

ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

CHRISTCHURCH CITY COUNCIL –  
UNMETERED TRAFFIC LIGHTS  
AND GENESIS ENERGY LIMITED

Prepared by: Steve Woods (assisted by Deborah Anderson)

Date audit commenced: 23 April 2018

Date audit report completed: 8 May 2018

Audit report due date: 01-Jun-18

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## EXECUTIVE SUMMARY

This audit of the Christchurch City Council's – Christchurch Transport Operation Centre (CTOC) Unmetered Traffic Light DUML database and processes was conducted at the request of Genesis Energy Limited (Genesis), 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 traffic light unmetered load is managed in an access database by Christchurch City Council's Christchurch Transport Operations Centre (CTOC) with a monthly report for reconciliation and billing being provided to Genesis.

Items of load are held in CTOC's database by GXP.

The audit found five non-compliances and makes no recommendations.

The field audit found no discrepancies.

The database accuracy is assessed to be 100% indicating no over or under submission but there was a discrepancy found with the March 2018 submission.

The future risk rating of 10 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	Over submission occurring due to disconnected lights being included in the monthly report.	Moderate	Low	2	Unknown
ICP identifier and items of load	2.2	11(2)(a) and (aa) of Schedule 15.3	<ul style="list-style-type: none"> <li>No ICP identifier recorded against each item of load in the traffic light access database.</li> <li>Five items of load with no GXP recorded</li> </ul>	Moderate	None	2	Unknown
Tracking of load changes	2.6	11(3) of Schedule 15.3	Disconnected traffic lights not tracked in the database	Moderate	Low	2	Unknown
Audit trail	2.7	11(4) of Schedule 15.3	No audit trail of changes made in the	Moderate	Low	2	Unknown

			access database.				
Volume information accuracy	3.2	15.2 and 15.37B(c)	Under submission for the March 2018 period due to the incorrect monthly report being used to calculate the submission.	Moderate	Low	2	Unknown
<b>Future Risk Rating</b>						<b>10</b>	

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

**RECOMMENDATIONS**

Subject	Section	Description	Recommendation

**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.*

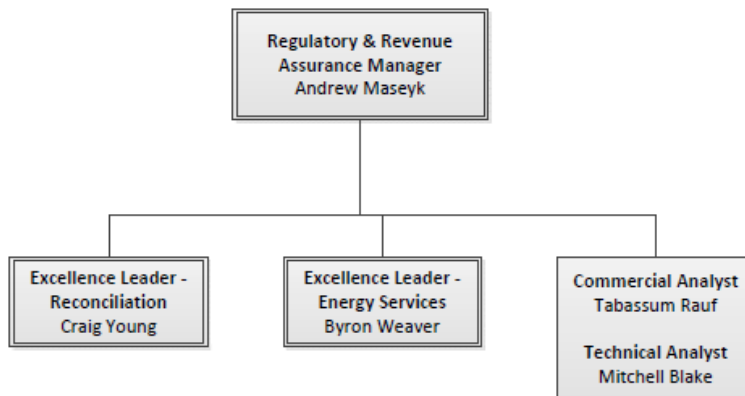
#### Audit observation

The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit. No exemptions are in place.

#### Audit commentary

Compliance is confirmed.

### 1.2. Structure of Organisation



### 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
Bruce Kelly	SCATS Engineer	Christchurch Transport Operation Centre – Christchurch City Council
Shweta Arora	Reconciliation Systems Analyst	Genesis Energy

#### 1.4. Hardware and Software

CTOC maintains an Access database for the management of the DUML information. Access to GIS and the Access database are secure by way of password protection.

Backup and restoration procedures are in accordance with normal industry protocols.

#### 1.5. Breaches or Breach Allegations

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

#### 1.6. ICP Data

The following ICPs are relevant to the scope of this audit:

ICP Number	Description	NSP	Profile	Number of items of load	Database wattage (watts)
0007102602RN872	Orion_Bromley 66kV GXP Traffic Lights	BRY0661	UNM	72	11,612.94
0007102603RN437	Orion_Islington 33kV GXP Traffic Lights	ISL0331	UNM	14	2,982.76
0007102604RN9FD	Orion_Islington 66kV GXP Traffic Lights	ISL0661 & blanks	UNM	330 3	65,937.04 34.78
0000298513MPF38	TRAFFIC LIGHTS OFF RAMP MAIN NORTH & EMPIRE ROADS	KAI0111	UNM	5	183.58

#### 1.7. Authorisation Received

All information was provided directly by Genesis or the CCC's Christchurch Transport Operation Centre.

