ELECTRICITY INDUSTRY PARTICIPATION CODE

DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

WESTERN BAY OF PLENTY DISTRICT COUNCIL

AND TRUSTPOWER LIMITED

Prepared by: Steve Woods

Date audit commenced: 12 November 2019

Date audit report completed: 27 November 2019

Audit report due date: 1 January 2020

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EXECUTIVE SUMMARY

This audit of the Western Bay of Plenty District Council (**WBOP DC**) 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.

A RAMM database is managed by Westlink on behalf of WBOP DC and monthly reporting is provided to Trustpower. The field work is carried out by Horizon.

Westlink have good processes in place to manage the database accuracy. The main issue is that the process to add new lights indicates that the information is slow to reach Westlink from WBOPDC and for these to get added to RAMM. The 32 new lights identified missing from the database since 2017 were checked and these lights are still to be added. When new lights are added to the database, Westlink's contract does not require them to be added until the 20th of the month following. them being advised. This will result in a further month of no submission for the new lights.

The audit found four non-compliances. The future risk rating of 24 indicates that the next audit be completed in 3 months. Westlink advised that the process for new lighting has recently improved, so I recommend a longer period of 6 months to allow the improvements to fully take effect. 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	New lights not added to the RAMM database within the month of electrical connection. 32 new lights not in the RAMM database equating to an estimated annual under submission of 4,117 kWh. In absolute terms, total annual consumption is estimated to be 12,600 kWh higher than the DUML database indicates	Weak	Medium	6	Identified
All load recorded in database	2.5	11(2A) of Schedule 15.3	13 additional lights found in the field audit. 32 lights electrically connected but not recorded in the database since July 2017	Weak	Medium	6	Identified
Database accuracy	3.1	15.2 and 15.37B(b)	In absolute terms, total annual consumption is estimated to be 12,600 kWh lower than the DUML database indicates. New lights not added to the RAMM database within the month of electrical connection. 32 new lights not in the RAMM database equating to an estimated annual under submission of 4,117 kWh	Weak	Medium	6	Identified
Volume information accuracy	3.2	15.2 and 15.37B(c)	New lights not added to the RAMM database within the month of electrical connection. 32 new lights not in the RAMM database equating to an estimated annual under submission of 4,117 kWh.	Weak	Medium	6	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			In absolute terms, total annual consumption is estimated to be 12,600 kWh higher than the DUML database indicates				
					Future Risk Rating	**24**	

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	Description
		None	

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:

Steve Woods

Veritek Limited

Electricity Authority Approved Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Phillip Barnes	Maintenance Manager	Westlink BOP
Robbie Diederen	Reconciliation Analyst	Trustpower

1.4. Hardware and Software

The SQL database used for the management of DUML is remotely hosted by RAMM Software Ltd. The database is commonly known as "RAMM" which stands for "Roading Asset and Maintenance Management".

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

1.5. Breaches or Breach Allegations

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

1.6. ICP Data

ICP Number	Description	Profile	Number of items of load	Database wattage (watts)
0001264707UN697	Mount Maunganui/Papamoa	STL	77	10,663
1000524996PC530	Welcome Bay/Ohauiti/Hairini	STL	18	1,749
1000524997PC975	Tauranga City	STL	4	417
1000524998PC6AB	North of Tauranga	STL	974	82,762
1000524999PCAEE	Te Puke area	STL	1,017	101,118
TOTAL			2,090	196,709

