ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

TASMAN NZTA
AND CONTACT ENERGY LIMITED
NZBN: 9429038549977

Prepared by: Rebecca Elliot

Date audit commenced: 20 September 2022

Date audit report completed: 26 October 2022

Audit report due date: 1 November 2022

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EXECUTIVE SUMMARY

This audit of the **Tasman NZTA** DUML database and processes was conducted at the request of **Contact Energy Limited (Contact)** 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.

Network Tasman hold an access database for the Tasman NZTA unmetered streetlights. Fault, maintenance and upgrade work is conducted by W J Ashton, and the database is managed by Network Tasman.

Simply Energy sends the monthly kW values to EMS. EMS prepare the submission file using the data logger hours to determine the burn hours and the file is then sent to Contact who submit the data under the CTCS code.

Network Tasman updates the distributor kW figure in the registry when changes are made in the database, but they have agreed to start providing monthly reporting to Contact.

I checked the submission values used for August 2022 against the database extract and confirmed that the volumes submitted were correct.

Contact demonstrated that they are using the registry figure and it is tracking changes at a daily level, and this is reflected in submission volumes.

The field audit against the database quantities found that the database is not confirmed as accurate with a 95% level of confidence:

- in absolute terms the installed capacity is estimated to be 2 kW higher than the database indicates,
- there is a 95% level of confidence that the installed capacity is between 2 kW lower and 8kW higher than the database,
- in absolute terms, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates, and
- there is a 95% level of confidence that the annual consumption is between 6,500 kWh p.a. lower to 35,900 kWh p.a. higher than the database indicates.

The audit found five non-compliances and repeats one recommendation. The future risk rating of seven indicates that the next audit be completed in 18 months. I have considered this in conjunction with Contact's comments and recommend that the next audit be in 18 months.

The matters raised are detailed below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Deriving submission information	2.1	11(1) of Schedule 15.3	Database is not confirmed as accurate with a 95% level of confidence. In absolute terms, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates. Incorrect wattages for 11 items of load resulting in an estimated minor under submission of 482.6kWh per annum.	Strong	Low	1	Identified
Description and capacity of load	2.4	11(2)(c)&(d) of Schedule 15.3	One item of load with no light or wattage details populated.	Strong	Low	1	Identified
All load recorded in database	2.5	11(2A) of Schedule 15.3	Three additional lamps identified in the field of 105 items of load sampled.	Moderate	Low	2	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, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates. One item of load with no light or wattage details populated. Incorrect wattages for 11 items of load	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			resulting in an estimated minor under submission of 482.6kWh per annum.				
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, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates. Incorrect wattages for 11 items of load resulting in an estimated minor under submission of 482.6kWh per annum.	Strong	Low	1	Identified
Future Risk Rating						7	

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
Database Accuracy	3.1	Update database with lamp descriptions to confirm the correct wattage has been applied.