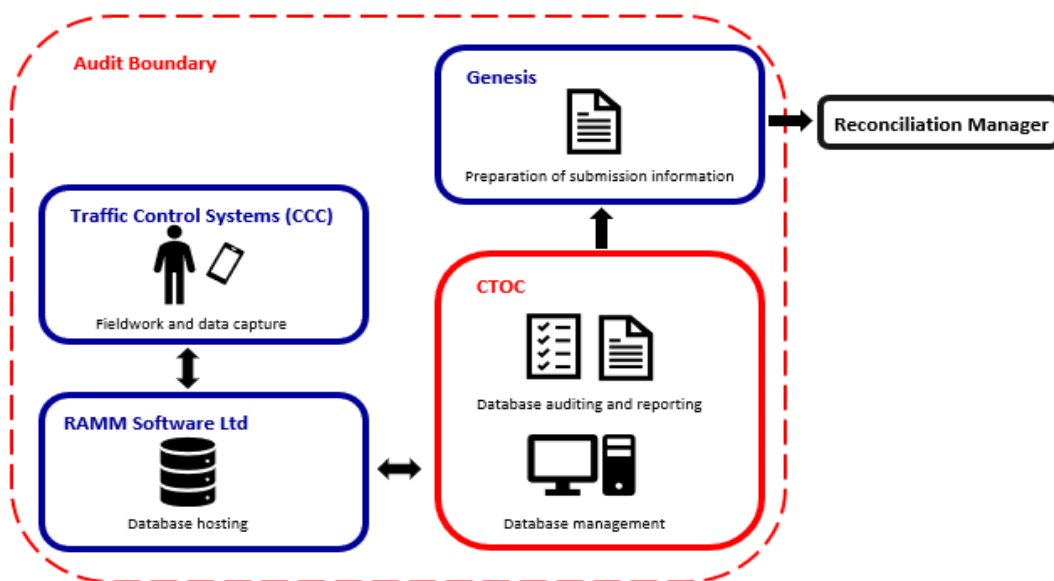
#### 1.8. Scope of Audit

This audit of the CTOC DUML database and processes was conducted at the request of Genesis, 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 100 items of load on 25th April 2018.

### 1.9. Summary of previous audit

Genesis provided a copy of the last audit report undertaken by Rebecca Elliot of Veritek, completed in May 2017. The table below records the findings.

Subject	Section	Clause	Non compliance	Status
Deriving Submission Information	2.1	11(1) of schedule 15.3	Over submission occurring due to disconnected lights being included in the monthly report.	Still existing
ICP Identifier	2.2.1	11(2)(a) of schedule 15.3	No ICP identifier in the traffic light access database.	Still existing
Tracking of load change	2.3	11(3) of schedule 15.3	Disconnected traffic lights not tracked in the database.	Still existing
Audit trail	2.4	1(4) of schedule 15.3	No audit trail of changes made in the access database.	Still existing

## 1.10. Distributed unmetered load audits (Clause 16A.26 and 17.295F)

### Code reference

*Clause 16A.26 and 17.295F*

### Code related audit information

*Retailers must ensure that DUML database audits are completed:*

- 1. by 1 June 2018 (for DUML that existed prior to 1 June 2017)*
- 2. within 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

Genesis 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

Genesis reconciles this unmetered Traffic Light DUML load using the UNM profile as these lights are operational 24 hours a day.

The traffic light access database calculates the load based on the wattage of each item of load and the burn time of each light. The burn time has been calculated based on the various light types and sequencing patterns over a 24 hour time span.

The city rebuild continues and as part of that existing traffic lights are turned off, but these are not made inactive in the database therefore in these instances over submission will be occurring. The database has no audit trail and therefore I am unable to calculate the volume of over submission in relation this this. This is recorded as non-compliance below.

I checked the March 2018 extract provided by CTOC against the submission totals supplied by Genesis and found that submission appears to have used the February database multiplied by 31 days. The difference between CTOC's database totals for the March 2018 period and the submission information provided by GENE is 1,268.42 kWh for the month of March.

The submission difference is recorded as a non-compliance in **section 3.2**.

Council	ICPs	Profile	GXP	Database volume for month of March from CTOC T Dakers 04/04	Volume submitted for month of March	Submission difference
Christchurch CC traffic lights	0007102602RN872	UNM	BRY0661	11,612.94	11,419.07	-193.87
Christchurch CC traffic lights	0007102603RN437	UNM	ISL0331	2,982.76	2,370.39	-612.37
Christchurch CC traffic lights	0007102604RN9FD	UNM	ISL0661	65,971.82	65,509.64	-462.18
Christchurch CC traffic lights	0000298513MPF38	UNM	KAI0111	183.58	183.58	-
						-1,268.42

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3  From: 01-May-17 To: 30-Apr-18	Over submission occurring due to disconnected lights being included in the monthly report.  Potential impact: Low  Actual impact: Low  Audit history: Once  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as moderate, because they are sufficient to ensure that lamp information is correctly recorded most of the time.  The impact is not able to be determined but rated as low due to the relatively small number of traffic lights affected.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis will contact CCT and discuss the content of this audit, with the intent of improving both database and data reporting to Genesis.		12/2018	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis will make recommendations with the intent to improve CCT's current processes		12/2018	

## 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 bar 5 CTOC items of load have GXP recorded against them, but no ICP number.

There are 5 items that do not have a GXP recorded against them. Their usage is included in the submission for ISL0661.

