ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

STRATFORD DISTRICT COUNCIL AND MERCURY ENERGY LIMITED NZBN: 9429037706609

Prepared by: Tara Gannon

Date audit commenced: 14 October 2022

Date audit report completed: 3 February 2023

Audit report due date: 27 January 2023

TABLE OF CONTENTS

Executive summary 3
Audit summary 4

Non-compliances 4
Recommendations 7
Issues 7

1. Administrative 8

1.1. Exemptions from Obligations to Comply with Code 8
1.2. Structure of Organisation 9
1.3. Persons involved in this audit 10
1.4. Hardware and Software 10
1.5. Breaches or Breach Allegations 10
1.6. ICP Data 10
1.7. Authorisation Received 11
1.8. Scope of Audit 11
1.9. Summary of previous audit 12
1.10. Distributed unmetered load audits (Clause 16A.26 and 17.295F) 14

2. DUML database requirements 16

2.1. Deriving submission information (Clause 11(1) of Schedule 15.3) 16
2.2. ICP identifier and items of load (Clause 11(2)(a) and (aa) of Schedule 15.3) 18
2.3. Location of each item of load (Clause 11(2)(b) of Schedule 15.3) 20
2.4. Description and capacity of load (Clause 11(2)(c) and (d) of Schedule 15.3) 20
2.5. All load recorded in database (Clause 11(2A) of Schedule 15.3) 23
2.6. Tracking of load changes (Clause 11(3) of Schedule 15.3) 25
2.7. Audit trail (Clause 11(4) of Schedule 15.3) 25

3. Accuracy of DUML database 27

3.1. Database accuracy (Clause 15.2 and 15.37B(b)) 27
3.2. Volume information accuracy (Clause 15.2 and 15.37B(c)) 30

Conclusion 33

Participant response 33

EXECUTIVE SUMMARY

This audit of the **Stratford District Council (SDC)** DUML database and processes was conducted at the request of **Mercury Energy Limited (Mercury)** 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 DUML ICPs switched to MEEN effective from 1 October 2022.

A RAMM database is held by SDC, who is Mercury' customer. NPE Tech are responsible for fault, maintenance, and upgrade work for streetlights, and maintain the database. Staff update RAMM from the field using Pocket RAMM. The LED upgrade is complete, and most work completed relates to replacing fuses and completing repairs where a pole has been damaged.

The SDC database contains three ICPs:

ICP Number	Description	NSP	Number of items of load	Database wattage (watts)
0089352004PCE32	STRATFORD DISTRICT DRAWING 9807	SFD0331	766	19,097
0080012045PC49C	STATE HIGHWAY 3 STRATFORD CARRIAGEWAY LIGHTS	SFD0331	181	24,050
0089352001PC37D	UNDER VERANDA LIGHTS	SFD0331	189	9,312

The lights connected to 0080012045PC49C are the responsibility of NZTA. The lights were expected to be transferred to NZTA's Lower North Island database, and then the ICP could be decommissioned. I obtained a copy of the NZTA Lower North Island database as at July 2022 and plotted the lights in the NZTA database recorded with the SFD0331 NSP against those recorded in the SDC database. I found that the highway lights in SDC's database were also recorded in the NZTA Lower North Island database against ICPs which Genesis and Meridian are the trader for. 0080012045PC49C is excluded from this audit and will be covered under NZTA's Lower North Island audit.

Mercury settles the DUML load as HHR under exemption 233, and submission information is based on monthly DUML database extracts provided by SDC and data logger information. There was a delay in receiving a wattage report from SDC following the ICPs switching in. No submission occurred until this data was received in January 2023, and reports are expected to be provided on a monthly basis from now on. The delay in Mercury producing submission data delayed completion of this audit. I checked the revision submission data for October 2022 and found Mercury applied an incorrect wattage value, and revised data will be provided in later revisions.

A field audit was conducted of a statistical sample of 116 items of load. I found that the lights present in the field matched the database records and total annual consumption is estimated to be the same as the DUML database indicates.

The audit found seven non-compliances, makes seven recommendations. The future risk rating of 21 indicates that the next audit be completed in three months. I have considered this in conjunction with Mercury's comments and recommend that the next audit be in at least six months to allow time for the issues to be resolved.

