

**ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTED UNMETERED LOAD AUDIT REPORT**

For

**NZTA ELECTRONET AREA AND  
TRUSTPOWER LIMITED  
NZBN: 9429041910085**

Prepared by: Rebecca Elliot

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Audit report due date: 10 November 2021

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## EXECUTIVE SUMMARY

This audit of the **NZTA ElectroNet area (NZTA)** DUML database and processes was conducted at the request of **Trustpower Limited (Trustpower)** 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 Arc GIS database used for submission is managed by ElectroNet, on behalf of Westpower. New connection, fault, and maintenance work is completed by ElectroNet, who update the GIS in the field using Arc GIS collector. ElectroNet provide a monthly report from the database to Trustpower.

Trustpower reconciles this DUML load under the "CNIR" participant code using the STL profile. The on and off times are derived from data logger information.

There were minor discrepancies identified in the ballast values being applied to 15 items of load indicating an estimated very minor over submission of 128 kWh per annum.

A field audit was conducted of a statistical sample of 148 items of load. The "database auditing tool" was used to analyse the results. This confirmed that the database accuracy is within the allowable +/-5% variance threshold.

This audit found four non-compliances and repeats one recommendation. The future risk rating of 8 indicates that the next audit be completed in 18 months. I have considered this in conjunction with Trustpower's comments and agree with this recommendation.

The matters 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	The data used for submission does not track changes at a daily basis and is provided as a snapshot.  15 items of permanent load have the incorrect ballast applied indicating an estimated very minor over submission of 128 kWh per annum.	Moderate	Low	2	Identified
All load recorded in database	2.4	11(2A) of Schedule 15.3	Four additional lights found in the field of the sample of 91 items of load checked.	Moderate	Low	2	Identified
Database accuracy	3.1	15.2 and 15.37B(b)	15 items of permanent load have the incorrect ballast applied indicating a very minor estimated over submission of 128 kWh per annum.	Moderate	Low	2	Identified
Volume information accuracy	3.2	15.2 and 15.37B(c)	The data used for submission does not track changes at a daily basis and is provided as a snapshot.  15 items of permanent load have the incorrect ballast applied indicating a very minor estimated over submission of 128 kWh per annum.	Moderate	Low	2	Identified
Future Risk Rating						8	

<b>Future risk rating</b>	0	1-4	5-8	9-15	16-18	19+
<b>Indicative audit frequency</b>	36 months	24 months	18 months	12 months	6 months	3 months

## RECOMMENDATIONS

Subject	Section	Recommendation
Database accuracy	3.1	Record LED light make and model in the database to confirm that the correct wattage is recorded in the database.

## 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

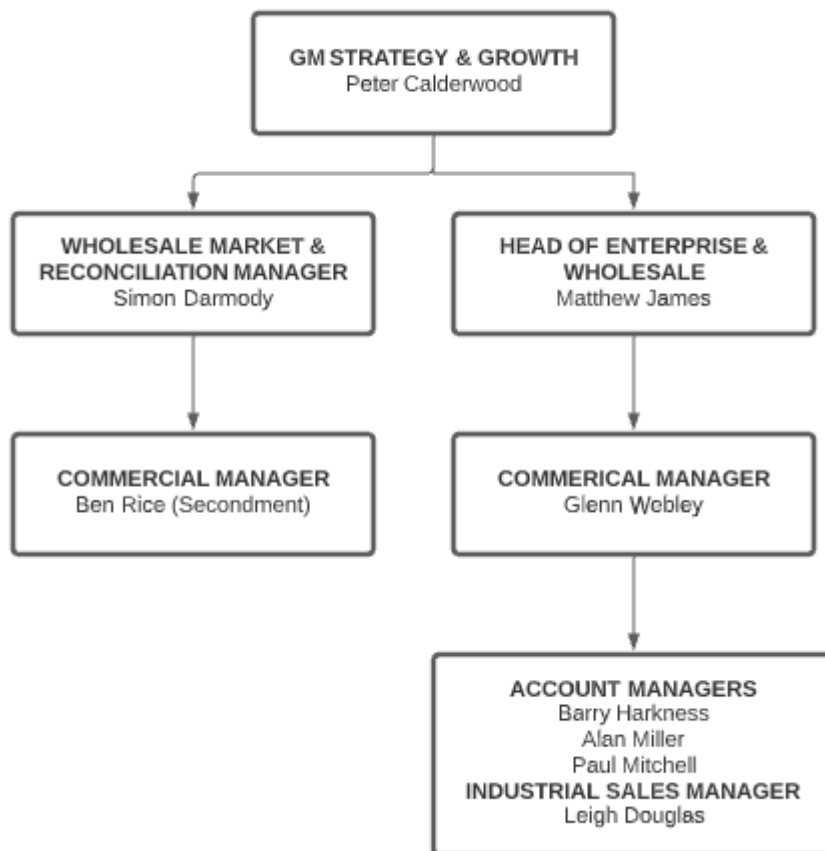
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