1.7. Authorisation Received

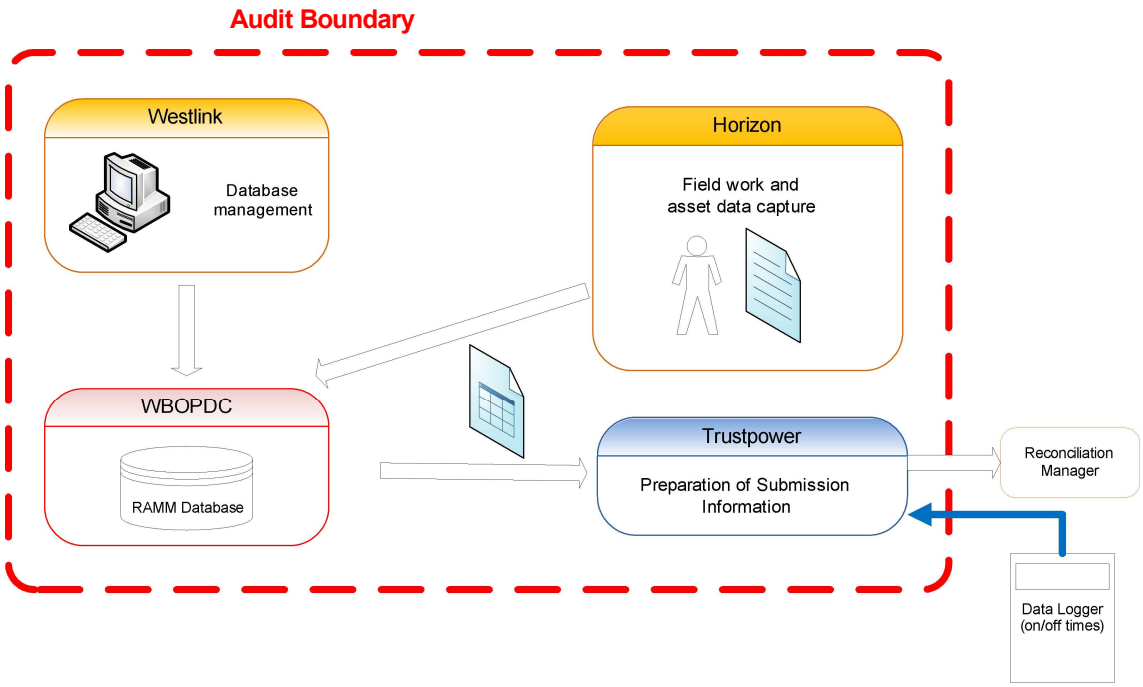
All information was provided directly by Trustpower or Westlink.

1.8. Scope of Audit

This audit of the Western Bay of Plenty District Council (**WBOPDC**) 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 database is remotely hosted by RAMM Software Ltd. The asset data capture and database population are conducted by Westlink. The field work is carried out by Horizon. 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 327 items of load.

1.9. Summary of previous audit

The previous audit was completed in March 2019 by Rebecca Elliot of Veritek Limited. Four non-compliances were identified, and one recommendation was made. The statuses of the non-compliances and recommendation are described below.

Table of Non-Compliance

Subject	Section	Clause	Non-Compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	New lights not added to the RAMM database within the month of electrical connection. 34 new lights not in the RAMM database equating to an estimated annual under submission of 4,279.5 kWh.	Still existing
All load recorded in database	2.5	11(2A) of Schedule 15.3	One additional light found in the field audit. 34 lights electrically connected but not recorded in the database.	Still existing
Database accuracy	3.1	15.2 and 15.37B(b)	New lights not added to the RAMM database within the month of electrical connection. 34 new lights not in the RAMM database equating to an estimated annual under submission of 4,279.5 kWh.	Still existing
Volume information accuracy	3.2	15.2 and 15.37B(c)	New lights not added to the RAMM database within the month of electrical connection. 34 new lights not in the RAMM database equating to an estimated annual under submission of 4,279.5 kWh.	Still existing

Recommendations

Subject	Section	Description	Status
Tracking of load change	2.6	Liaise with Powerco to determine the most effective process to ensure the volumes associated with new subdivision streetlights are reconciled.	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. 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

Trustpower reconciles this DUML load using the STL profile. Trustpower receive monthly wattage reports. Submissions are based on the monthly wattage report, with on and off times derived from data logger information.

I recalculated the submissions for October 2019 using the data logger and database information. I confirmed that the calculation method and result was correct.

New lights are not added to the database in the month of these being electrically connected. 32 of 34 lights identified in the previous audits have not yet been added to the database. This is discussed further in **section 2.5**. This is recorded as non-compliance below.

Submission is based on a snapshot of the database at the end of the month and does not consider historic adjustments or the fact that lights can be livened before they are entered into the database.

