ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

TIMARU DISTRICT COUNCIL AND CONTACT ENERGY LIMITED

Prepared by: Steve Woods (assisted by Deborah Anderson)

Date audit commenced: 14 May 2018

Date audit report completed: 28 May 2018

Audit report due date: 01-Jun-18

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This audit of the Timaru District Council (TDC) DUML database and processes was conducted at the request of Contact Energy Limited (Contact), in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

The audit was conducted in accordance with the audit guidelines for DUML audits version 1.1, which became effective on 1 June 2017.

The RAMM database used for submission is maintained by TDC.

New connection, fault and maintenance work is completed by NetCon. NetCon update the database for maintenance work using Pocket RAMM. Asset Management data eg LED upgrades in residential areas, are completed by NetCon and then advised to TDC who make those changes in the RAMM database.

TDC provide monthly reports to Contact from the database for submission calculations.

All database checks have been performed on the database provided as at the end of February 2018, with submission checks performed on a database version and submission file as at the end of March 2018.

Six non-compliances were identified, and one recommendation is raised.

The future risk rating of twelve indicates that the next audit be completed in 12 months.

The matters raised are detailed below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Deriving submission information	2.1	11(1) of Schedule 15.3	The methodology for deriving submission information is incorrect, Festive Lights are incorrectly subtracted from the database total each month. Estimated under submission of 43,116 kWh per annum. Inaccurate information in the database • 7 items of load without an ICP, under submission of 2,358 kWh pa • 2 lamp type and wattage errors, over submission of 324 kWh pa • 1 lamp type field audit	Moderate	Medium	4	Identified

			errors identified, over submission of 205 kWh pa				
ICP identified and items of load	2.2	11(2)(a) and (aa) of Schedule 15.3	There are seven items of load that do not have an ICP identifier recorded against them in the database. Resulting in estimated under submission of 2,358 kWh per annum.	Strong	Low	1	Identified
Description and capacity of load	2.4	11(2)(c) and (d) of Schedule 15.3	There are two lamp types with incorrect wattage values in the database. There are 19 lamps affected result in estimated over submission of 324 kWh per annum.	Strong	Low	1	Identified
All load recorded in the database	2.5	11(2A) of Schedule 15.3	The field audit included the majority of the lamps identified (12 of the 15) with one of the incorrect lamp type wattage value in the database. The field data was 99.9% of the database data for the sample checked, resulting in estimated over submission of 205 kWh per annum.	Strong	Low	1	Identified
Database accuracy	3.1	Clause 15.2 and 15.37B(b)	The only database inaccuracies found stem from the two incorrect lamp type wattage values identified in the database, 19 lamps in total, estimated over submission of 324 kWh per annum. The field data was 99.9% of the database data for the sample checked, resulting in estimated over submission of 205 kWh per annum.	Strong	Low	1	Identified
Volume Information accuracy	3.2	15.2 and 15.37B(c)	The DUML database is largely accurate but the submission calculation is incorrectly reducing the	Moderate	Medium	4	Identified

			total by Festive Lights which are not included in the database total to start with. Resulting in an estimated under submission of 43,116 kWh per annum.				
						Future Risk Rating	**12**

Future risk rating	1-3	4-6	7-8	9-17	18-26	27+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Description	Recommendation
All load recorded in the database	2.5	I was unable to distinguish the one 30w LED from the twenty five 27w LEDs in Gleniti Road	A site visit to confirm lamp type and wattage at above GPS location on Gleniti Road.

ISSUES

Subject	Section	Description	Issue

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.

