission of 1,025 kWh p.a.	Still existing
			Changes are not tracked at a daily level as required by the code.	Cleared

Table of Recommendations

Subject	Section	Recommendation	Issue	Status
Description and capacity of load	2.4	Diver notification sign wattages	Confirm the wattages for the two LED driver notification signs and update the database.	Adopted, the wattage is now recorded.
Database accuracy	3.1	Change management	Review change management process with DOC to ensure changes are recorded in the database.	Meridian adopted this recommendation before the ICP switched out. There is currently no change management process.

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 Provera 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 application of profiles was checked. The database was checked for accuracy.

Audit commentary

Submission data accuracy

The Whakapapa Village – DoC DUML ICP switched from Meridian Energy to Genesis effective from 1 November 2023. DoC manages the streetlights directly. Genesis requested a dataset on switch in, but this has not been received.

The previous trader, Meridian, maintained their own DUML database in a spreadsheet. They checked with DoC monthly to request any changes to the unmetered load, and updated the registry unmetered load details to be consistent with the database. The unmetered daily kWh currently recorded is based on Meridian's last recorded database wattage and 11.9 on hours per day.

Genesis submits the DUML load as NHH using the RPS profile. Until a dataset is received volumes are calculated using the daily unmetered kWh recorded on the registry. An error resulted in the daily kW being accidentally applied as the daily kWh when calculating submissions from November 2023 to April 2024 which resulted in under submission of 42.62 kWh per day or 7,756.84 kWh in total. Genesis corrected the error during the audit and provided evidence that revised submission information has been calculated and will be washed up.

Once a dataset is received from DoC, Genesis will wash up any further volume differences.

Database accuracy

Accuracy of the registry value used for submission was checked by reviewing Meridian's DUML database, which this value is based on. The database contains some inaccurate information:

Discrepancy	Potential impact on submission
The field wattage was estimated to be 116.1% of the database wattage, indicating that the installed capacity is 16.1% higher than the database. This falls outside the allowable $\pm 5.0\%$ accuracy level and could result in estimated under submission of 2,736.4 kWh per annum.	Under submission 2,736.4 kWh per annum

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3</p> <p>From: 01-Apr-24 To: 15-May-24</p>	<p>A copy of the DUML database has not been provided by DoC, and changes are not tracked.</p> <p>Accuracy of the registry value used for submission was checked by reviewing Meridian's DUML database, which this value is based on. The field audit found that the best available estimate indicates that the database which the submission value is based on is not accurate within $\pm 5.0\%$. Total annual consumption is estimated to be 2,736 kWh higher than the DUML database indicates.</p> <p>An error resulted in the daily kW being accidentally applied as the daily kWh when calculating submissions from November 2023 to April 2024 which resulted in under submission of 42.62 kWh per day or 7,756.84 kWh in total. Genesis corrected the error during the audit and provided evidence that revised submission information has been calculated and will be washed up.</p> <p>Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Weak Breach risk rating: 3</p>		
Audit risk rating	Rationale for audit risk rating		
<p>Low</p>	<p>The controls are weak. A copy of the database has not been provided and submission is based on historic database information which was found not to be accurate within $\pm 5\%$.</p> <p>The audit risk rating is low because:</p> <ul style="list-style-type: none"> • The differences due to the submission calculation error have been corrected and revised information will be provided through the wash up process. • The estimated volume under submitted due to database accuracy issues resulting in an incorrect average daily kWh is 2,736.4 kWh per annum. 		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis continues to contact with DOC in securing accurate data.		Continuous Improvement	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
The error identified in the incorrect average daily kWh being applied has now been corrected and revised for the period November 2023 – April 2024 as part of our wash up process.		15.05.2024	

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

A database has not been provided by DoC, and submission is based on the registry unmetered load information. The Genesis unmetered load details are consistent with the previous trader's (Meridian), which were in turn based on Meridian's own unmetered load database. I checked whether ICP numbers were recorded in Meridian's database.

Audit commentary

All items of load relate to one ICP, which is recorded against each item of load in Meridian's database.

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

A database has not been provided by DoC, and submission is based on the registry unmetered load information. The Genesis unmetered load details are consistent with the previous trader's (Meridian), which were in turn based on Meridian's own unmetered load database. I checked whether addresses were recorded in Meridian's database.

Audit commentary

All items of load have addresses and GPS coordinates recorded in Meridian's database.

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

A database has not been provided by DoC, and submission is based on the registry unmetered load information. The Genesis unmetered load details are consistent with the previous trader's (Meridian),

which were in turn based on Meridian’s own unmetered load database. Meridian’s database was checked to confirm that:

- it contained a field for light type and wattage capacity,
- wattage capacities include any ballast or gear wattage, and
- each item of load has a light type, light wattage, and gear wattage recorded.