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

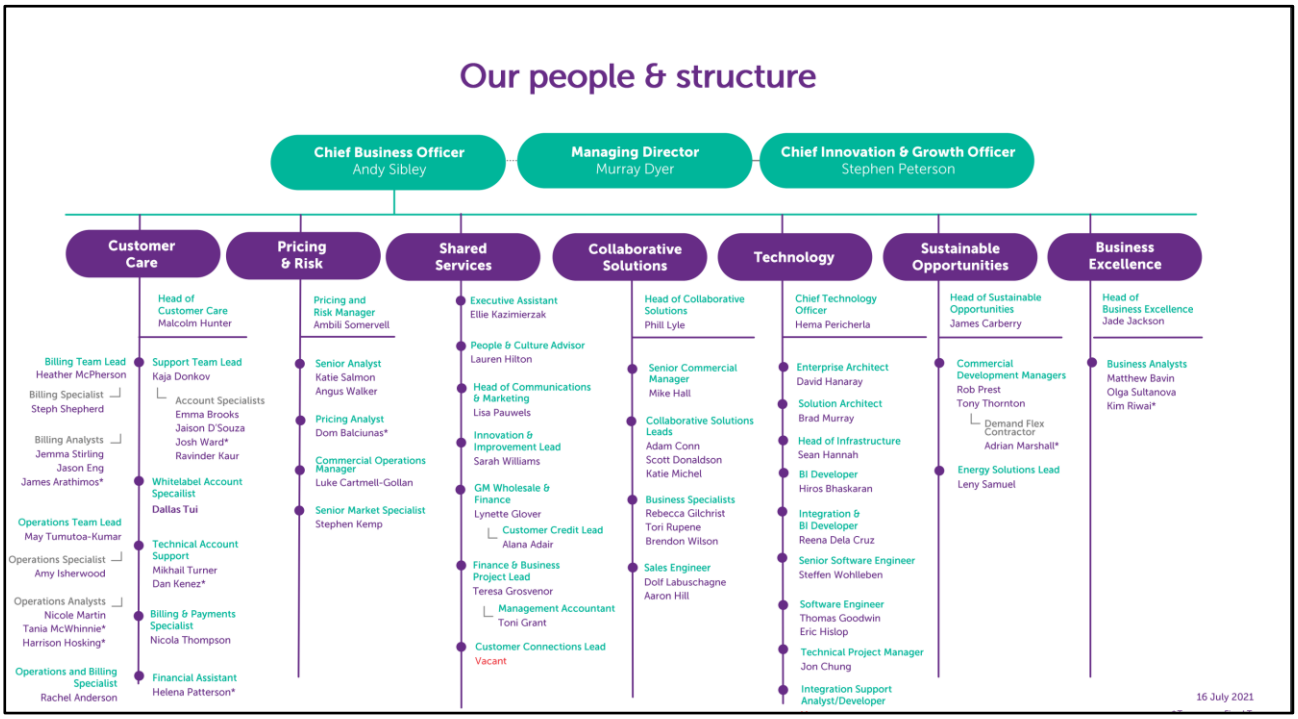
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

Audit commentary

There was one exemption (no. 177) in place in the last audit, this is no longer relevant and all four ICP's are now reconciled as NHH.

1.2. Structure of Organisation

Contact Energy (CTCS) provided a copy of their organisational structure.



1.3. Persons involved in this audit

Auditor:

Name	Role
Rebecca Elliot	Lead Auditor
Claire Stanley	Supporting Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Kerryn Delaney	Easement Officer	Network Tasman
Luke Cartmell-Gollan	Commercial Operations Manager	Simply Energy

1.4. Hardware and Software

The Access database used by Network Tasman is backed-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	Profile	Number of items of load	Database wattage (watts)
0000090007NTA60	TRANSIT NZ STREETLIGHTING STOKE POC	STK0331	DST	389	69,986
0000090009NT9FB	TRANSIT STREETLIGHTING MOTUEKA	STK0661	DST	120	14,437
0000090010NTD07	TRANSIT STREETLIGHTING MOTUPIPI	STK0661	DST	55	5,709
0000090012NTD82	TRANSIT STREETLIGHTING MURCHISON	MCH0111	DST	45	5,757
0000090011NT142	NZTA STREETLIGHTING KIKIWA	KIK0111	RPS	11	630
TOTAL				**620**	**96,519**

ICP 0000090011NT142 for is reconciled under the RPS profile using the registry figures.

1.7. Authorisation Received

All information was provided directly by Contact or Network Tasman.