#### Audit commentary

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

### 1.2. Structure of Organisation

Trustpower provided a copy of their organisational structure:



### 1.3. Persons involved in this audit

Auditor:

Name	Company	Role
Rebecca Elliot	Veritek Limited	Lead Auditor
Claire Stanley	Veritek Limited	Supporting Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Robbie Diederer	Reconciliation Analyst	Trustpower
Daniella Sollitt	GIS Technician	ElectroNet
Violet Penty	Asset Support Officer	ElectroNet
Chris Busson	GIS Administrator	ElectroNet

### 1.4. Hardware and Software

The Arc GIS SQL database used for the management of DUML is managed by ElectroNet.

The database back up is in accordance with standard industry procedures. Access to the database is restricted using a login and password.

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

### 1.5. Breaches or Breach Allegations

There are no breach allegations relevant to the scope of this audit.

### 1.6. ICP Data

ICP Number	Description	NSP	Profile	Number of items of load	Database wattage (watts)
0000950100WPF4D	NZTA Westcoast	DOB0331	STL	158	19,060
0000950111WP9A5	NZTA Westcoast	GYM0661	STL	243	55,454
0000950112WP565	NZTA Westcoast	HKK0661	STL	194	25,103
0000950113WP920	NZTA Westcoast	KUM0661	STL	39	6,330
0000950114WP4EA	NZTA Westcoast	OTI0111	STL	2	206
0000950115WP8AF	NZTA Westcoast	RFN1101	STL	94	10,056
0000950116WP46F	NZTA Westcoast	RFN1102	STL	52	9,409
<b>Total</b>				<b>782</b>	<b>125,618</b>

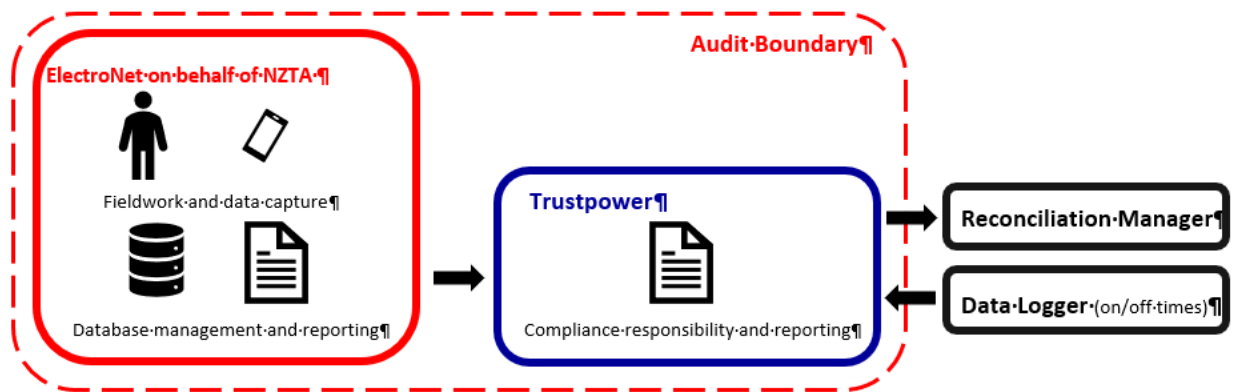
## 1.7. Authorisation Received

All information was provided directly by Trustpower and ElectroNet.