In absolute terms, total annual consumption is estimated to be 12,600 kWh higher than the DUML database indicates.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 Clause 11(1) of Schedule 15.3 From: 01-Mar-19 To: 26-Nov-19	New lights not added to the RAMM database within the month of electrical connection. 32 new lights not in the RAMM database equating to an estimated annual under submission of 4,117 kWh. In absolute terms, total annual consumption is estimated to be 12,600 kWh higher than the DUML database indicates. Potential impact: Medium Actual impact: Medium Audit history: Three times Controls: Weak Breach risk rating: 6

Audit risk rating	Rationale for audit risk rating
Medium	The controls are rated as weak as new lights are not added to RAMM within the month of being electrically connected. The impact is assessed to be medium, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
The WBOPDC are responsible for notifying WestLink of any new installation. There are errors with how this happens because WBOPDC do not have appropriate processes and controls in place. Several meetings with WBOPDC have taken place to focus on getting lists of installed and connected lamps entered in the database, as well as a focus on remedying business processes. Despite assurances not all processes and outcomes comply. Another meeting will be scheduled using this audit report as motivation for further improvement.	Unknown but will expect before 31 March 20.	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
A follow-up meeting will occur with the council to focus on and put processes in place to address the areas of non-compliance identified (and re-occurring) in this audit.	ASAP	

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 the correct ICP was recorded against each item of load.

Audit commentary

All items of load have an ICP recorded against them.

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 the street address and also GPS coordinates and all were populated.

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 it contained a field for lamp type and wattage capacity and included any ballast or gear wattage and that each item of load had a value recorded in these fields.

Audit commentary

The database contains the manufacturers rated wattage and the ballast wattage. The extract provided has fields for lamp and gear make and model and all were populated.

Audit outcome

Compliant

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

Code reference

Clause 11(2A) of Schedule 15.3

Code related audit information

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

Audit observation

The field audit was undertaken of a statistical sample of 327 items of load.

Audit commentary

The field audit findings for the sample of lamps was accurate with the exception of the streets detailed in the table below:

Address	Database Count	Field Count	Count differences	Wattage differences	Comments
CONWAY ROAD	11	12	+1	-	1 x additional 70W HPS

Address	Database Count	Field Count	Count differences	Wattage differences	Comments
FAIRWAY VIEW DRIVE	4	5	+1	-	1 x additional 29W LED
MACLOUGHLIN DRIVE	9	10			1 x additional 29W LED
MADELEINE PLACE	2	2	-	2	2 x 26.7W LED recorded as 29W
NO 2 ROAD	10	10	-	4	4 x 70W HPS recorded as 29W LED
PARK ROAD (KATIKATI)	19	20	+1	-	1 x additional 29W LED
PUKEHINA BEACH ROAD SLIP	1	1	-	1	1 x 29W LED recorded as 70W HPS
TE AWHE ROAD	5	4	-1	-	1 x 29W LED not found
TE PUNA ROAD	14	13	-1	-	1 x 150W HPS not found
TYNAN STREET	4	14	+10	-	10 x additional LED

This clause relates to lights found in the field but not recorded in the database. The field audit found 13 additional lights in the field. This is recorded as non-compliance below. The database accuracy from the field audit is discussed in **section 3.1**.

I rechecked the new lights identified in the last audit that had not been added to the database and found 32 of 34 were still not recorded.

Address	Database Count	Field Count	Count differences	Wattage differences	Comments
CHARLOTTE DRIVE EXTENTION	0	5	5		Lights not recorded in RAMM
NEW ROAD (Near GANE PLACE)	0	15	15		Lights not recorded in RAMM
NEW ROAD OMOK1	0	3	3		Lights not recorded in RAMM
NEW ROAD OMOK2	0	4	4		Lights not recorded in RAMM
PENELOPE PLACE	0	2	2		Lights not recorded in RAMM
PIPI LANE	0	3	3		Lights not recorded in RAMM
TOTAL	0	32			

These lights are likely to have been vested to Council by now but Westlink have yet to receive any information from the council to get these lights added to the database. They were first identified in July 2017. This is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: Clause 11(2A) of Schedule 15.3 From: 01-Jul-17 To: 26-Nov-19	13 additional lights found in the field audit. 32 lights electrically connected but not recorded in the database since July 2017. Potential impact: Medium Actual impact: Low Audit history: Twice previously Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as weak as new lights are not added to the database as required by the code. The impact is low as the volume of missing lights identified is small.