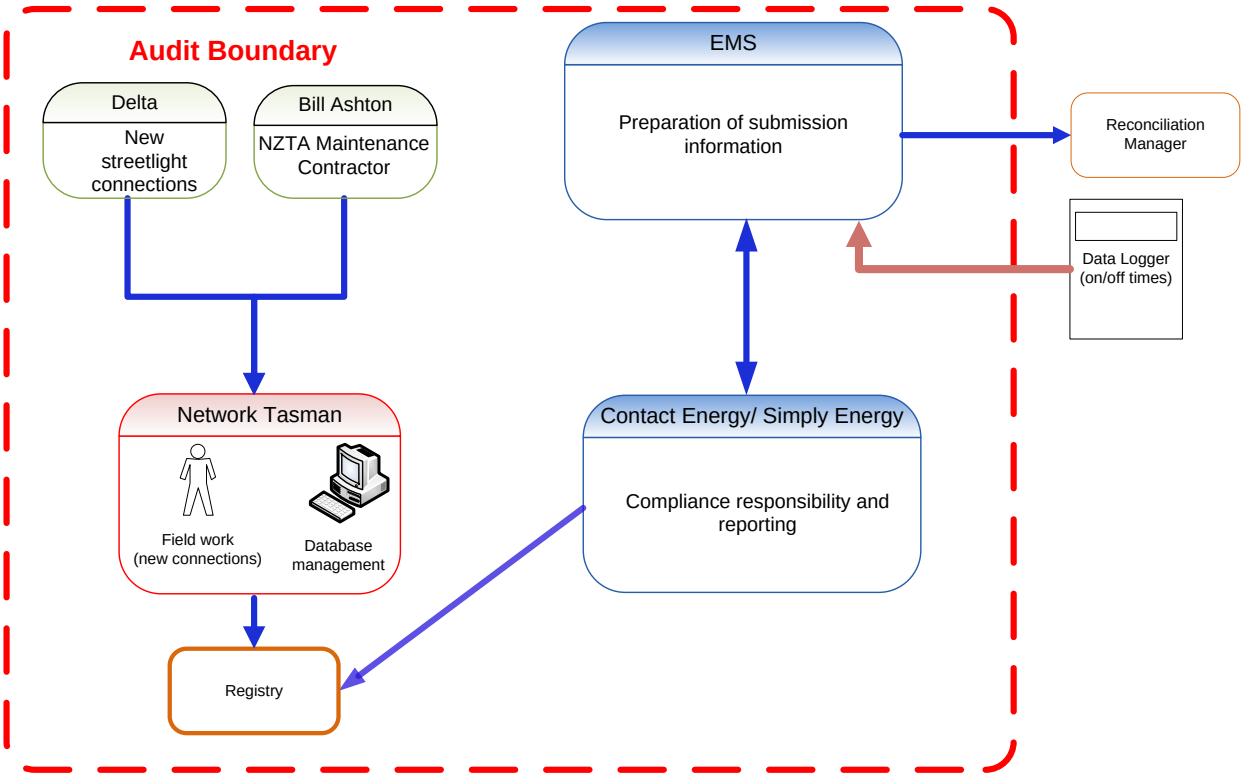
1.8. Scope of Audit

This audit of the Tasman NZTA DUML database and processes was conducted at the request of Contact Energy Limited (Contact) 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.

Network Tasman hold an access database for the Tasman NZTA unmetered streetlights. Fault, maintenance and upgrade work is conducted by W J Ashton, and the database is managed by Network Tasman. New streetlight connections are undertaken by Delta.

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.



The field audit was undertaken of a statistical sample of 105 items of load on 2nd and 3rd October 2022.

1.9. Summary of previous audit

The previous audit of this database was undertaken by Rebecca Elliot of Veritek Limited in August 2021. The summary table below shows the statuses of the non-compliances raised in the previous audit.