The matters raised are detailed below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Distributed unmetered load audits	1.10	16A.26 and 17.295F	Late provision of data resulted in the audit report being completed late.	Strong	Low	1	Identified
Deriving submission information	2.1	11(1) of Schedule 15.3	No initial or r1 submission data was provided for October, November, or December 2022 because a database extract was not received in time. Submission data will be provided through the wash up process. 14 unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of 120W or 50.4 kWh p.a. Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a. 87 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24,096 kWh per annum. One item of load (light ID 1832) has an unknown lamp model, zero lamp wattage and zero gear wattage. One item of load (light ID 1832) has a blank lamp wattage. 22 items of load have a blank gear (total) wattage. Two 40W LED lights (light IDs 1559 and 1583) were recorded with total wattage of 81, but 40W was expected resulting in estimated over submission of 82 W or 350 kWh per annum. The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot.	Moderate	Medium	4	Identified
ICP identifier and items of load	2.2	11(2)(a) and (aa) of Schedule 15.3	87 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24,096 kWh per annum.	Moderate	Medium	4	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Description and capacity of load	2.4	11(2)(c) and (d) of Schedule 15.3	One item of load (light ID 1832 connected to 0089352004PCE32) has an unknown lamp model, zero lamp wattage and zero gear wattage. One item of load (light ID 1832 connected to 0089352004PCE32) has a blank lamp wattage. 22 items of load connected to 0089352004PCE32 have a blank gear (total) wattage. A further 38 items of load with missing or blank ICP numbers had missing descriptions, lamp and/or gear (total) wattages.	Moderate	Low	2	Identified
All load recorded in database	2.5	11(2A) of Schedule 15.3	Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a. 14 unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of at least 120W or 50.4 kWh p.a.	Moderate	Low	2	Identified
Database accuracy	3.1	15.2 and 15.37B(b)	87 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24,096 kWh per annum. One item of load (light ID 1832) has an unknown lamp model, zero lamp wattage and zero gear wattage. One item of load (light ID 1832) has a blank lamp wattage. 22 items of load have a blank gear (total) wattage. Two 40W LED lights (light IDs 1559 and 1583) were recorded with total wattage of 81, but 40W was expected resulting in estimated over submission of 82 W or 350 kWh per annum. 14 unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of 120W or 50.4 kWh p.a. Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under	Moderate	Medium	4	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			submission of 170W or 726 kWh p.a.				
Volume information accuracy	3.2	15.2 and 15.37B(c)	No initial or r1 submission data was provided for October, November, or December 2022 because a database extract was not received in time. Submission data will be provided through the wash up process. 14 unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of 120W or 50.4 kWh p.a. Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a. 87 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24,096 kWh per annum. One item of load (light ID 1832) has an unknown lamp model, zero lamp wattage and zero gear wattage. One item of load (light ID 1832) has a blank lamp wattage. 22 items of load have a blank gear (total) wattage. Two 40W LED lights (light IDs 1559 and 1583) were recorded with total wattage of 81, but 40W was expected resulting in estimated over submission of 82 W or 350 kWh per annum. The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot.	Moderate	Medium	4	Identified
Future Risk Rating						21	

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
NZTA ICP	1.6	Work with NZTA and NZ Streetlighting to confirm that all NZTA items of load are accounted for in the NZTA Lower North Island Database, and then decommission ICP 0080012045PC49C.
Inputs to calculation of submission data	2.1	While SDC records the total wattage in the gear wattage field, ensure that the gear wattage is used as the total wattage when calculating submission information.
Use of the gear wattage field in the database	2.1	Investigate whether the gear wattage field can be updated to reflect the gear wattage rather than the total wattage. If the gear wattage field is updated to reflect the gear wattage only, the submission process should be updated to ensure that the lamp + gear wattage is applied as the total wattage.
Blank and N/A ICP for 87 items of load	2.2	Investigate and determine where the lights are connected to determine if they should be included in the DUML audit, or the load should be transferred to another ICP.
Christmas lights connected to SDC ICP 0089352004PCE32	2.5	Add the Christmas lights to RAMM for lights connected to 0089352004PCE32 once wattages are confirmed. Ensure that festive light on and off dates are communicated to Mercury for submission.
Christmas lights connected to NZTA ICP 0080012045PC49C	2.5	Advise NZTA of Christmas lights connected to NZTA ICP 0080012045PC49C and ensure that these are accounted for under their new NZTA ICPs before ICP 0080012045PC49C is decommissioned. SDC should develop a process to communicate festive light on and off dates to NZTA so that these can be communicated to NZTA's retailer for submission.
Decorative lights	2.5	Add the decorative lights to RAMM against the appropriate ICP.

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

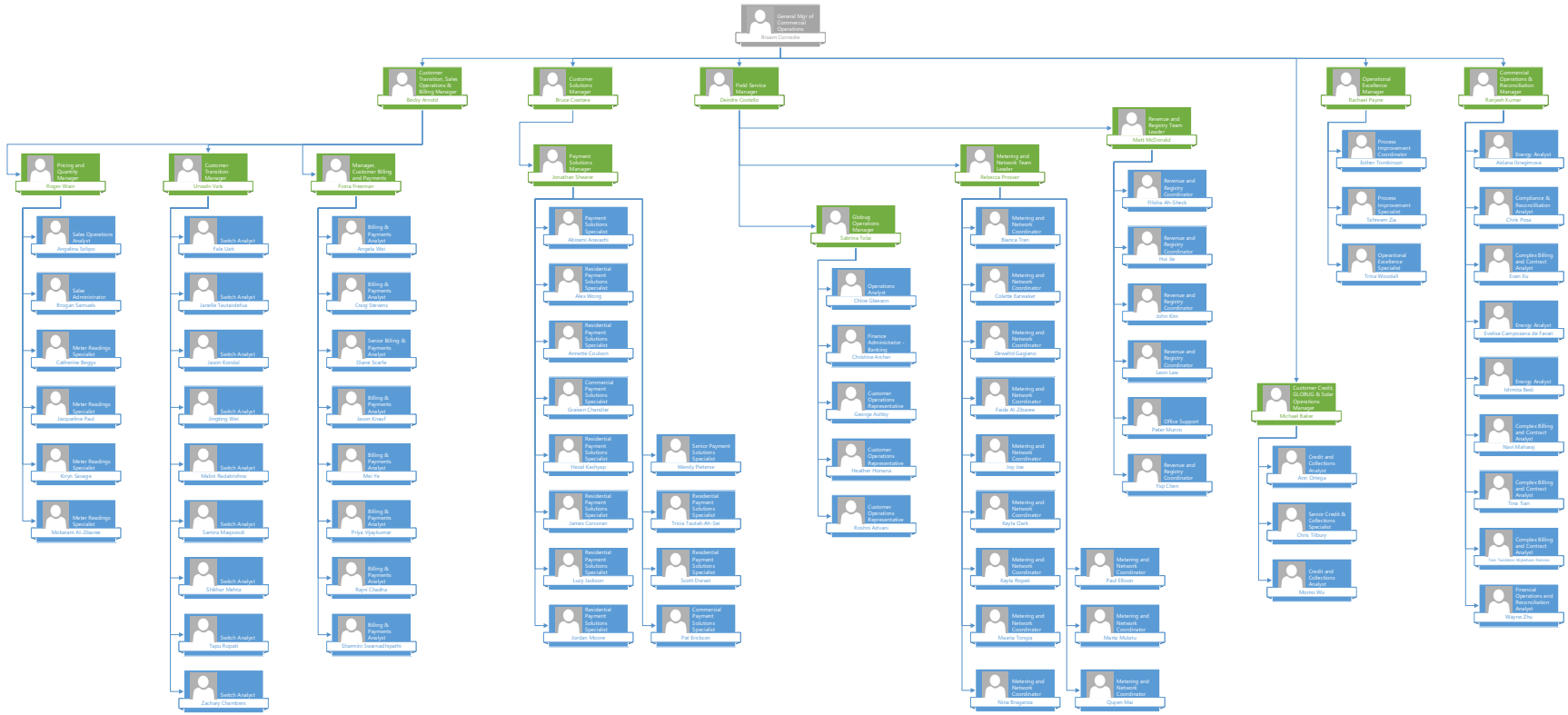
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