Actions taken to resolve the issue	Completion date	Remedial action status
The WBOPDC are responsible for notifying WestLink of any new installation. There are errors with how this happens because WBOPDC do not have appropriate processes and controls in place. Several meetings with WBOPDC have taken place to focus on getting lists of installed and connected lamps entered in the database, as well as a focus on remedying business processes. Despite assurances not all processes and outcomes comply. Another meeting will be scheduled using this audit report as motivation for further improvement.	Unknown but will expect before 31 March 20.	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
A follow-up meeting will occur with the council to focus on and put processes in place to address the areas of non-compliance identified (and re-occurring) in this audit.	ASAP	

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 RAMM 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 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	Western BOP DC Street Lights
Strata	The databases contain 2,090 items of load in the Western BOP DC area. The processes for the management of all WBOPDC items of load is the same. I selected the following strata: • Road name A-F • Road name G-M • Road name N-S • Road name T-Y
Area units	I created a pivot table of the roads in each database and used a random number generator in each spreadsheet to select a total of 73 sub-units.
Total items of load	327 items of load were checked.

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

Audit commentary

Database accuracy based on the field audit

A field audit was conducted of a statistical sample of 327 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	101.5	Wattage from survey is higher than the database wattage by 1.5%
R_L	99.2	With a 95% level of confidence it can be concluded that the error could be between -0.8% and +6.5%
R_H	106.5	

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 01/02/19 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 0.8% lower and 6.5% 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 3.0 kW higher than the database indicates.

There is a 95% level of confidence that the installed capacity is between 2 kW lower to 13 kW higher than the database.

In absolute terms, total annual consumption is estimated to be 12,600 kWh lower than the DUML database indicates.

There is a 95% level of confidence that the annual consumption is between 6,700 kWh p.a. lower to 54,600 kWh p.a. higher than the database indicates.

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

The database was checked against the published standardised wattage table and confirmed that ballasts applied, and lamp descriptions were correct.

As discussed in **section 2.5**, new lights are not being added to the RAMM database within the month of electrical connection as they are not being provided to Westlink until some months after they have been electrically connected. When new lights are added to the database, Westlink's contract does not require them to be added until the 20th of the month following them being advised. This will result in no submission in a further month from the new lights being added if the RAMM database extract was used for submission. This delay in the tracking of load change is recorded as non-compliance below. As detailed in **section 2.5**, 32 new lights found missing from the database in the last audit have yet to be added. This equates to an estimated 4,117 kWh of under submission annually.

NZTA Lighting

NZTA lighting is not included in this audit.

ICP accuracy

No ICP errors were identified.

Location accuracy

The database contains fields for the street address and also GPS coordinates and all were populated.

Change management process findings

The process to add new streetlights was examined and it remains unchanged from the last audit. WBOP DC approves all new developments and the consent is provided once they are satisfied that the development will meet the required standards. Detailed "as builts" are required to be provided by the developer and a walk over by council staff of the development is undertaken before the 224 certificate is issued. Once this is issued the "as builts" should be sent to Westlink to upload to RAMM. This process is slow, and it can take some months before this information reaches Westlink. This was evident in this audit as I rechecked the new lights identified in the last audit and these have not yet been added to RAMM. It is likely that these roads have been vested to council but Westlink have not received any information to progress this. When new lights are added to the database Westlink's contract does not require them to be added until the 20th of the month following them being advised. This will result in no submission for a further month from the new lights being added.

This is recorded as non-compliance in **sections 2.1, 2.5, 3.1** and **3.2**.

Horizon carries out the field maintenance for Westlink on behalf of WBOP DC and they update RAMM directly. Westlink have robust controls in their contract with Horizon and this ensures that field maintenance is captured in a timely and accurate manner. Outage patrols are in place with the whole network being checked each month. Additional to this Westlink undertake a 20% validation of all assets they are responsible for on an annual basis.

WBOP DC will be undertaking an LED light update, this is still in the planning phase and not expected to be started until the next financial year at the earliest. There are no plans to use a dimming or central management system.