Table of non-compliances

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	ICP 0000090010NTD07 had the incorrect kWh submitted for June 2021 resulting in under submission of 1,159.93kWh. This is expected to be corrected in R3.	Cleared
			Incorrect submission for ICP 0000090011NT142 due to the default value of 55kWh per day being applied resulting in an estimated annual under submission of 2,140.2 kWh. This will be corrected through the audit revision process post the material change being approved.	Cleared
			The registry data used for submission does not track changes at a daily basis and is provided as a snapshot.	Cleared
			Database is not confirmed as accurate with a 95% level of confidence resulting in an estimated annual over submission of 9,300kWh.	Still existing
			Incorrect wattages for 13 items of load resulting in an estimated minor under submission of 482.6kWh per annum.	Still existing for 11 items
Description and capacity of load	2.4	11(2)(c)&(d) of Schedule 15.3	One item of load with no light or wattage details populated.	Still existing
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, total annual consumption is estimated to be 9,300 kWh lower than the DUML database indicates.	Still existing
			One item of load missing lamp description and wattage.	Still existing
			Incorrect wattages for 13 items of load resulting in an estimated minor under submission of 482.6kWh per annum.	Still existing for 11 items of load
Volume information accuracy	3.2	15.2 and 15.37B(c)	ICP 0000090010NTD07 had the incorrect kWh submitted for June 2021 resulting in under submission of 1,159.93kWh. This is expected to be corrected in R3.	Cleared
			Incorrect submission for ICP 0000090011NT142 due to the default value of 55kWh per day being applied resulting in an estimated annual under submission of 2,140.2 kWh.	Cleared
			The registry data used for submission does not track changes at a daily basis and is provided as a snapshot.	Cleared
			Database is not confirmed as accurate with a 95% level of confidence resulting in an estimated annual over submission of 9,300kWh.	Still existing
			Incorrect wattages for 13 items of load resulting in an estimated minor under submission of 482.6kWh per annum.	Still existing for 11 items

Table of recommendations

Subject	Recommendation	Status
Deriving submission information	Monthly report tracking change at a daily level be provided from the database.	Cleared
Database Accuracy	Update database with lamp descriptions to confirm the correct wattage has been applied.	Not adopted

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

Contact have requested Veritek to undertake this streetlight audit.

Audit commentary

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

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

Contact reconciles this DUML load using the DST profile for ICPs 0000090007NTA60, 0000090009NT9FB 0000090010NTD07 and 0000090012NTD82. Simply Energy on behalf of Contact send the monthly kW values to EMS. EMS prepare the submission file using the data logger hours to determine the burn hours and the file is then sent to Contact who submit the data under the CTCS code.

The previous audit identified an error for ICP 0000090010NTD07, the incorrect kW value was logged for the June 2021 submission by EMS. This has been checked and it was confirmed that it has been corrected from June 2021.

The previous audit identified ICP 0000090011NT142 was reconciled using RPS profile and that Simply Energy were managing the unmetered load by estimating the volume at 55kWh/day. This will have resulted in an estimated under submission of 2,008.5 kWh from the date of switching in 1 October 2020 to 31 August 2021. The data has been corrected for the volumes back to the date of switch in through the revision process.

Network Tasman have agreed to start providing regular reporting to Contact. Network Tasman updates the distributor kW figure in the registry when changes are made in the database.

I checked the submission values used for August 2022 against the database extract and confirmed that that all four ICPs reconciled using the DST profile match.

Contact demonstrated that they are using the registry figure and it is tracking changes at a daily level, and this is reflected in submission volumes.

The field audit against the database quantities found that the database is not confirmed as accurate with a 95% level of confidence. In absolute terms, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates as detailed in **section 3.1**.

A check of the wattages applied identified a small number of lights with the incorrect wattage applied resulting in an estimated minor under submission of 482.6 kWh as detailed in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3 From: 14-Aug-21 To: 20-Sep-22	Database is not confirmed as accurate with a 95% level of confidence. In absolute terms, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates. Incorrect wattages for 11 items of load resulting in an estimated minor under submission of 482.6kWh per annum. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as strong because they mitigate risk to an acceptable level. The audit risk rating is low based on the estimated kWh volume impact of the database inaccuracy.

Actions taken to resolve the issue	Completion date	Remedial action status
Incorrect wattages have been corrected	31/10/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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 against each item of load.

Audit commentary

All items of load have an ICP assigned.

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 fields for light ID, location description, area and GPS co-ordinates. The database contains GPS co-ordinates recorded for 60 of the 620 lights. The database information is sufficient to locate the items of load.