Audit commentary

Under Exemption 233, Mercury is exempted from complying with the obligation in clause 8(g) of Schedule 15.3 of the Electricity Industry Participation Code 2010 ("Code") to provide non-half-hour ("NHH") submission information instead of half-hour ("HHR") submission information for distributed unmetered load ("DUML"). This exemption expires on 31 October 2023.

1.2. Structure of Organisation

Mercury provided a copy of their organisational structure:



1.3. Persons involved in this audit

Auditor:

Name	Company	Role
Tara Gannon	Veritek Limited	Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Steve Bowden	Roading Asset Manager	Stratford District Council
Chris Posa	Compliance Reconciliation Analyst	Mercury
Maneesh Jeram	Commercial Sales	Mercury

1.4. Hardware and Software

The SQL database used for the management of DUML is remotely hosted by thinkproject New Zealand Limited (formerly RAMM NZ Ltd). The database is commonly known as "RAMM" which stands for "Roading Asset and Maintenance Management". The specific module used for DUML is called RAMM Contractor. thinkproject New Zealand Limited backs up the database and assists with disaster recovery as part of their hosting service.

Access to the database is secure by way of password protection.

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)
0089352004PCE32	STRATFORD DISTRICT DRAWING 9807	SFD0331	HHR	766	19,097
0089352001PC37D	UNDER VERANDA LIGHTS	SFD0331	HHR	189	9,312
0080012045PC49C	STATE HIGHWAY 3 STRATFORD CARRIAGEWAY LIGHTS	SFD0331	HHR	181	24,050
TOTAL				**1,136**	**52,459**

The lights connected to 0080012045PC49C are the responsibility of NZTA. The lights were expected to be transferred to NZTA's Lower North Island database, and then the ICP could be decommissioned. I obtained a copy of the NZTA Lower North Island database as of July 2022 and plotted the lights in the NZTA database recorded with the SFD0331 NSP against those recorded in the SDC database. I found that the highway lights in SDC's database were also recorded in the NZTA Lower North Island database against ICPs which Genesis and Meridian are the trader for. 0080012045PC49C is excluded from this audit and will be covered under NZTA's Lower North Island audit.

Recommendation	Description	Audited party comment	Remedial action
NZTA ICP	Work with NZTA and NZ Streetlighting to confirm that all NZTA items of load are accounted for in the NZTA Lower North Island Database, and then decommission ICP 0080012045PC49C.	We have suggested to SDC that they liaise with NZTA to confirm before proceeding with decommissioning, we have also advised the process for decommissioning when they are ready.	Identified

1.7. Authorisation Received

All information was provided directly by Mercury or SDC.

1.8. Scope of Audit

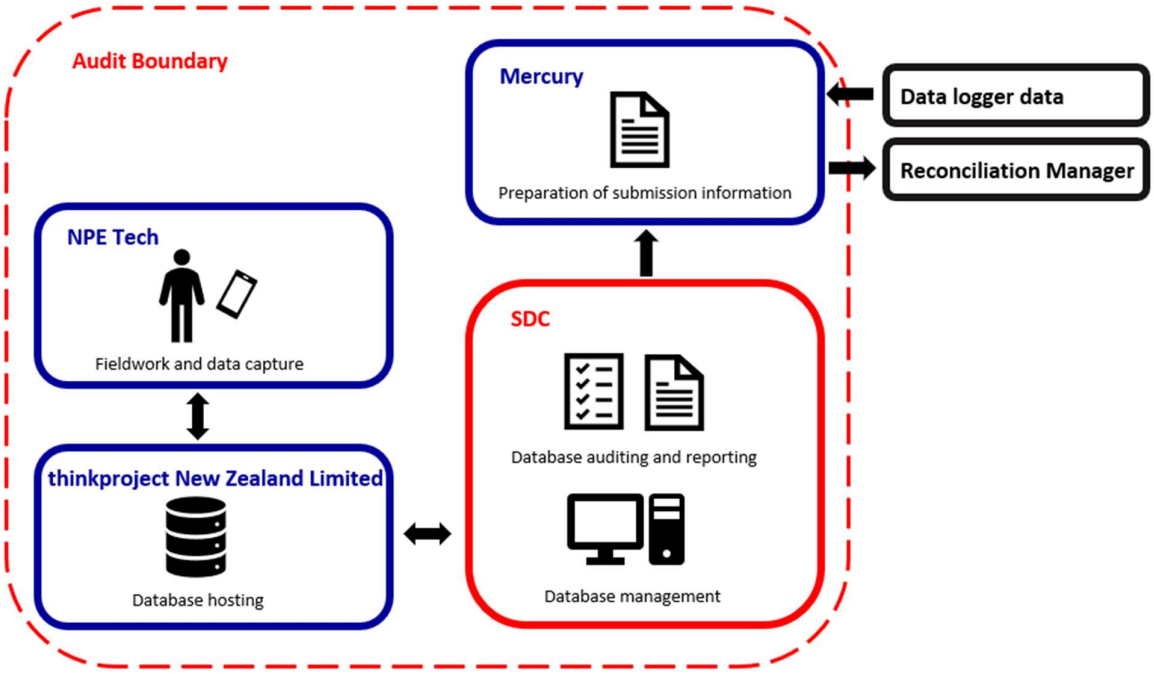
This audit of the SDC DUML database and processes was conducted at the request of Mercury in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