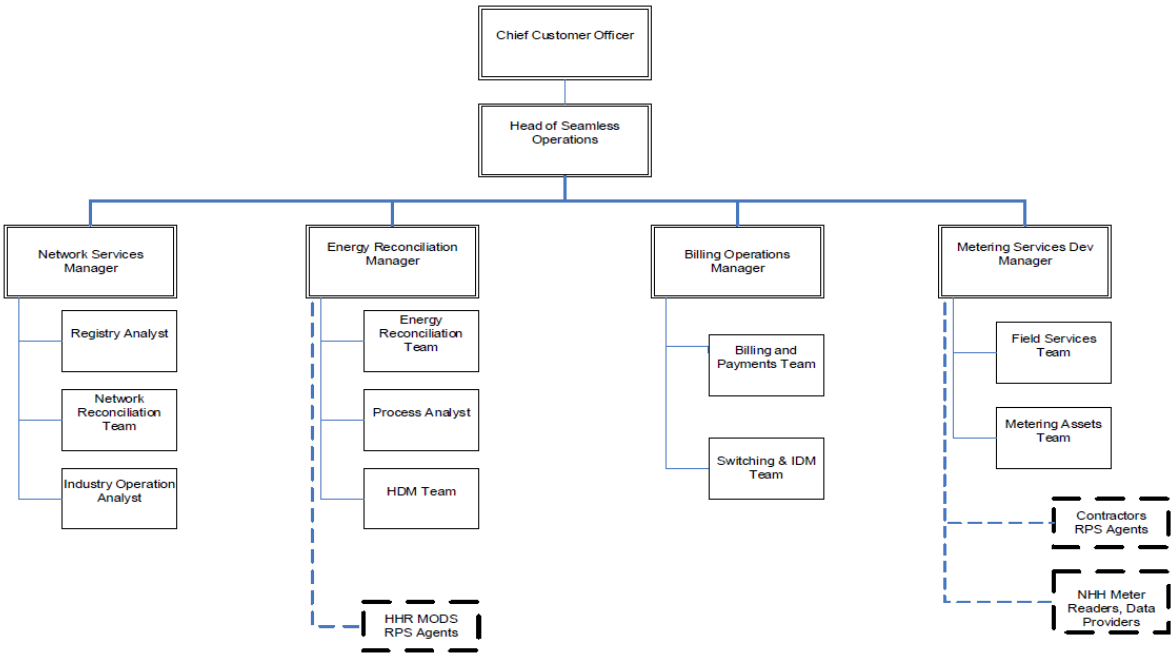
Audit commentary

There is one exemption in place relevant to the scope of this audit:

Exemption No. 177: Exemption to clause 8(g) of schedule 15.3 of the Electricity Industry Participation Code 2010 ("Code") in respect of providing half-hour ("HHR") submission information instead of non half-hour ("NHH") submission information for distributed unmetered load ("DUML"). This exemption expires at the close of 31 October 2023.

1.2. Structure of Organisation

Contact Energy 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
Anthony Bacon	Road Engineering Technician	Timaru District Council
Bernie Cross	Energy Reconciliation Manager	Contact Energy

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". The specific module used for DUML is called RAMM Contractor.

TDC 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	NSP	Profile	Number of items of load	Database wattage (watts)
0000000001ALAE7	All TIM0111 Streets	TIM0111	HHR	3,928	435,441
0000000006AL72D	All TMK0331 Streets	TMK0331	HHR	1,055	84,857
No ICP no.				7	522

1.7. Authorisation Received

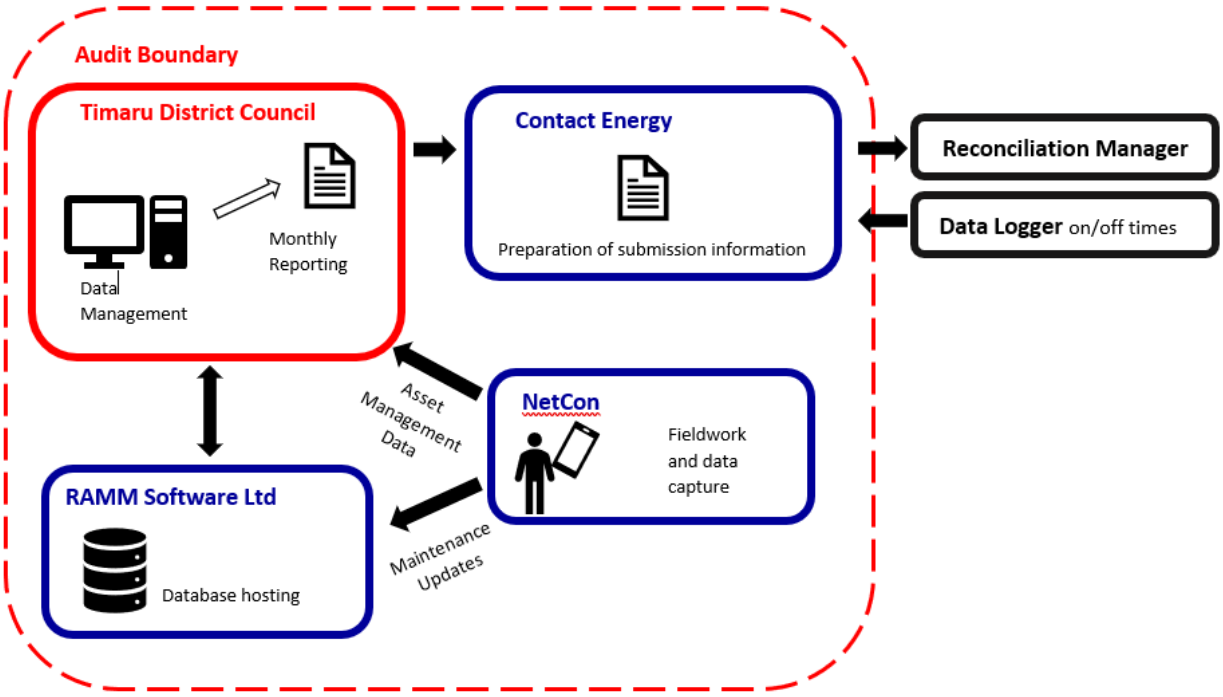
All information was provided directly by Contact and TDC.