There are no festive lights connected to the unmetered streetlight circuits and there are no private lights known of or identified as part of the field audit undertaken.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 01-Jul-17 To: 26-Nov-19	In absolute terms, total annual consumption is estimated to be 12,600 kWh lower than the DUML database indicates. New lights not added to the RAMM database within the month of electrical connection. 32 new lights not in the RAMM database equating to an estimated annual under submission of 4,117 kWh. Potential impact: Medium Actual impact: Medium Audit history: Twice previously Controls: Weak Breach risk rating: 6
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as weak as new lights are not added to RAMM within the month of being electrically connected. The impact is assessed to be medium, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
The WBOPDC are responsible for notifying WestLink of any new installation. There are errors with how this happens because WBOPDC do not have appropriate processes and controls in place. Several meetings with WBOPDC have taken place to focus on getting lists of installed and connected lamps entered in the database, as well as a focus on remedying business processes. Despite assurances not all processes and outcomes comply. Another meeting will be scheduled using this audit report as motivation for further improvement.	Unknown but will expect before 31 March 20.	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
A follow-up meeting will occur with the council to focus on and put processes in place to address the areas of non-compliance identified (and re-occurring) in this audit.	ASAP	

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 burn hours against the submitted figure to confirm accuracy.

Audit commentary

Trustpower reconciles this DUML load using the STL profile. Trustpower receive monthly wattage reports. Submissions are based on the monthly wattage report, with on and off times derived from data logger information.

I recalculated the submissions for October 2019 using the data logger and database information. I confirmed that the calculation method and result was correct.

New lights are not added to the database in the month of these being electrically connected. 32 of 34 lights identified in the previous audits have not yet been added to the database. This is discussed further in **section 2.5**. This is recorded as non-compliance below.

Submission is based on a snapshot of the database at the end of the month and does not consider historic adjustments or the fact that lights can be livened before they are entered into the database.

In absolute terms, total annual consumption is estimated to be 12,600 kWh higher than the DUML database indicates.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 Clause 15.2 and 15.37B(c) From: 01-Mar-19 To: 26-Nov-19	New lights not added to the RAMM database within the month of electrical connection. 32 new lights not in the RAMM database equating to an estimated annual under submission of 4,117 kWh. In absolute terms, total annual consumption is estimated to be 12,600 kWh higher than the DUML database indicates. Potential impact: Medium Actual impact: Medium Audit history: Three times Controls: Weak Breach risk rating: 6

Audit risk rating	Rationale for audit risk rating
Low	The controls are rated as weak as new lights are not added to RAMM within the month of being electrically connected. The impact is assessed to be medium, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
The WBOPDC are responsible for notifying WestLink of any new installation. There are errors with how this happens because WBOPDC do not have appropriate processes and controls in place. Several meetings with WBOPDC have taken place to focus on getting lists of installed and connected lamps entered in the database, as well as a focus on remedying business processes. Despite assurances not all processes and outcomes comply. Another meeting will be scheduled using this audit report as motivation for further improvement.	Unknown but will expect before 31 March 20.	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
A follow-up meeting will occur with the council to focus on and put processes in place to address the areas of non-compliance identified (and re-occurring) in this audit.	ASAP	

CONCLUSION

Westlink have good processes in place to manage the database accuracy. The main issue is that the process to add new lights indicates that the information is slow to reach Westlink from WBOPDC and for these to get added to RAMM. The 32 new lights identified missing from the database since 2017 were checked and these lights are still to be added. When new lights are added to the database, Westlink's contract does not require them to be added until the 20th of the month following. them being advised. This will result in a further month of no submission for the new lights.

The audit found four non-compliances. The future risk rating of 24 indicates that the next audit be completed in 3 months. Westlink advised that the process for new lighting has recently improved, so I recommend a longer period of 6 months to allow the improvements to fully take effect.

PARTICIPANT RESPONSE

Trustpower will continue to work with WBOPDC and their contractor to ensure that New lights and changes are reported back to WBOPDC promptly and that the information then flows through to Trustpower reconciliation and submission processes in the monthly updates. We will ensure that all new lights, highlighted by this Audit, are accounted for in our submissions to the market going forward.