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

A RAMM database is held by SDC, who is Mercury' customer. NPE Tech are responsible for fault, maintenance, and upgrade work for streetlights, and maintain the database. Staff update RAMM from the field using Pocket RAMM. The LED upgrade is complete, and most work completed relates to replacing fuses and completing repairs where a pole has been damaged.

Mercury settles the DUML load as HHR under exemption 233, and submission information is based on monthly DUML database extracts provided by SDC and data logger information.

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 116 items of load on 14 October 2022.

1.9. Summary of previous audit

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

Table of Non-compliance

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	No database extracts have been received since January 2022 resulting in an estimated very minor under submission of 59.65 kWh for ICP 0089352004PCE32 for the month of May 2022.	Now being received
			Estimated over submission of 5,280 kWh for the NZTA lights that are being reconciled in both the SDC and NZTA RAMM database.	Cleared
			Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a.	Still existing
			Eight unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of 120W or 50.4 kWh p.a.	Still existing
			85 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24.431 kWh per annum.	Still existing

Subject	Section	Clause	Non-compliance	Status
			The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. 21 lamps have incorrect total wattages, resulting in an estimated under submission of 8,551 kWh per annum.	Still existing Still existing
ICP identifier and items of load	2.2	11(2)(a) and (aa) of Schedule 15.3	85 items of load do not have an ICP number recorded resulting in an estimated under submission of 24,431 kWh per annum.	Still existing
Description and capacity of load	2.4	11(2)(c) and (d) of Schedule 15.3	Two lamps have an unknown lamp model, and a missing lamp wattage, one has missing gear wattage.	Still existing
All load recorded in database	2.5	11(2A) of Schedule 15.3	Two additional lights found in the field from the sample of 127 lights checked. Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a. Eight unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of 120W or 50.4 kWh p.a.	Still existing
Database accuracy	3.1	15.2 and 15.37B(b)	21 lamps have incorrect total wattages, resulting in an estimated under submission of 8,551 kWh per annum. Eight unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of 120W or 50.4 kWh p.a. Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a. 85 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24.431 kWh per annum.	Still existing Still existing Still existing Still existing
Volume information accuracy	3.2	15.2 and 15.37B(c)	No database extracts have been received since January 2022 resulting in an estimated very minor under submission of 59.65 kWh for ICP 0089352004PCE32 for the month of May 2022. Estimated over submission of 5,280 kWh for the NZTA lights that are being reconciled in both the SDC and NZTA RAMM database. Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a.	Now being received Cleared Still existing

Subject	Section	Clause	Non-compliance	Status
			Eight unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of 120W or 50.4 kWh p.a.	Still existing
			85 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24.431 kWh per annum.	Still existing
			The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot.	Still existing
			21 lamps have incorrect total wattages, resulting in an estimated under submission of 8,551 kWh per annum.	Still existing

Table of Recommendations

Subject	Section	Recommendation	Status
Deriving submission information	2.1	Ensure monthly reports are being received from SDC.	Now adopted
		Mercury work with NZTA and SDC to resolve the recording of NZTA lights in the SDC database.	Re-raised in section 1.6
Database Accuracy	2.2	Investigate and determine where the lights are connected to determine if they should be included in the DUML audit.	Re-raised
Christmas and decorative lights	2.5	Add the Christmas and decorative lights to RAMM. Communicate on and off dates for Christmas lights to the trader.	Re-raised

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:

- *by 1 June 2018 (for DUML that existed prior to 1 June 2017)*
- *within three months of submission to the reconciliation manager (for new DUML)*
- *within the timeframe specified by the Authority for DUML that has been audited since 1 June 2017.*

Audit observation

Mercury have requested Veritek to undertake this streetlight audit.

Audit commentary

The field audit was conducted on time, but the assessment of submission accuracy was not able to be completed until February 2023 when I received submission data and responses to questions regarding inputs into the calculation process. The information was delayed because the ICPs switched in to

Mercury from 1 October 2022 but a database extract to calculate submission data was not received until January 2023.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 1.10 With: Clause 16A.26 and 17.295F From: 27-Jan-23 To: 02-Feb-23	Late provision of data resulted in the audit report being completed late. Potential impact: Medium Actual impact: Medium Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong because information was provided as soon as practicable once it was received. The impact is assessed to be low because Mercury advised the Authority of the issue and arranged for an extension.

Actions taken to resolve the issue	Completion date	Remedial action status
There was relatively minor delay in receiving the wattage data but the main delay was caused by difficulties in identifying the correct logger.	January 2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We have taken some learnings from this experience and if/when DUML switches in to Mercury in the future we will hopefully be able to resolve these teething issues quicker.	Ongoing.	

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

Mercury reconciles the DUML load as HHR using the HHR profile, based on a wattage report provided by SDC and logger hours.

There was a delay in receiving a wattage report from SDC following the ICPs switching in effective from 1 October 2022. No submission occurred until this data was received in January 2023. Reports are expected to be provided on a monthly basis from now on.

I checked the revision submission data for October 2022 and found Mercury's methodology to calculate submission data was correct, but they had applied the lamp wattage + gear wattage as the total wattage. Because SDC records the total wattage for each item of load in the gear wattage field in the database, adding the lamp and gear wattage together effectively double counted the lamp wattage. Submissions for November and December 2022 will be prepared and submitted at the next available opportunity, and were not available for review at the time this audit was completed.