## 1.8. Scope of Audit

The Arc GIS database used for submission is managed by ElectroNet, on behalf of Westpower. New connection, fault, and maintenance work is completed by ElectroNet, who update the GIS in the field using Arc GIS collector. ElectroNet provide a monthly report from the database to Trustpower.

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 of a statistical sample of 148 items of load was undertaken on 15th September 2021. The sample was selected from three strata:

- rural north,
- rural south, and
- urban.



## 1.9. Summary of previous audit

The previous audit was completed in November 2020 by Steve Woods of Veritek Limited. Five non-compliances were identified, and one recommendation was made. The current status of these is detailed below.

### Table of Non-Compliance

Subject	Section	Clause	Non-Compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	In absolute terms, total annual consumption is estimated to be 33,400 kWh lower than the DUML database indicates.  36 items of load with the incorrect wattage recorded resulting in a minor estimated under submission of 329 kWh per annum.  The data used for submission does not track changes at a daily basis and is provided as a snapshot.	Cleared  Still existing for some items of load  Still existing
All load recorded in database	2.5	11(2A) of Schedule 15.3	Two additional lights found in the field.	Still existing for different lamps
Database accuracy	3.1	15.2 and 15.37B(b)	In absolute terms, total annual consumption is estimated to be 33,400 kWh lower than the DUML database indicates.  36 items of load with the incorrect ballast recorded resulting in a minor estimated under submission of 329 kWh per annum.	Cleared  Still existing for some items of load
Volume information accuracy	3.2	15.2 and 15.37B(c)	In absolute terms, total annual consumption is estimated to be 33,400 kWh lower than the DUML database indicates.  36 items of load with the incorrect wattage recorded resulting in a minor estimated under submission of 329 kWh per annum.  The data used for submission does not track changes at a daily basis and is provided as a snapshot.	Cleared  Still existing for some items of load  Still existing

### Table of Recommendations

Subject	Section	Recommendation	Status
Database accuracy	3.1	Record LED light make and model in the database to confirm that the correct wattage is recorded in the database.	Still existing

## 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

Trustpower 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. DUMML DATABASE REQUIREMENTS

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

#### Code reference

*Clause 11(1) of Schedule 15.3*

#### Code related audit information

*The retailer must ensure the:*

- *DUMML database is up to date*
- *methodology for deriving submission information complies with Schedule 15.5.*

#### Audit observation

The process for calculation of consumption was examined.

#### Audit commentary

Trustpower reconciles this DUMML load under the “CNIR” participant code using the STL profile. The on and off times are derived from data logger information.

I recalculated the submissions for July 2021 for the seven ICPs associated with the NZTA database using the data logger and database information. I confirmed that the calculation method was correct.

The field audit confirmed that the database is within the allowable +/-5% accuracy threshold.

A check of the wattages applied identified a small number of lights with the incorrect wattage applied this will be resulting in an estimated over submission of 128 kWh as detailed in **section 3.1**.

On 18 June 2019, the Electricity Authority issued a memo confirming that the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed, and
- wash up volumes must take into account where historical corrections have been made to the DUMML load and volumes.