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 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

The database contains fields for lamp type, lamp size and total wattage (this includes ballast where required). All but one item of load (item #30433) has a lamp type, size and total wattage figure populated; this was also reported in the previous audit.

The accuracy of the recorded wattages and lamp descriptions is discussed in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.4 With: Clause 11(2)(c) &(d) of Schedule 15.3 From: 14-Aug-21 To: 20-Sep-22	One item of load with no light or wattage details populated. Potential impact: Low Actual impact: Low Audit history: Three times previously Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as strong as the processes in place ensure that this detail is captured, and there was only one light that had no wattage or light type recorded. The audit risk rating is recorded as low to none as there was only one light with no wattage recorded.

Actions taken to resolve the issue	Completion date	Remedial action status
Wattage details have been populated	31/10/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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 105 items of load on 2nd and 3rd October 2022. The sample was selected from three strata, as detailed in **section 3.1**.

Audit commentary

The field audit discrepancies are detailed in the table below:

Street	Database count	Field count	Light count difference	Wattage recorded incorrectly	Comments
Waller Street	30	29	-1	3	1 x 150W SON recorded in the database but not located in the field 1 x 120W LED recorded in the database but 1 x 107W LED located in the field 1 x 100W SON recorded in the database but 1 x 107W LED located in the field

Street	Database count	Field count	Light count difference	Wattage recorded incorrectly	Comments
					1 x 100W SON recorded in the database but 1 x 150W SON located in the field
Gladstone Rd	41	41		7	4 x 75W LED recorded in the database but 4 x 103 W LED located in the field 2 x 250W SON recorded in the database but 2 x 103 W LED located in the field 1 x 150W LED recorded in the database but 1 x 103 W LED located in the field
High Street	85		+2	14	14 x 78W LED recorded in the database but 14 x 107W LED located in the field 2 additional x 44W LED located in the field not recorded in the database
Main Road, Riwaka	23	24	+1	2	1 x 100W SON recorded in the database but 1 x 27W LED located in the field 1 x 46W LED recorded in the database but 1 x 27W LED located in the field 1 additional 27W LED located in the field not recorded in the database
Owen Hotel - opp entrance	1	1		1	1 x 250W SON recorded in the database but 1 x 103 W LED located in the field
Grand Total	**609**	**611**	**4 (+3, -1)**	**27**	

The field audit found three additional items of load found in the field of 105 items of load sampled, this is recorded as non-compliance below. The database accuracy is discussed in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: Clauses 11(2A) of Schedule 15.3 From: 14-Aug-21 To: 20-Sep-22	Three additional lamps identified in the field of 105 items of load sampled. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate as the processes in place will ensure that the data is recorded correctly most of the time. The impact is assessed to be low due to the small number of additional lights found in the field in relation to the overall count of the items of load.

Actions taken to resolve the issue	Completion date	Remedial action status
Missing lights will be added, and incorrect wattages will be corrected	30/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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 database has a complete and compliant audit trail.

Audit outcome

Compliant

2.7. Audit trail (Clause 11(4) of Schedule 15.3)

Code reference

Clause 11(4) of Schedule 15.3

Code related audit information

The DUML database must incorporate an audit trail of all additions and changes that identify:

- *the before and after values for changes*
- *the date and time of the change or addition*
- *the person who made the addition or change to the database.*

Audit observation

The database was checked for audit trails.

Audit commentary

The database 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

The DUML Statistical Sampling Guideline was used to determine the database accuracy. The table below shows the survey plan.

Plan Item	Comments
Area of interest	Tasman NZTA Street Lights
Strata	The database contains the items of load for DUML ICPs on the Network Tasman network. The processes for the management of all items of load are the same, but I decided to place the items of load into three strata based on geographic area: 1. Nelson Urban, 2. Nelson Rural, and 3. Nelson West.
Area units	I created a pivot table of the roads, and I used a random number generator in a spreadsheet to select a total of 21 sub-units.
Total items of load	105 items of load were checked.