Recommendation	Description	Audited party comment	Remedial action
Inputs to calculation of submission data	While SDC records the total wattage in the gear wattage field, ensure that the gear wattage is used as the total wattage when calculating submission information.	This is our plan and we are working with SDC to confirm going forward.	Identified
Use of the gear wattage field in the database	Investigate whether the gear wattage field can be updated to reflect the gear wattage rather than the total wattage. If the gear wattage field is updated to reflect the gear wattage only, the submission process should be updated to ensure that the lamp + gear wattage is	This is our plan and we are working with SDC to confirm going forward.	Identified

Recommendation	Description	Audited party comment	Remedial action
	applied as the total wattage.		

The previous audit recorded that some NZTA lights connected to 0080012045PC49C were being invalidly included in submission data by the previous trader. This issue has been resolved and they are excluded from submission by Mercury. A recommendation a decommission the ICP is raised in **section 1.6**.

The field audit confirmed that the database accuracy is within the ±5% allowable threshold, and the field audit wattage matched the database wattage for the sample checked.

Examination of the database found:

Issue	Estimated volume information impact (annual kWh)
14 unmetered Christmas lights are not recorded in RAMM.	under submission of at least 50.4 kWh p.a.
Ten unmetered decorative lights are not recorded in RAMM.	under submission of 726 kWh p.a.
87 items of load in the database that have either N/A or blank for ICP.	under submission of 24,096 kWh p.a.
24 items of load had missing descriptions, lamp and/or gear (total) wattages.	under submission of 3,827 kWh p.a.
Two 40W LED lights (light IDs 1559 and 1583) were recorded with total wattage of 81, but 40W was expected.	over submission of 350 kWh p.a.

On 18 June 2019, the Electricity Authority issued a memo clarifying the memo of 2012 that stated that a monthly snapshot was sufficient to calculate submission from, and confirmed 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 monthly report is provided as a snapshot and this practice is non-compliant. When a wattage is changed in the database due to a physical change or a correction, only the record present at the time the report is run is recorded, not the historical information showing dates of changes.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3	No initial or r1 submission data was provided for October, November, or December 2022 because a database extract was not received in time. Submission data will be provided through the wash up process. 14 unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of 120W or 50.4 kWh p.a. Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a.

	87 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24,096 kWh per annum. One item of load (light ID 1832) has an unknown lamp model, zero lamp wattage and zero gear wattage. One item of load (light ID 1832) has a blank lamp wattage. 22 items of load have a blank gear (total) wattage. Two 40W LED lights (light IDs 1559 and 1583) were recorded with total wattage of 81, but 40W was expected resulting in estimated over submission of 82 W or 350 kWh per annum. The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. Potential impact: Medium Actual impact: Medium Audit history: Multiple times
From: 30-Sep-22 To: 30-Sep-22	Controls: Moderate Breach risk rating: 4

Audit risk rating	Rationale for audit risk rating
Medium	The controls are rated as moderate because they ensure most information is accurate, and submissions will be provided on time now that database extracts are received. 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
We have provided SDC with feedback and details of the specific discrepancies so that they can make the appropriate improvements and corrections.	February 2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will continue to liaise with SDC with the goal of improving their database accuracy.	Ongoing	

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

Code reference

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

Code related audit information

The DUML database must contain:

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

Audit observation

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

Audit commentary

The analysis found that there were 87 items in the database that have either N/A or blank for the ICP. 49 had total wattages recorded, nine had make and model information recorded but no total wattage, and 29 had no model or wattage information recorded. The estimated wattage for these items is 5,642 W or 24,096 kWh per annum based on the wattage and/or model information provided, and estimated wattage of 24 W per lamp (the most common lamp wattage) where no information was available.

I recommend that the 87 items of load are investigated to determine where they are connected and if they should be included in the DUML audit or not. During the field audit I confirmed that light ID 1806 pole ID 1299 Portia St (3 South) was present on the street but had no ICP recorded.

SDC provided the initial results of their review which found:

- 15 lights at King Edward Park Sportsground, Sportsground Swansea Road and Victoria Park walkway are owned by SDC and should be checked to determine whether they are metered,
- four lights at the Victoria Park No 1 ground are no longer in use,
- two other lights are Victoria Park are owned by SDC parks, and should potentially be recorded under a different ICP and will be investigated,
- six lights at the Page Street Rugby Club are owned by the Rugby Club should be investigated to confirm whether they are metered, or if new unmetered load should be created before responsibility is transferred to the Rugby Club,
- six lights at the King Edward Park Netball/Tennis Courts should be investigated to confirm whether they are metered, or if new unmetered load should be created before responsibility is transferred to the Netball Taranaki, and
- the other 54 lights are still under investigation.

Description	Recommendation	Audited party comment	Remedial action
Blank and N/A ICP for 87 items of load	Investigate and determine where the lights are connected to determine if they should be included in the DUML audit, or the load should be transferred to another ICP.	We will follow up with SDC on their investigation.	Investigating

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.2 With: Clause 11(2)(a) and (aa) of Schedule 15.3 From: 28-May-21 To: 30-Sep-22	87 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24,096 kWh per annum. Potential impact: Medium Actual impact: Medium Audit history: Once Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**

Medium	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact is assessed to be medium based on the estimated kWh impact described above.

Actions taken to resolve the issue	**Completion date**	**Remedial action status**
We will follow up with SDC on their investigation.	February 2023	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will continue to liaise with SDC with the goal of improving their database accuracy.	Ongoing	

2.3. Location of each item of load (Clause 11(2)(b) of Schedule 15.3)

Code reference

Clause 11(2)(b) of Schedule 15.3

Code related audit information

The DUML database must contain the location of each DUML item.