1.8. Scope of Audit

This audit of the Timaru District Council (**TDC**) DUML database and processes was conducted at the request of Contact Energy Limited (**Contact**), in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

The audit was conducted in accordance with the audit guidelines for DUML audits version 1.1, which became effective on 1 June 2017.

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 301 items of load on 14th & 17th May 2018

1.9. Summary of previous audit

The previous audit was completed in March 2017 by Allie Jones of Contact Energy Limited. One non-compliance was identified. The status of the non-compliances is described below.

Subject	Section	Clause	Non-compliance	Status
Tracking of Load	2.3	Clause 11 (3) of Schedule 15.3	Some Tracking of Load Changes for MDC to be confirmed	Resolved

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

Audit observation

Contact have requested Veritek to undertake this streetlight audit.

Audit commentary

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

2. DUML DATABASE REQUIREMENTS

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

Code reference

Clause 11(1) of Schedule 15.3

Code related audit information

The retailer must ensure the:

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

Audit observation

The process for calculation of consumption was examined and the application of profiles was checked. The database was checked for accuracy.

Audit commentary

Contact reconciles this DUML load using the HHR profile, in accordance with exemption number 177. This exemption is discussed further in **section 1.1**.

TDC provide Contact a monthly workbook containing the required database information by ICP for submissions to be calculated. There are separate worksheets labelled 'Timaru – Contact' and 'TDC Christmas Lights'.

Submissions are based on the database information provided monthly by TDC, with on and off times derived from data logger information.

Festive lights are not included in the main 'Timaru – Contact' worksheet, they are defined separately in the 'TDC Christmas Lights' worksheet. The intention is for them to be added to the submissions that cover the period they are active for, derived from the installed and removed dates provided.

I checked the March 2018 extract provided by TDC against the submission totals supplied by Contact and found that submission did not matched the database. The methodology for deriving submission information is incorrect and recorded as a non-compliance.

Contact's calculation is incorrectly subtracting the Festive Light kW total each month from the 'Timaru – Contact' database total. Festive lights are not included in the 'Timaru – Contact' database. This calculation error results in an under submission of 13.46 kW each month outside the periods the Festive lights are active. The March 2018 period under submission is calculated to be 4,778.70 kWh.

This will result in estimated under submission of 43,116 kWh per annum (calculation based on 9 months) (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

There is some inaccurate data within the database, detailed in later sections, used to calculate submissions. This is recorded as non-compliance

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clauses 11(1) of Schedule 15.3 From: 01-Feb-17 To: 30-Apr-18	The methodology for deriving submission information is incorrect. Contact's calculation is incorrectly subtracting the Festive Light kW total each month from the 'Timaru – Contact' database total. Festive lights are not included in the 'Timaru – Contact' database. This calculation error results in an under submission of 13.46 kW each month outside the periods the Festive lights are active. The March 2018 period under submission is calculated to be 4,778.70 kWh. With an estimated annual under submission of 43,116 kWh. Inaccurate information in the database used for submission calculation • 7 items of load without an ICP number recorded, **section 2.2**, estimated under submission of 2,358 kWh per annum. • 2 lamp type and wattage errors, **section 2.4**, estimated over submission of 324 kWh per annum. • 5 field audit errors identified, **section 2.5**, estimated over submission of 205 kWh per annum. Potential impact: Medium Actual impact: Medium Audit history: None Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as moderate because although the submission error impact is medium it is only one incorrect step in the calculation process. The impact is medium, as estimated under submission is 43,116 kWh per annum.