Audit commentary

Meridian’s database contains a lamp description, model, gear wattage and lamp wattage. All items of load contain a lamp wattage, gear wattage and model. Lamp and gear wattages were confirmed to be accurate 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 database has not been provided by DoC, and submission is based on the registry unmetered load information. The field audit on 7 May 2024 was conducted using Meridian’s most recent copy of the database which the daily unmetered kWh value was calculated from.

Audit commentary

The following lights were found in the field but not recorded in the database:

Address	Description	Latitude	Longitude	Model	Total W
Bruce Road SH48	On highway outside pub	-39.1988783	175.5379824	80W mercury vapour	90 W
Ngaruhoe Terrace	Accommodation on Ngaruahoe Tce	-39.1993595	175.5424938	80W mercury vapour	90 W
Ngaruhoe Terrace	Outside Skotel	-39.1997838	175.7529994	80W mercury vapour	90 W
Ngaruhoe Terrace	Opposite Taranaki Falls lower track	-39.2001787	175.5413532	80W mercury vapour	90 W
Ngaruhoe Terrace	Western end of Ngaruahoe Terrace	-39.2006084	175.5400678	80W mercury vapour	90 W

Address	Description	Latitude	Longitude	Model	Total W
Bruce Road SH48	Outside Whakapapa Holiday Park	-39.2021624	175.5402596	80W mercury vapour	90 W
Bruce Road SH48	Inside Holiday Park (attached to building)	-39.2022728	175.5392698	80W mercury vapour	90 W
Bruce Road SH48	South end of Whakapapa Holiday Park	-39.2034152	175.5401322	80W mercury vapour	90 W
Total				8 lights	720 W

The following lights were not found in the field but were recorded in the database:

Address	Description	Latitude	Longitude	Model	Total W
Bruce road SH48	Holiday Park drive way lighting -site 10	-39.202805	175.539855	80W mercury vapour	90 W

The additional lamps found in the field are recorded as non-compliance below. Database accuracy is discussed in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 2.5</p> <p>With: Clause 11(2A) of Schedule 15.3</p> <p>From: 07-May-24</p> <p>To: 07-May-24</p>	<p>A net seven additional lights were identified in the field, and one light appears to have an incorrect location recorded.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>
Audit risk rating	Rationale for audit risk rating
Low	<p>The controls are weak. Although there are processes in place to request updates to database information, there are some lights missing from the database and it is not accurate within $\pm 5\%$.</p> <p>The audit risk rating is low because the estimated volume under submitted is 2,736.4 kWh per annum.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis continues to work with DoC to ensure accurate datasets & changes are being provided.	Continuous Improvement	Investigating
Preventative actions taken to ensure no further issues will occur	Completion date	
Genesis has created an updated dataset based on the findings and are currently having this reviewed with DoC	Continuous Improvement	

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

A database has not been provided by DoC, and submission is based on the registry unmetered load information. The Genesis unmetered load details are consistent with the previous trader's (Meridian), which were in turn based on Meridian's own unmetered load database.

Audit commentary

During Meridian's period of supply, they checked with DoC monthly to request any changes to the unmetered load, and updated the registry unmetered load details to be consistent with the database. Since the ICP switched to Genesis the Meridian database has not been maintained.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.6 With: Clause 11(3) of Schedule 15.3 From: 01-Apr-24 To: 15-May-24	A copy of the DUML database has not been provided by DoC, and changes are not tracked. 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 are no controls. A copy of a database has not been provided by DoC and changes are not currently tracked.

	The audit risk rating is low because the estimated volume difference between submission based on the registry information and the field audit is 2,736.4 kWh per annum.	
Actions taken to resolve the issue	Completion date	Remedial action status
Genesis continues to work with DOC to ensure accurate datasets & changes are being provided.	Continuous Improvement	Investigating
Preventative actions taken to ensure no further issues will occur	Completion date	
Genesis has created an updated dataset based on the findings and are currently having this reviewed with DOC	Continuous Improvement	

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

A database has not been provided by DoC, and submission is based on the registry unmetered load information. The Genesis unmetered load details are consistent with the previous trader's (Meridian), which were in turn based on Meridian's own unmetered load database.

Audit commentary

During Meridian's period of supply, Meridian maintained an audit trail for changes to their database, and updated the registry unmetered load details to be consistent with the database. Since the ICP switched to Genesis the Meridian database has not been maintained.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.7 With: Clause 11(4) of Schedule 15.3 From: 01-Apr-24 To: 15-May-24	A copy of the DUML database has not been provided by DoC, and changes are not tracked. Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are weak. A copy of a database has not been provided by DoC, but Meridian's database which submission is based on did have audit trails.</p> <p>The audit risk rating is low because the estimated volume difference between submission based on the registry information and the field audit is 2,736.4 kWh per annum.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis continues to work with DOC to ensure accurate datasets & changes are being provided.		Continuous Improvement	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis has created an updated dataset based on the findings and are currently having this reviewed with DOC		Continuous Improvement	

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

Genesis reconciles this DUML load using the using the database load and 11.9 on hours per day.