The current data used is a snapshot and this practice is non-compliant.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3  From: 16-Nov-20 To: 16-Aug-21	<p>The data used for submission does not track changes at a daily basis and is provided as a snapshot.</p> <p>15 items of permanent load have the incorrect ballast applied indicating a very minor estimated over submission of 128 kWh per annum.</p> <p>Potential impact: Low Actual impact: Low Audit history: Multiple times previously Controls: Moderate Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	<p>Controls are rated as moderate, as they are sufficient to mitigate the risk most of the time but there is room for 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
Have spoken to ElectroNet about the audit report findings		4/11/2021	Identified
Preventative actions taken to ensure no further issue will occur		Completion date	
ElectroNet have corrected the ballast errors in the DB and are reviewing their system and exploring DB options. We will follow up with to ensure accuracy & compliance.		30/11/2021	

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

### Code reference

*Clause 11(2)(a) and (aa) of Schedule 15.3*

### Code related audit information

*The DUMML database must contain:*

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

### Audit observation

The database was checked to confirm an ICP is recorded for each item of load.

### Audit commentary

All items of load have an ICP number recorded.

### 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 DUMML database must contain the location of each DUMML 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 the street name, area and GPS coordinates. All items of load have a GPS location recorded, and all but one item of load also have a street address recorded

#### 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 DUMML 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

A description of each light is recorded in the light type field, and total wattage, including ballast. All items of load have a light type and wattage populated.

The accuracy of the lamp description, capacity and ballasts recorded is discussed in **section 3.1**.

#### Audit outcome

Compliant

### 2.5. All load recorded in database (Clause 11(2A) of Schedule 15.3)

#### Code reference

*Clause 11(2A) of Schedule 15.3*

#### Code related audit information

*The retailer must ensure that each item of DUMML for which it is responsible is recorded in this database.*

### Audit observation

A field audit of a statistical sample of 148 items of load was undertaken on 15<sup>th</sup> September 2021. The sample was selected from three strata:

- rural north,
- rural south, and
- urban.

### Audit commentary

The field audit discrepancies are detailed in the table below:

Address	Database Count	Field Count	Count differences	Wattage differences	Comments
Smith Street	15	15		1	1 x 250W SON in the database but 1 x 103W LED found in the field.
Grey Road	18	19	+1	2	1 x additional 90 SOX found in the field . 1 x 90 SOX recorded in the database but 1 x 103W LED found in the field 1x 83W LED recorded in the database but 103W LED found in the field.
Cnr Seven Mile Rd, Somerled Ave	9	20	+1	1	1x additional 149W LED found in the field. 1 x 70W LED recorded in the database but 75W LED found in the field.
Cnr Main South Road, Camerons Road	5	5		1	1 x 125 MBFU recorded in the database but 22W LED found in the field.
Fitzherbert St	34	36	+2	1	1 x additional 103W LED found in the field. 1x additional 75W LED found in the field. 1 x 150W SON recorded in the database but 1 x 149W LED found in the field.
<b>GRAND TOTAL</b>	<b>91</b>	<b>95</b>	<b>+4</b>	<b>6</b>	

The field audit found four additional lights in the field. This is recorded as non-compliance below.

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

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.4 With: Clause 11(2A) of Schedule 15.3  From: 18-Nov-20 To: 16-Aug-21	Four additional lights found in the field of the sample of 148 items of load checked. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate, as they are sufficient to mitigate the risk most of the time but there is room for improvement  The impact is assessed to be low due to the small number of additional lights found.		
Actions taken to resolve the issue		Completion date	Remedial action status
ElectroNet are arranging site visits so DB can be corrected		30/11/2021	Identified
Preventative actions taken to ensure no further issue will occur		Completion date	
ElectroNet are reviewing their system and DB capabilities. We will follow up with them to ensure accuracy and compliance.		30/11/2021	

## 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 functionality achieves compliance with the code.

### 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 and compliant 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	NZTA ElectroNet Westland region
Strata	The database contains the NZTA items of load in Westland area. The processes for the management of all NZTA items of load are the same. I created three geographical strata: <ul style="list-style-type: none"> <li>• rural north,</li> <li>• rural south, and</li> <li>• urban</li> </ul>
Area units	I created a pivot table of the roads based on the strata and I used a random number generator in a spreadsheet to select a total of 31 sub-units.
Total items of load	148 items of load were checked.