Actions taken to resolve the issue	Completion date	Remedial action status
Settlement methodology This issue relates to a human error / training gap with Contacts process to translate the information provided by Timaru DC into Contacts settlement systems. The error has only occurred since Jan 2018 and will be resolved by the end of June 2018. Additional QA steps and training will be implemented as part of this fix. ***Database inaccuracies*** Contact will work with Timaru DC in getting these streetlight values and attributes updated within their database.	June 2018 July 2018	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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

Code reference

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

Code related audit information

The DUML database must contain:

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

Audit observation

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

Audit commentary

There are seven items of load, wattage of 552 W, that do not have an ICP number recorded against them in the database. This will result in estimated under submission of 2,358 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

Pole ID	Road Name	Light ID	Model	Northing	Easting
5409	ASCOT STREET	9381	GL520 27w LED	5086672.739	1459636.527
5413	COLLINGWOOD STREET	9385	GL520 27w LED	5083291.954	1458371.409
5408	ESSEX STREET	9380	GL520 27w LED	5084262.139	1459049.465
5386	SARAH STREET	9352	GL520 27w LED	5082972.276	1460397.219
5422	TE WEKA STREET	9394	High Pressure Sodium 70W	5083685.393	1459917.322
5412	MACDONALD ST & DUNKIRK ST ACCESS	9384	70w High Pressure Sodium	5084725.131	1459343.757
5421	ROUNDABOUT SOPHIA STREET	9393	250w High Pressure Sodium	5082650.677	1460725.747

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.2 With: Clauses 1(2)(a) and (aa) of Schedule 15.3 From/To: entire audit period	There are seven items of load that do not have an ICP identifier recorded against them in the database. Resulting in estimated under submission of 2,358 kWh per annum. Potential impact: Low Actual impact: Low 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 only seven of the 4090 items of load do not have an ICP identifier recorded. The impact is low, as estimated under submission is 2,358 kWh per annum.

Actions taken to resolve the issue	Completion date	Remedial action status
Database inaccuracies Contact will work with Timaru DC in getting these streetlight values and attributes updated within their database.	July 2018	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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

There is one item of load that does not have GPS co-ordinates or exact address location but it does have Pole ID and Light ID reference numbers to assist with Location.

Pole ID	Road Name	Light ID	Model	Pole Purpose
5157	DOMAIN AVENUE (TKA)	8906	250w High Pressure Sodium	Floodlight

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 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

Lamp make, model, lamp wattage and ballast wattage are included in the database.

TDC's database contains the manufacturers rated wattage and the ballast wattage.

The differences found when wattages were checked for alignment with the published standardised wattage table were two lamp type and wattage differences, affecting 19 lamps with an overall wattage difference of 76 W. This will result in estimated over submission of 324 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

Lamp Type	Description	Wattage	Lamp Type Category	TDC database	Correct wattage	Lamps affected	wattage difference	total difference
26w Fluroescent	Unknown	32	26w Fluroescent	26w Fluroescent	28	15	-4	-60
100W High Pressure Sodium	Goughlite 600	118	High Pressure Sodium	100W High Pressure Sodium	114	4	-4	-16
						19		76W

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.4 With: Clauses 11(2)(c) and (d) of Schedule 15.3 From: unknown To: 31-Mar-18	There are two lamp types with incorrect wattage values in the database. There are 19 lamps affected result in estimated over submission of 324 kWh per annum. Potential impact: Low Actual impact: Low 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 only two lamp type wattages were found to be incorrect, affecting 19 lamps. The impact is low, as estimated over submission of 324 kWh per annum.

Actions taken to resolve the issue	Completion date	Remedial action status
Database inaccuracies Contact will work with Timaru DC in getting these streetlight values and attributes updated within their database.	July 2018	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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

Code reference

Clause 11(2A) of Schedule 15.3

Code related audit information

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

Audit observation

The field audit was undertaken of a statistical sample of 301 items of load on the 14th and 17th May.