Genesis provided a current copy of the database in April 2024. The table below shows the survey plan.

Plan Item	Comments
Area of interest	Whakapapa Village streetlights
Strata	The database contains 41 items of load connected to ICP 0088055801WMB6F. All 41 items of load were checked.
Area units	Not applicable, all 41 items of load were checked.
Total items of load	All 41 items of load were checked.

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

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

Audit commentary

Field audit findings

Accuracy of the registry value used for submission was checked by reviewing Meridian's DUML database, which this value is based on. All 41 items of load recorded in the database were surveyed and the discrepancies are documented in **section 2.5**.

Eight additional 80W mercury vapour lights were identified during the field audit and one 80W mercury vapour light was not present at the location recorded in the database. I have concluded that a net seven additional 80W mercury vapour lights were found, and one light appears to have an incorrect location recorded.

Item	Database	Field	Difference
Item count	41	48	+7
Wattage	3,910 W	4,540 W	+630 W
Annual kWh based on 11.9 on hours per day	16,983.1 kWh	19,719.5 kWh	+2,736.4 kWh

The field wattage was estimated to be 116.1% of the database wattage, indicating that the installed capacity is 16.1% higher than the database. This falls outside the allowable $\pm 5.0\%$ accuracy level and

could result in estimated under submission of 2,736.4 kWh per annum. This is recorded as non-compliance below and **sections 2.1 and 3.2.**

Light description and capacity accuracy

As discussed in **section 2.4**, Meridian’s database contains a lamp description, model, gear wattage and lamp wattage. Wattages for all lights were checked against the published standardised wattage table produced by the Electricity Authority and found to be correct. The wattages for the driver notification signs appear reasonable.

Address accuracy

As discussed in **section 2.3** All items of load have addresses and GPS coordinates recorded in Meridian’s database. One item of load had SH49 instead of SH48 recorded, which appears to be an error created when entering the record:

Asset Location - Address	Asset comments	Latitude	Longitude
Bruce road SH49	additional light by Pub export on Bruce Road	-39.1988509	175.5379393

Change management process findings

A database has not been provided by DoC, and submission is based on the registry unmetered load information. The Genesis unmetered load details are consistent with the previous trader’s (Meridian), which were in turn based on Meridian’s own unmetered load database.

During Meridian’s period of supply, they checked with DoC monthly to request any changes to the unmetered load, and updated the registry unmetered load details to be consistent with the database. Since the ICP switched to Genesis the Meridian database has not been maintained.

Festive and private lights

There are no private or festive lights for Whakapapa Village.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 3.1</p> <p>With: Clause 15.2 and 15.37B(b)</p> <p>From: 01-Apr-24</p> <p>To: 07-May-24</p>	<p>A copy of the DUML database has not been provided by DoC.</p> <p>Accuracy of the registry value used for submission was checked by reviewing Meridian’s DUML database, which this value is based on. The field audit found that the best available estimate indicates that the database which the submission value is based on is not accurate within ±5.0%. Total annual consumption is estimated to be 2,736 kWh higher than the DUML database indicates.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Twice previously</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>
Audit risk rating	Rationale for audit risk rating

Low	<p>The controls are weak. A copy of the database has not been provided and submission is based on historic database information which was found not to be accurate within $\pm 5\%$.</p> <p>The audit risk rating is low because:</p> <ul style="list-style-type: none"> • The differences due to the submission calculation error have been corrected and revised information will be provided through the wash up process. • The estimated volume under submitted due to database accuracy issues resulting in an incorrect average daily kWh is 2,736.4 kWh per annum. 	
Actions taken to resolve the issue	Completion date	Remedial action status
Genesis continues to work with DoC to ensure accurate datasets & changes are being provided.	Continuous Improvement	Investigating
Preventative actions taken to ensure no further issues will occur	Completion date	
Genesis has created an updated dataset based on the findings and are currently having this reviewed with DoC	Continuous Improvement	

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

Submission data accuracy

The Whakapapa Village – DoC DUML ICP switched from Meridian Energy to Genesis effective from 1 November 2023. DoC manages the streetlights directly. Genesis requested a dataset on switch in, but this has not been received.

The previous trader, Meridian, maintained their own DUML database in a spreadsheet. They checked with DoC monthly to request any changes to the unmetered load, and updated the registry unmetered load details to be consistent with the database. The unmetered daily kWh currently recorded is based on Meridian’s last recorded database wattage and 11.9 on hours per day.