Audit observation

The database was checked to confirm the location is recorded for all items of load.

Audit commentary

The database contains the road name, location number, and Global Positioning System (GPS) coordinates for most items of load, and users in the office and field can view these locations on a mapping system.

Nine of the 766 items of load do not have GPS co-ordinates recorded, and there is sufficient information recorded in the address fields to locate these 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 a lamp make and model description, lamp wattage and gear wattage. The gear wattage field records the total wattage for each item of load, including lamp and gear wattage.

Items of load connected to ICP 0089352004PCE32 and 0089352001PC37D

24 items of load connected to ICP 0089352004PCE32 had missing descriptions, lamp and/or gear (total) wattages. The estimated wattage for these items is 896 W or 3,827 kWh per annum based on the wattage and/or model information provided, and estimated wattage of 24 W per lamp (the most common lamp wattage) where no information was available.

Light ID	Pole ID	Road	Light Make	Light Model	Lamp Model	Gear (Total) Wattage	Lamp Wattage
1578	1096	BIRON PLACE	Evolve	LED IP65	40WLED		40
1579	1097	BIRON PLACE	Evolve	LED IP65	40WLED		40
1580	1098	BIRON PLACE	Evolve	LED IP65	40WLED		40
1581	1099	BIRON PLACE	Evolve	LED IP65	40WLED		40
1582	1100	BIRON PLACE	Evolve	LED IP65	40WLED		40
1575	1093	MARIA PLACE	Evolve	LED IP65	40WLED		40
1576	1094	MARIA PLACE	Evolve	LED IP65	40WLED		40
1577	1095	MARIA PLACE	Evolve	LED IP65	40WLED		40
1560	1078	MERCADE CLOSE	Evolve	LED IP65	40WLED		40
1562	1080	MERCADE CLOSE	Evolve	LED IP65	40WLED		40
1563	1081	MERCADE CLOSE	Evolve	LED IP65	40WLED		40
1564	1082	MERCADE CLOSE	Evolve	LED IP65	40WLED		40
1565	1083	MERCADE CLOSE	Evolve	LED IP65	40WLED		40
1566	1084	MERCADE CLOSE	Evolve	LED IP65	40WLED		40
1567	1085	MERCADE CLOSE	Evolve	LED IP65	40WLED		40
1568	1086	MERCADE CLOSE	Evolve	LED IP65	40WLED		40
1569	1087	MERCADE CLOSE	Evolve	LED IP65	40WLED		40
1570	1088	MERCADE CLOSE	Evolve	LED IP65	40WLED		40
1574	1092	MERCADE CLOSE	Evolve	LED IP65	40WLED		40

Light ID	Pole ID	Road	Light Make	Light Model	Lamp Model	Gear (Total) Wattage	Lamp Wattage
1561	1079	MERCADE CLOSE	Evolve	LED IP65		40	
1811	1302	MIDSUMMER AVENUE	Orange TEK	Terra LED	24WLED		24
1812	1303	MIDSUMMER AVENUE	Orange TEK	Terra LED	24WLED		24
1813	1304	MIDSUMMER AVENUE	Orange TEK	Terra LED	24WLED		24
1832	1	REGAN STREET (1 WEST)	Unknown	Unknown	Unknown	0	0

Items of load without ICP numbers

There were 87 items in the database that have either N/A or blank for the ICP. Nine had make and model information recorded but no total wattage, and 29 had no model or wattage information recorded. The estimated wattage for these items is 5,642 W or 24,096 kWh per annum based on the wattage and/or model information provided, and estimated wattage of 24 W per lamp (the most common lamp wattage) where no information was available.

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

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.4 With: Clause 11(2)(c) and (d) of Schedule 15.3 From: 28-May-21 To: 13-May-22	One item of load (light ID 1832 connected to 0089352004PCE32) has an unknown lamp model, zero lamp wattage and zero gear wattage. One item of load (light ID 1832 connected to 0089352004PCE32) has a blank lamp wattage. 22 items of load connected to 0089352004PCE32 have a blank gear (total) wattage. A further 38 items of load with missing or blank ICP numbers had missing descriptions, lamp and/or gear (total) wattages. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as moderate because most lamps have a valid lamp and total wattage recorded but there is room for improvement. The impact is assessed to be low on the estimated kWh impact of the items of load connected to settled ICPs.

Actions taken to resolve the issue	Completion date	Remedial action status
We have provided SDC with feedback and details of the specific discrepancies so that they can make the appropriate improvements and corrections.	February 2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will continue to liaise with SDC with the goal of improving their database accuracy.	Ongoing	

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 116 items of load on 14 October 2022. The sample was selected from three strata, as follows:

- road names A-Fa,
- road names Fe-O, and
- road names P-Z.

Audit commentary

A field audit was conducted of a statistical sample of 116 items of load. I found that the lights present in the field matched the database records for the sample checked, and no lights were missing.

As detailed in the last three audits, Christmas and decorative lights are connected to the streetlight circuits when operating but are not recorded in RAMM.

- 14 festive motif lights are connected in the start of December and disconnected in the first week of January. Four are confirmed to be 15W Christmas tree motifs, and four are confirmed to be 15W bell motifs. Wattages for the other six lights are being confirmed. SDC have agreed to provide Mercury with the wattages and on/off dates so that they can be included in submission information. I note that ten of the festive lights are connected to NZTA light poles.
- Ten poles in the town centre have Inari 200 17W decorative lights installed and operate year round. SDC have agreed to add these lights to the database, so that the load can be reconciled.