Audit commentary

The field audit findings are detailed in the table below:

Street	Database count	Field count	Light count diff	Wattage recorded incorrectly	Comments
Strata					
Geraldine					
HUFFEY STREET	8	8			
COLES STREET	2	2			
Wincester					
R72 - WINCHESTER-GERALDINE ROAD	3	3			
RISE ROAD	5	5			
Temuka					
CASS STREET	11	11			
WOOD STREET	4	4			
WHITCOMBE STREET	13	13			
Timaru 1					
OLD NORTH ROAD	25	25			
Timaru 2					
GUINNESS STREET	7	7			
GLENWOOD AVENUE	5	5			
Timaru 3					
BALMORAL STREET	5	5			
Timaru 4					
GLENITI RD	29	29			Unable to distinguish 1 x 30w LED
POPLAR STREET	10	10			
Timaru 5					
PRESTON STREET	12	12			
Timaru 6					
CLYDE STREET	3	3			
RHODES STREET (TU)	13	13			
Timaru 7					
CANON STREET	10	10			

RUSSELL SQUARE	6	6			
WILLIAM STREET (TU)	6	6			
QUEEN STREET (TU)	35	35			
Timaru 8					
SH1- (G) - EVANS STREET (TU)	89	89			
Total by Type	301	301			

The field audit found all load to be recorded correctly in the database.

I was however unable to distinguish the one 30w LED from the twenty five 27w LEDs in Gleniti Road and would recommend a site visit is made to confirm this lamp type and wattage.

Pole ID	Road Name	Displacement	Model	Easting	Northing
4903	GLENITI RD	1450m	30w LED	1455504.654	5084624.146

Description	Recommendation	Audited party comment	Remedial action
All load recorded in the database	A site visit to confirm lamp type and wattage at above GPS location on Gleniti Road.		Identified

The field data was 99.9% of the database data for the sample checked. The total wattage recorded in the database for the sample was 36,757 watts. The total wattage found in the field for the sample checked was 36,709 watts, a difference of 48 watts which is due to the incorrect wattage for one lamp type (twelve lamps in total in the database) recorded in the database. This will result in estimated over submission of 205 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

I did not identify any load missing from the database but the incorrect lamp type wattage in the database is recorded as a non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: Clauses 11(2A) of Schedule 15.3 From: unknown To: 31-Mar-18	The field audit included the majority (12 of the 15) of the lamps identified with one of the incorrect lamp type wattage value in the database. The field data was 99.9% of the database data for the sample checked, resulting in estimated over submission of 205 kWh per annum. Potential impact: Low Actual impact: Low 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 only one of the twelve lamp types in the field sample were affected, twelve lamps in total. The impact is low, as estimated over submission of 205 kWh per annum.

Actions taken to resolve the issue	Completion date	Remedial action status
Database inaccuracies Contact will work with Timaru DC in getting these streetlight values and attributes updated within their database.	July 2018	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

2.6. Tracking of load changes (Clause 11(3) of Schedule 15.3)

Code reference

Clause 11(3) of Schedule 15.3

Code related audit information

The DUML database must track additions and removals in a manner that allows the total load (in kW) to be retrospectively derived for any given day.

Audit observation

The process for tracking of changes in the database was examined.

Audit commentary

NetCon is the maintenance contractor for TDC region. Outage patrols are conducted on a regular basis. Lamp outages are notified to TDC by residents and work requests are made to NetCon personnel. NetCon update the database directly when maintenance is performed.

LED upgrades are underway by region by street. NetCon report to TDC as upgrades completed and the database is updated within the month of notification.

New subdivisions require a proposed plan to be provided and an "as built" plan once the development is complete. The Councils have an acceptance process for new subdivisions. NetCon's site foreman advises when able to be livened. TDC then go and check these are installed and livened and add them to their database from the day of livening.

Festive light installation and removal dates are advised to TDC. The monthly database worksheet for Festive Lights is maintained with installation and removal dates.

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

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	Timaru region
Strata	The database contains 4,990 items of load in the area. The processes for the management of TDC's items of load are the same, but I decided to place the items of load into two strata, as follows: 1. Outer Towns 2. Timaru City
Area units	I created a pivot table of the roads in each area and I used a random number generator in a spreadsheet to select a total of 21 subunits.
Total items of load	301 items of load were checked. Outer Towns 46 Timaru City 255

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

Audit commentary

The database was found to contain very few inaccuracies.

The lamp type and wattage check of the database against the published standardised wattage table identified two lamp type and wattage differences, affecting 19 lamps with an overall wattage difference of 76 W. This will result in estimated over submission of 324 kWh per annum and is recorded as a non-compliance in **section 2.4**.

The field audit found all load to be recorded correctly in the database – except one of the lamp type wattage differences as already noted above.