Wattages for all items of load were checked against the published standardised wattage tables produced by the Electricity Authority or LED light specifications where available against the DUML database.

##### Audit commentary

A field audit was conducted of a statistical sample of 148 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	100.8%	Wattage from survey is higher than the database wattage by 0.8%
R <sub>L</sub>	97.2%	With a 95% level of confidence, it can be concluded that the error could be between -2.8% and 4.0%.
R <sub>H</sub>	104.0%	

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 A (detailed below) applies.

The conclusion from Scenario A is that the variability of the sample results across the strata means that the true wattage (installed in the field) could be between 2.8% lower and 4.0% higher than the wattage recorded in the DUML database. Compliance is recorded because the potential error is less than 5.0%.

In absolute terms the installed capacity is estimated to be 1.0 kW higher than the database indicates.

There is a 95% level of confidence that the installed capacity is between 3kW lower and 5kW higher than the database.

In absolute terms, total annual consumption is estimated to be 4,300 kWh higher than the DUML database indicates.

There is a 95% level of confidence that the annual consumption is between 14,900 kWh p.a. and 21,300 kWh p.a. higher than the database indicates but as this is within the +/- 5% allowable threshold compliance is confirmed.

Scenario	Description
<p><b>A - Good accuracy, good precision</b></p>	<p>This scenario applies if:</p> <ul style="list-style-type: none"> <li>(a) <math>R_H</math> is less than 1.05; and</li> <li>(b) <math>R_L</math> is greater than 0.95</li> </ul> <p>The conclusion from this scenario is that:</p> <ul style="list-style-type: none"> <li>(a) the best available estimate indicates that the database is accurate within +/- 5 %; and</li> <li>(b) this is the best outcome.</li> </ul>
<p><b>B - Poor accuracy, demonstrated with statistical significance</b></p>	<p>This scenario applies if:</p> <ul style="list-style-type: none"> <li>(a) the point estimate of <math>R</math> is less than 0.95 or greater than 1.05</li> <li>(b) as a result, either <math>R_L</math> is less than 0.95 or <math>R_H</math> is greater than 1.05.</li> </ul> <p>There is evidence to support this finding. In statistical terms, the inaccuracy is statistically significant at the 95% level</p>
<p><b>C - Poor precision</b></p>	<p>This scenario applies if:</p> <ul style="list-style-type: none"> <li>(a) the point estimate of <math>R</math> is between 0.95 and 1.05</li> <li>(b) <math>R_L</math> is less than 0.95 and/or <math>R_H</math> is greater than 1.05</li> </ul> <p>The conclusion from this scenario is that the best available estimate is not precise enough to conclude that the database is accurate within +/- 5 %</p>

### Lamp description and capacity accuracy

I checked the wattage being applied in the database and found that 15 lamps had a discrepancy when compared to the standardised wattage table. This is detailed in the table below:

Lamp model	EA Standardised Total Wattage	Database Total Wattage	Count	Wattage Difference
250 HPS COATED	278	280	14	-28
250 SON	278	280	1	-2
<b>Total</b>			<b>15</b>	<b>-30</b>

The incorrect capacities will be resulting in an estimated very minor over submission of 128 kWh per annum (based on annual burn hours of 4,271 as is detailed in the DUML database auditing tool).

There are 188 LED lights in the field, and I repeat the recommendation from the last two audits to populate the lamp make and model.

Recommendation	Description	Audited party comment	Remedial action
Database Accuracy	Record LED light make and model in the database to confirm that the correct wattage is recorded in the database.	ElectroNet are investigating how they can incorporate the LED make & model in to the DB	Investigating

### Change management process findings

There have been no changes to the processes in place during the audit period. The Arc GIS database used for submission is managed by ElectroNet, on behalf of Westpower. New connection, fault, and maintenance work is completed by ElectroNet, who update the GIS in the field using Arc GIS collector. ElectroNet office staff validate the data and post it to the database after the field devices are synchronised to the main database.