Wattages for all items of load were checked against the published standardised wattage tables produced by the Electricity Authority, and the manufacturer's specifications or in the case of LED lights against the LED light specification.

Audit commentary

Database accuracy

A field audit was conducted of a statistical sample of 105 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	102.1	Wattage from survey is higher than the database wattage by 2.10%
R_L	98.4	With a 95% level of confidence, it can be concluded that the error could be between -1.6% and 8.7%
R_H	108.7	

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 1.7 % lower and 8.6% higher than the wattage recorded in the DUML database. Non-compliance is recorded because the potential error is greater than 5.0%.

In absolute terms the installed capacity is estimated to be 2 kW higher than the database indicates.

There is a 95% level of confidence that the installed capacity is between 2 kW lower and 8kW higher than the database.

In absolute terms, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates.

There is a 95% level of confidence that the annual consumption is between 6,500 kWh p.a. lower to 35,900kWh 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 %

Light description and capacity accuracy

As discussed in **section 2.4**, all but one item of load has a lamp and gear wattage recorded. Lamp and gear wattages were compared to the expected values. This found a minor number of discrepancies. These are detailed in the table below; they were also reported in the previous audit:

Lamp make model	Quantity	Database lamp wattage	Expected lamp wattage	Variance
SON (100W)	3	111	114	-9
SON (400W)	8	425	438	-104
			TOTAL	-113

This will result in an estimated annual under submission of 482.6 kWh per annum (based on 4,271 burn hours). This is recorded as non-compliance below.

As previously reported, there are nine lights recorded with a light type of "Various". The details are insufficient to determine if the correct wattage has been recorded. The database records all 239 LED lights as "LED" lights only. There are 23 different LED wattages recorded. As detailed in previous reports, I recommend that all light descriptions especially LED lights are reviewed to ensure that they contain enough detail to confirm that the correct wattage has been applied. I repeat the recommendation from the last audit:

Recommendation	Description	Audited party comment	Remedial action
Database Accuracy	Update database with lamp descriptions to confirm the correct wattage has been applied.	Discussions will be held with Network Tasman and NZTA in regard to funding this development.	Investigating

Change management process findings

Fault, maintenance and upgrade work is managed by W J Ashton. All changes made require a "streetlight advice form" to be supplied to Network Tasman. The database assigns a unique identifier per light. Each item of load has a "UML start date" and "UML end date". The "UML start date" relates to the installation date for the light. The "UML end date" defaults to 2099 and is updated to the date of removal when the light is replaced. As changes are made the ICP kW value is calculated on the day of updating. This is updated on a daily basis in the Network Tasman ICP database. Information provided by the contractor is requested to be provided to Network Tasman within 24 hours of the work being completed, this timeframe is usually not met. GPS co-ordinates are not provided by the contractor.

There have been no changes to this process since the last audit. The new connection process follows the same process as changes made in the field. This work is undertaken by Delta. A "streetlight service form" is completed and an "as built" drawing is provided. GPS co-ordinates are not provided as part of this process.

Festive lights

Network Tasman confirmed that there is no festive lighting used for NZTA on the Network Tasman network.

Private lights

Network Tasman confirmed that there is no private lighting recorded in the database.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 14-Jan-21 To: 13-Aug-21	Database is not confirmed as accurate with a 95% level of confidence. In absolute terms, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates. One item of load with no light or wattage details populated. Incorrect wattages for 11 items of load resulting in an estimated minor under submission of 482.6kWh per annum. Potential impact: Medium Actual impact: Low Audit history: Multiple time previously Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as moderate, as they are sufficient to mitigate the risk most of the time, but there is room for improvement. The audit risk rating indicates that the impact of database inaccuracy is low based on the estimated kWh of over submission.

Actions taken to resolve the issue	Completion date	Remedial action status
Missing lights will be added, and incorrect wattages will be corrected	30/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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

Code reference

Clause 15.2 and 15.37B(c)

Code related audit information

The audit must verify that:

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

Audit observation

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

- checking the registry to confirm that the ICP has the correct profile and submission flag, and
- checking the database extract combined with the on hours against the submitted figure to confirm accuracy.