The field data was 99.9% of the database data for the sample checked. The total wattage recorded in the database for the sample was 36,757 watts. The total wattage found in the field for the sample checked was 36,709 watts, a difference of 48 watts which is due to the incorrect wattage for one lamp type (twelve lamps in total in the database) recorded in the database. This will result in estimated over submission of 205 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: Unknown To: 31-Mar-18	The only database inaccuracies found stem from the two incorrect lamp type wattage values identified in the database, 19 lamps in total, estimated over submission of 324 kWh per annum. The field data was 99.9% of the database data for the sample checked, resulting in estimated over submission of 205 kWh per annum. Potential impact: Low Actual impact: Low Audit history: Never Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong because only nineteen lamps in total affected by incorrect lamp type wattages. The impact is low, as estimated over submission of 324 kWh per annum.

Actions taken to resolve the issue	Completion date	Remedial action status
Database inaccuracies Contact will work with Timaru DC in getting these streetlight values and attributes updated within their database.	July 2018	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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

Code reference

Clause 15.2 and 15.37B(c)

Code related audit information

The audit must verify that:

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

Audit observation

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

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

Audit commentary

I checked the March 2018 extract provided by TDC against the submission totals supplied by Contact and found that submission did not matched the database. The methodology for deriving submission information is incorrect and recorded as a non-compliance in section 2.1.

Contact's calculation is incorrectly subtracting the Festive Light kW total each month from the 'Timaru – Contact' database total. Festive lights are not included in the 'Timaru – Contact' database. This calculation error results in an under submission of 13.46 kW each month outside the periods the Festive lights are active. The March 2018 period under submission is calculated to be 4,778.70 kWh.

This will result in estimated under submission of 43,116 kWh per annum (calculation based on 9 months) (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c) From: Unknown To: 31-Mar-18	The DUML database is largely accurate but the submission calculation is incorrectly reducing the total by Festive Lights which are not included in the database total to start with. Resulting in an estimated under submission of 43,116 kWh per annum. Potential impact: Medium Actual impact: Medium Audit history: Never Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as moderate because although the submission error impact is medium it is only one incorrect step in the calculation process. The impact is medium, as estimated under submission is 43,116 kWh per annum.

Actions taken to resolve the issue	Completion date	Remedial action status
Settlement methodology This issue relates to a human error / training gap with Contacts process to translate the information provided by Timaru DC into Contacts settlement systems. The error has only occurred since Jan 2018 and will be resolved by the end of June 2018. Additional QA steps and training will be implemented as part of this fix. ***Database inaccuracies*** Contact will work with Timaru DC in getting these streetlight values and attributes updated within their database.	June 2018 July 2018	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

CONCLUSION

Timaru District Council's RAMM database used for submission calculations by Contact Energy.

New connection, fault and maintenance work is completed by NetCon. NetCon update the database for maintenance work using Pocket RAMM. Asset Management data eg LED upgrades in residential areas, are completed by NetCon and then advised to TDC who make those changes in the RAMM database.

All database checks have been performed on the database provided as at the end of February 2018, with submission checks performed on a database version and submission file as at the end of March 2018.

Timaru District Council provide monthly reports to Contact from the database for submission calculations. It was found that Festive Lights have been incorrectly deducted each month from the Timaru database total – they are held separately in their own worksheet.

The field audit was undertaken of a statistical sample of 301 items of load on 14th & 17th May 2018

Six non-compliances were identified, and one recommendation was raised.

The future risk rating of twelve indicates that the next audit be completed in 12 months.

Future risk rating	1-3	4-6	7-8	9-17	18-26	27+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

PARTICIPANT RESPONSE

Contact is disappointed that a failure in our processes has resulted in this audit scoring a risk rating higher than the accuracy of the DUML database deserves. Timaru DC have come a long way in improving the accuracy of their DUML database over the last few years.

Contact will address our settlement methodology issues and perform any necessary market wash-ups to ensure no other participant is impacted by this issue.

APPENDIX A - TEMPLATE FOR NON-COMPLIANCE, ISSUES AND RECOMMENDATIONS.

NON-COMPLIANCE

Non-compliance	Description
Audit Ref: With: From: Click here to enter a date. To: Click here to enter a date.	Potential impact: Choose an item. Actual impact: Choose an item. Audit history: Controls: Choose an item. Breach risk rating:
Audit risk rating	**Rationale for audit risk rating**
Choose an item.	

Actions taken to resolve the issue	Completion date	Remedial action status
[Participant comment]	[proposed or actual completion date]	Choose an item.
Preventative actions taken to ensure no further issues will occur	**Completion date**	
[Participant comment]	[proposed or actual completion date]	

RECOMMENDATION

Description	Recommendation	Audited party comment	Remedial action

ISSUE

Description	Issue	Remedial action