Description	Recommendation	Audited party comment	Remedial action
Christmas lights connected to SDC ICP 0089352004PCE32	Add the Christmas lights to RAMM for lights connected to 0089352004PCE32 once wattages are confirmed. Ensure that festive light on and off dates are communicated to Mercury for submission.	We have provided this feedback to SDC for them to take the appropriate action to ensure accuracy of the database.	Identified
Christmas lights connected to NZTA ICP 0080012045PC49C	Advise NZTA of Christmas lights connected to NZTA ICP 0080012045PC49C and ensure that these are accounted for under their new NZTA ICP before ICP 0080012045PC49C is decommissioned. SDC should develop a process to communicate festive light on and off dates to NZTA so that these can be communicated to NZTA's retailer for submission.	Feedback provided to SDC.	Identified
Decorative lights	Add the decorative lights to RAMM against the appropriate ICP.	We have provided this feedback to SDC for them to take the appropriate action to ensure accuracy of the database.	Identified

Database accuracy is discussed in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: Clause 11(2A) of Schedule 15.3 From: 30-Sep-22 To: 30-Sep-22	Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a. 14 unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of at least 120W or 50.4 kWh p.a. 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
Low	A control rating of moderate was selected, because the controls over the inclusion of Christmas and decorative lights are weak but will improve to strong once the lights have been added to the database. The impact is assessed to be low based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
We have provided SDC with feedback and details of the specific discrepancies so that they can make the appropriate improvements and corrections.	February 2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will continue to liaise with SDC with the goal of improving their database accuracy.	Ongoing	

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

RAMM records audit trail information of changes made.

Audit outcome

Compliant

3. ACCURACY OF DUML DATABASE

3.1. Database accuracy (Clause 15.2 and 15.37B(b))

Code reference

Clause 15.2 and 15.37B(b)

Code related audit information

Audit must verify that the information recorded in the retailer's DUML database is complete and accurate.

Audit observation

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

Plan Item	Comments
Area of interest	Stratford District Council streetlights including NZTA lighting
Strata	The database contains the SDC items of load DUML in the Stratford region. The processes for the management of all SDC items of load are the same, but I decided to place the items of load into three strata: 1. Road names A-Fa, 2. Road names Fe-O 3. Road names P-Z, and 4. Under verandah lights.
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 19 sub-units.
Total items of load	116 items of load were checked

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

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

Audit commentary

Field audit findings

A field audit was conducted of a statistical sample of 116 items of load. I found that the lights present in the field matched the database records and total annual consumption is estimated to be the same as the DUML database indicates. The "database auditing tool" could not be used to calculate confidence intervals because they were equal to the point of estimate R.

Result	Percentage	Comments
The point estimate of R	100.00	The field wattage matched the database wattage for the sample checked.
R_L	-	The database auditing tool was not able to calculate confidence intervals as there was no variance between the field and database wattages.
R_H	-	

Light description and capacity accuracy

As discussed in **section 2.4**, 24 items of load connected to ICP 0089352004PCE32 had missing descriptions, lamp and/or gear (total) wattages. The estimated wattage for these items is 896 W or 3,827 kWh per annum based on the wattage and/or model information provided, and estimated wattage of 24 W per lamp (the most common lamp wattage) where no information was available.

There were 87 items in the database that have either N/A or blank for the ICP. Nine had make and model information recorded but no total wattage, and 29 had no model or wattage information recorded. The estimated wattage for these items is 5,642 W or 24,096 kWh per annum based on the wattage and/or model information provided, and estimated wattage of 24 W per lamp (the most common lamp wattage) where no information was available.

Lamp and gear (total) wattages were compared to the expected values. Two 40W LED lights were recorded with total wattage of 81, but 40W was expected resulting in estimated over submission of 82 W or 350 kWh per annum.

Light ID	Pole ID	Road	Light Make	Light Model	Lamp Model	Gear (Total) Wattage	Lamp Wattage
1559	1077	MERCADE CLOSE	Evolve	LED IP65	40WLED	81	40
1583	1101	MERCADE CLOSE	Evolve	LED IP65	40WLED	81	40

ICP Accuracy

As detailed in **section 2.2**, 87 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24,096 kWh per annum.

Change management process findings

NPE Tech are responsible for fault, maintenance, and upgrade work for streetlights, and maintain the database. Staff update RAMM from the field using Pocket RAMM. The LED upgrade is complete, and most work completed relates to replacing fuses and completing repairs where a pole has been damaged.

There has been no change to the new connection process, and new connections on the Powerco network are customer initiated.

Where new connections are initiated by SDC installation is completed by NPE Tech and RAMM is populated by NPE Tech on completion using Pocket RAMM.

Where new connections are initiated by developers for new subdivisions, lights are checked and added to the database once they are vested and SDC takes responsibility for them. Field checks are conducted to ensure that the lights installed match the plan. If the lights are vested after electrical connection, then that period of connection won't be recorded in RAMM. The lights are still the responsibility of the developer at that time and the distributor at the point of electrical connection must ensure that a trader has taken responsibility for the lights.

Outage patrols are completed by NPE Tech every three months. Outages are also reported by residents within the SDC region and work orders are raised with NPE Tech as required.

Festive and decorative lights

As detailed in the last three audits, Christmas and decorative lights are connected to the streetlight circuits when operating but are not recorded in RAMM.

- 14 festive motif lights are connected in the start of December and disconnected in the first week of January. Four are confirmed to be 15W Christmas tree motifs, and four are confirmed to be 15W bell motifs. Wattages for the other six lights are being confirmed. SDC have agreed to provide Mercury with the wattages and on/off dates so that they can be included in submission information. I note that ten of the festive lights are connected to NZTA light poles.
- Ten poles in the town centre have Inari 200 17W decorative lights installed and operate year round. SDC have agreed to add these lights to the database, so that the load can be reconciled.

Recommendations to record these lights in the database are made in **section 2.5**.