New connections for NZTA in the ElectroNet area are managed and follow the same process that is in place for Westland District Council.

A process workflow in the Maximo system is used to manage all new connections and includes a step to update GIS information. Maximo tasks are normally allocated to a work group rather than individual, and key tasks are escalated within Maximo if not completed within specified timeframes. Tasks can be reassigned as necessary. Once the installation job is complete, a work task is created for the GIS team to check the Arc GIS database is up to date.

ElectroNet are not aware of any plans to roll out LED lights for NZTA on the ElectroNet network.

There are no private or festive lights associated with the NZTA lights.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b)  From: 16-Nov-20 To: 16-Aug-21	15 items of permanent load have the incorrect ballast applied indicating a very minor estimated over submission of 128 kWh per annum.  Potential impact: Low  Actual impact: Low  Audit history: Three times previously  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate, as they are sufficient to mitigate the risk most of the time but there is room for 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
Have spoken to ElectroNet about the audit report findings		4/11/2021	Identified
Preventative actions taken to ensure no further issue will occur		Completion date	
ElectroNet have corrected the ballast errors in the DB and are reviewing their system and exploring DB options. We will follow up with them to ensure accuracy and compliance.		30/11/2021	

### 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

Trustpower reconciles this DUML load under the "CNIR" participant code using the STL profile. The on and off times are derived from data logger information.

I recalculated the submissions for July 2021 for the seven ICPs associated with the NZTA database using the data logger and database information. I confirmed that the calculation method was correct.

The field audit confirmed that the database is within the allowable +/-5% accuracy threshold.

A check of the wattages applied identified a small number of lights with the incorrect wattage applied this will be resulting in an estimated over submission of 128 kWh as detailed in **section 3.1**. On 18 June 2019, the Electricity Authority issued a memo confirming that the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed, and
- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

The current data used is a snapshot and this practice is non-compliant.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c)  From: 25-Nov-20 To: 16-Aug-21	The data used for submission does not track changes at a daily basis and is provided as a snapshot.  15 items of permanent load have the incorrect ballast applied indicating a very minor estimated over submission of 128 kWh per annum.  Potential impact: Low  Actual impact: Low  Audit history: Multiple times previously  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate, as they are sufficient to mitigate the risk most of the time but there is room for 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
Have spoken to ElectroNet about the audit report findings		4/11/2021	Identified
ElectroNet have corrected the ballast errors in the DB and are reviewing their system and exploring DB options. We will follow up with them to ensure accuracy and compliance.		30/11/2021	

## CONCLUSION

The Arc GIS database used for submission is managed by ElectroNet, on behalf of Westpower. New connection, fault, and maintenance work is completed by ElectroNet, who update the GIS in the field using Arc GIS collector. ElectroNet provide a monthly report from the database to Trustpower.

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

The Arc GIS database used for submission is managed by ElectroNet, on behalf of Westpower. New connection, fault, and maintenance work is completed by ElectroNet, who update the GIS in the field using Arc GIS collector. ElectroNet provide a monthly report from the database to Trustpower.

Trustpower reconciles this DUML load under the “CNIR” participant code using the STL profile. The on and off times are derived from data logger information.

There were minor discrepancies identified in the ballast values being applied to 15 items of load indicating an estimated very minor over submission of 128 kWh per annum.

A field audit was conducted of a statistical sample of 148 items of load. The “database auditing tool” was used to analyse the results. This confirmed that the database accuracy is within the allowable +/-5% variance threshold.

This audit found four non-compliances and repeats one recommendation. The future risk rating of 8 indicates that the next audit be completed in 18 months. I have considered this in conjunction with Trustpower’s comments and agree with this recommendation.

## PARTICIPANT RESPONSE

Trustpower has reviewed this report and their comments are contained within the report.