Audit commentary

Contact reconciles this DUML load using the DST profile for ICPs 0000090007NTA60, 0000090009NT9FB 0000090010NTD07 and 0000090012NTD82. Simply Energy on behalf of Contact send the monthly kW values to EMS. EMS prepare the submission file using the data logger hours to determine the burn hours and the file is then sent to Contact who submit the data under the CTCS code.

The previous audit identified an error for ICP 0000090010NTD07, the incorrect kW value was logged for the June 2021 submission by EMS. This has been checked and it was confirmed that it has been corrected from June 2021.

The previous audit identified ICP 0000090011NT142 was reconciled using RPS profile and that Simply Energy were managing the unmetered load by estimating the volume at 55kWh/day. This will have resulted in an estimated under submission of 2,008.5 kWh from the date of switching in 1 October 2020 to 31 August 2021. The data has been corrected for the volumes back to the date of switch in through the revision process.

Network Tasman have agreed to start providing regular reporting to Contact. Network Tasman updates the distributor kW figure in the registry when changes are made in the database.

I checked the submission values used for August 2022 against the database extract and confirmed that that all four ICPs reconciled using the DST profile match.

Contact demonstrated that they are using the registry figure and it is tracking changes at a daily level, and this is reflected in submission volumes.

The field audit against the database quantities found that the database is not confirmed as accurate with a 95% level of confidence. In absolute terms, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates as detailed in **section 3.1**.

A check of the wattages applied identified a small number of lights with the incorrect wattage applied resulting in an estimated minor under submission of 482.6 kWh as detailed in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c) From: 14-Aug-21 To: 20-Sep-22	Database is not confirmed as accurate with a 95% level of confidence. In absolute terms, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates. Incorrect wattages for 11 items of load resulting in an estimated minor under submission of 482.6kWh per annum. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as strong because they mitigate risk to an acceptable level. The audit risk rating is low based on the estimated kWh volume impact of the database inaccuracy.

Actions taken to resolve the issue	Completion date	Remedial action status
Incorrect wattages will be corrected	31/10/2022	Identified

CONCLUSION

Network Tasman hold an access database for the Tasman NZTA unmetered streetlights. Fault, maintenance and upgrade work is conducted by W J Ashton, and the database is managed by Network Tasman.

Simply Energy sends the monthly kW values to EMS. EMS prepare the submission file using the data logger hours to determine the burn hours and the file is then sent to Contact who submit the data under the CTCS code.

Network Tasman have agreed to start providing regular reporting to Contact. Network Tasman updates the distributor kW figure in the registry when changes are made in the database.

I checked the submission values used for August 2022 against the database extract and confirmed that the volumes submitted were correct.

Contact demonstrated that they are using the registry figure and it is tracking changes at a daily level, and this is reflected in submission volumes.

The field audit against the database quantities found that the database is not confirmed as accurate with a 95% level of confidence:

- in absolute terms the installed capacity is estimated to be 2 kW higher than the database indicates,
- there is a 95% level of confidence that the installed capacity is between 2 kW lower and 8kW higher than the database,
- in absolute terms, total annual consumption is estimated to be 8,600 kWh higher than the DUML database indicates, and
- there is a 95% level of confidence that the annual consumption is between 6,500 kWh p.a. lower to 35,900kWh p.a. higher than the database indicates.

The audit found five non-compliances and repeats one recommendation. The future risk rating of seven indicates that the next audit be completed in 18 months. I have considered this in conjunction with Contact's comments and recommend that the next audit be in 18 months.

PARTICIPANT RESPONSE

NZTA are in the process of taking direct ownership of all NZTA lights across the country and have been in touch regarding the lights on the Network Tasman network. It is expected that management of these assets will switch to NZTA, their RAMM system and their processes in the first half of 2023.