Private lights

There are no private lights recorded in the database, and SDC confirmed that they are not aware of any private streetlights in the SDC region.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 30-Sep-22 To: 30-Sep-22	87 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24,096 kWh per annum. One item of load (light ID 1832) has an unknown lamp model, zero lamp wattage and zero gear wattage. One item of load (light ID 1832) has a blank lamp wattage. 22 items of load have a blank gear (total) wattage. Two 40W LED lights (light IDs 1559 and 1583) were recorded with total wattage of 81, but 40W was expected resulting in estimated over submission of 82 W or 350 kWh per annum. 14 unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of 120W or 50.4 kWh p.a. Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a. Potential impact: Medium Actual impact: Medium Audit history: Multiple times previously Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	A control rating of moderate was selected, because the controls over the inclusion of Christmas and decorative lights are weak but will improve to strong once the lights have been added to the database. 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

We have provided SDC with feedback and details of the specific discrepancies so that they can make the appropriate improvements and corrections.	February 2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will continue to liaise with SDC with the goal of improving their database accuracy.	Ongoing	

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

Mercury reconciles the DUML load as HHR using the HHR profile, based on a wattage report provided by SDC and logger hours.

There was a delay in receiving a wattage report from SDC following the ICPs switching in effective from 1 October 2022. No submission occurred until this data was received in January 2023. Reports are expected to be provided on a monthly basis from now on.

I checked the revision submission data for October 2022 and found Mercury's methodology to calculate submission data was correct, but they had applied the lamp wattage + gear wattage as the total wattage. Because SDC records the total wattage for each item of load in the gear wattage field in the database, adding the lamp and gear wattage together effectively double counted the lamp wattage. Submissions for November and December 2022 will be prepared and submitted at the next available opportunity, and were not available for review at the time this audit was completed.

The previous audit recorded that some NZTA lights connected to 0080012045PC49C were being invalidly included in submission data by the previous trader. This issue has been resolved and they are excluded from submission by Mercury. A recommendation a decommission the ICP is raised in **section 1.6**.

The field audit confirmed that the database accuracy is within the ±5% allowable threshold, and the field audit wattage matched the database wattage for the sample checked.

Examination of the database found:

Issue	Estimated volume information impact (annual kWh)
14 unmetered Christmas lights are not recorded in RAMM.	under submission of at least 50.4 kWh p.a.
Ten unmetered decorative lights are not recorded in RAMM.	under submission of 726 kWh p.a.
87 items of load in the database that have either N/A or blank for ICP.	under submission of 24,096 kWh p.a.
24 items of load had missing descriptions, lamp and/or gear (total) wattages.	under submission of 3,827 kWh p.a.
Two 40W LED lights (light IDs 1559 and 1583) were recorded with total wattage of 81, but 40W was expected.	over submission of 350 kWh p.a.

On 18 June 2019, the Electricity Authority issued a memo clarifying the memo of 2012 that stated that a monthly snapshot was sufficient to calculate submission from, and confirmed 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 monthly report is provided as a snapshot and this practice is non-compliant. When a wattage is changed in the database due to a physical change or a correction, only the record present at the time the report is run is recorded, not the historical information showing dates of changes.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c)	No initial or r1 submission data was provided for October, November, or December 2022 because a database extract was not received in time. Submission data will be provided through the wash up process. 14 unmetered Christmas lights are not recorded in RAMM. This may result in estimated under submission of 120W or 50.4 kWh p.a. Ten unmetered decorative lights are not recorded in RAMM. This may result in estimated under submission of 170W or 726 kWh p.a. 87 items of load do not have an ICP number recorded resulting in a potential estimated under submission of 24,096 kWh per annum. One item of load (light ID 1832) has an unknown lamp model, zero lamp wattage and zero gear wattage. One item of load (light ID 1832) has a blank lamp wattage. 22 items of load have a blank gear (total) wattage. Two 40W LED lights (light IDs 1559 and 1583) were recorded with total wattage of 81, but 40W was expected resulting in estimated over submission of 82 W or 350 kWh per annum. The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot.

From: 30-Sep-22 To: 30-Sep-22	Potential impact: Medium Actual impact: Medium Audit history: Multiple times Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as moderate because they ensure most information is accurate, and submissions will be provided on time now that database extracts are received. 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**
We have provided SDC with feedback and details of the specific discrepancies so that they can make the appropriate improvements and corrections.	February 2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will continue to liaise with SDC with the goal of improving their database accuracy.	Ongoing	

CONCLUSION

A RAMM database is held by SDC, who is Mercury's customer. NPE Tech are responsible for fault, maintenance, and upgrade work for streetlights, and maintain the database. Staff update RAMM from the field using Pocket RAMM. The LED upgrade is complete, and most work completed relates to replacing fuses and completing repairs where a pole has been damaged.

Mercury settles the DUML load as HHR under exemption 233, and submission information is based on monthly DUML database extracts provided by SDC and data logger information. There was a delay in receiving a wattage report from SDC following the ICPs switching in. No submission occurred until this data was received in January 2023, and reports are expected to be provided on a monthly basis from now on. The delay in Mercury producing submission data delayed completion of this audit. I checked the revision submission data for October 2022 and found Mercury applied an incorrect wattage value, and revised data will be provided in later revisions.

A field audit was conducted of a statistical sample of 116 items of load. I found that the lights present in the field matched the database records and total annual consumption is estimated to be the same as the DUML database indicates.

The audit found seven non-compliances, makes seven recommendations. The future risk rating of 21 indicates that the next audit be completed in three months. I have considered this in conjunction with Mercury's comments and recommend that the next audit be in at least six months to allow time for the issues to be resolved.

PARTICIPANT RESPONSE

Mercury has reviewed this report and their comments are contained within its body.