Genesis submits the DUML load as NHH using the RPS profile. Until a dataset is received volumes are calculated using the daily unmetered kWh recorded on the registry. An error resulted in the daily kW being accidentally applied as the daily kWh when calculating submissions from November 2023 to April 2024 which resulted in under submission of 42.62 kWh per day or 7,756.84 kWh in total. Genesis corrected the error during the audit and provided evidence that revised submission information has been calculated and will be washed up.

Once a dataset is received from DoC, Genesis will wash up any further volume differences.

Database accuracy

Accuracy of the registry value used for submission was checked by reviewing Meridian’s DUML database, which this value is based on. The database contains some inaccurate information:

Discrepancy	Potential impact on submission
The field wattage was estimated to be 116.1% of the database wattage, indicating that the installed capacity is 16.1% higher than the database. This falls outside the allowable $\pm 5.0\%$ accuracy level and could result in estimated under submission of 2,736.4 kWh per annum.	Under submission 2,736.4 kWh per annum

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-24 To: 15-May-24</p>	<p>A copy of the DUML database has not been provided by DoC, and changes are not tracked.</p> <p>Accuracy of the registry value used for submission was checked by reviewing Meridian’s DUML database, which this value is based on. The field audit found that the best available estimate indicates that the database which the submission value is based on is not accurate within $\pm 5.0\%$. Total annual consumption is estimated to be 2,736 kWh higher than the DUML database indicates.</p> <p>An error resulted in the daily kW being accidentally applied as the daily kWh when calculating submissions from November 2023 to April 2024 which resulted in under submission of 42.62 kWh per day or 7,756.84 kWh in total. Genesis corrected the error during the audit and provided evidence that revised submission information has been calculated and will be washed up.</p> <p>Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Weak Breach risk rating: 3</p>
Audit risk rating	Rationale for audit risk rating
<p>Low</p>	<p>The controls are weak. A copy of the database has not been provided and submission is based on historic database information which was found not to be accurate within $\pm 5\%$.</p> <p>The audit risk rating is low because:</p> <ul style="list-style-type: none"> The differences due to the submission calculation error have been corrected and revised information will be provided through the wash up process. The estimated volume under submitted due to database accuracy issues resulting in an incorrect average daily kWh is 2,736.4 kWh per annum.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis continues to work with DOC to ensure accurate datasets & changes are being provided.	Continuous Improvement	Investigating
Preventative actions taken to ensure no further issues will occur	Completion date	
<p>The error identified in the incorrect average daily kWh being applied has now been corrected and revised for the period November 2023 – April 2024 as part of our wash up process.</p> <p>Genesis has created an updated dataset based on the findings and are currently having this reviewed with DOC</p>	Continuous Improvement	

CONCLUSION

The Whakapapa Village – DoC DUML ICP switched from Meridian Energy to Genesis effective from 1 November 2023. The **Department of Conservation (DoC)** manages the streetlights directly. Genesis requested a dataset on switch in, but this has not been received.

The previous trader, Meridian, maintained their own DUML database in a spreadsheet. They checked with DoC monthly to request any changes to the unmetered load, and updated the registry unmetered load details to be consistent with the database. The unmetered daily kWh currently recorded is based on Meridian's last recorded database wattage and 11.9 on hours per day.

Genesis submits the DUML load as NHH using the RPS profile. Until a dataset is received volumes are calculated using the daily unmetered kWh recorded on the registry. An error resulted in the daily kW being accidentally applied as the daily kWh when calculating submissions from November 2023 to April 2024 which resulted in under submission of 42.62 kWh per day or 7,756.84 kWh in total. Genesis corrected the error during the audit and provided evidence that revised submission information has been calculated and will be washed up. Once a dataset is received from DoC, Genesis will wash up any further volume differences.

Because submission is based on the registry unmetered daily kWh, the field audit was conducted using Meridian's most recent copy of the database which the value was calculated from. All 41 items of load were surveyed and a net seven additional 80W mercury vapour lights were found, and one light appears to have an incorrect location recorded. The field wattage was estimated to be 116.1% of the database wattage, indicating that the installed capacity is 16.1% higher than the database. This falls outside the allowable $\pm 5.0\%$ accuracy level and could result in estimated under submission of 2,736.4 kWh per annum.

This audit found six non-compliances and makes no recommendations. The future risk rating of 20 indicates that the next audit be completed in three months. Taking into consideration that this is a very small database, and the impact of the submission accuracy issues is low, I recommend that the next audit is completed in a minimum of nine months to allow time for Genesis to obtain or create a DUML database for this load.

PARTICIPANT RESPONSE

Genesis agrees with the findings and recommendations. When the error was identified for the incorrect average daily kWh being applied, this was corrected for November 2023 – April 2024 as part of our wash up process and has been corrected moving forward.

Genesis has created a new dataset using the findings found in field and are currently communicating with DOC to have this data checked. Genesis continues to work with DOC to ensure accurate datasets and charges are being provided.