SiteID	SiteName	Status	RCA	Region	IntCommd	GXPCode	Num Pwr Cons	Site Units Per Day
513	Halswell Junction/Springs (Roundabout Metering)	C	NZTA	CHC	14/09/2017		1	0.93
802	CCTV Northern Motorway/Western Bypass	C	NZTA	TNC	20/11/2015			
807	CCTV Johns/Clearwater	C	NZTA	TNC	30/10/2017		1	0.096
808	CCTV Johns/Gardiners	C	NZTA	TNC	30/10/2017		0	
809	CCTV Johns/Wilkinsons	C	NZTA	TNC	30/10/2017		1	0.096

### Audit outcome

#### Non-compliant

Non-compliance	Description	
<p>Audit Ref: 2.2 With: Clause 11(2)(a) and (aa) of Schedule 15.3</p> <p>From/to: entire audit period</p>	<ul style="list-style-type: none"> <li>No ICP identifier recorded against each item of load in the traffic light access database.</li> <li>Five items of load with no GXP recorded</li> </ul> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: Twice</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>	
Audit risk rating	Rationale for audit risk rating	
<b>Low</b>	<p>The controls are rated as moderate, because there is sufficient information to correctly link each item of load to an ICP.</p> <p>The impact is rated as none as there is no affect on the submission GENE makes.</p>	
Actions taken to resolve the issue	Completion date	Remedial action status
Genesis will contact CCT and discuss the content of this audit, with the intent of improving both database and data reporting to Genesis.	12/2018	Unknown
Preventative actions taken to ensure no further issues will occur	Completion date	
Genesis will make recommendations with the intent to improve CCT's current processes	12/2018	

### 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 CTOC database contains fields for the street intersections and also GPS coordinates. There are 79 records that do not have GPS information which makes them more difficult to confirm locations, but they do have adequate street address information.

#### **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 they 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 traffic light access database calculates the load based on the wattage of each item of load and the burn time of each light. The burn time has been calculated based on the various light types and sequencing patterns over a 24 hour time span. The access database contains a description, behind which sits an algorithm for each traffic light type and this is used to calculate the daily kWh figure.

The algorithm for LED lanterns was calculated and added in January 2016. The council now have additional fixtures installed at traffic lights, specifically communication units. The associated load for these is currently being calculated and once confirmed will be added to the relevant traffic lights.

#### **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 100 items of load on 25<sup>th</sup> April 2018

### Audit commentary

The field audit findings are detailed in the table below:

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
<b>CBD</b>					
Barrington/Jerrold	1	1			
Brougham/Collins/Jerrold/Simeon	1	1			
Barrington/Xing (Moana)	1	1			
Barrington/Frankleigh/Milton	1	1			
Athelstan/Barrington	1	1			
Barrington/Lincoln/Whiteleigh	1	1			
Barbadoes/Tuam	1	1			
Barbadoes/Moorhouse/Waltham	1	1			
Barbadoes/Ferry	1	1			
Barbadoes/St Asaph	1	1			
Barbadoes/Lichfield	1	1			
Barbadoes/Cashel	1	1			
Barbadoes/Hereford	1	1			
Barbadoes/Worcester	1	1			
Barbadoes/Gloucester	1	1			
Armagh/Barbadoes	1	1			
Barbadoes/Kilmore	1	1			
Barbadoes/Bealey	1	1			
Barbadoes/Edgeware	1	1			
Fitzgerald/Gloucester	1	1			
Falsgrave/Fitzgerald/Moorhouse	1	1			
Fitzgerald/St Asaph	1	1			
Fitzgerald/Tuam	1	1			
Fitzgerald/Lichfield	1	1			
Cashel/Fitzgerald	1	1			
Fitzgerald/Hereford	1	1			
Fitzgerald/Worcester	1	1			
Armagh/Fitzgerald	1	1			
Avonside/Fitzgerald/Kilmore	1	1			
Bealey/Fitzgerald/London/Whitmore	1	1			

Gloucester/Montreal	1	1			
Gloucester/Rolleston	1	1			
Gloucester/Manchester	1	1			
Cambridge/Durham/Gloucester	1	1			
Gloucester/Linwood	1	1			
Gloucester/Latimer/Madras	1	1			
Gloucester/Stanmore	1	1			
Gloucester/Woodham	1	1			
Colombo/Salisbury	1	1			
Colombo/Xing (Wherstead)	1	1			
Colombo/Xing (Fisher)	1	1			
Colombo/Tennyson	1	1			
Colombo/Strickland	1	1			
Beaumont/Colombo	1	1			
Colombo/Huxley/Milton	1	1			
Colombo/Xing (Hastings)	1	1			
Brougham/Colombo	1	1			
Colombo/Wordsworth	1	1			
Battersea/Colombo	1	1			
Byron/Colombo/Sandyford	1	1			
Colombo/Moorhouse	1	1			
Colombo/St Asaph	1	1			
Colombo/Tuam	1	1			
Colombo/Lichfield	1	1			
Cashel/Colombo	1	1			
Colombo/Hereford	1	1			
Colombo/Gloucester	1	1			
Armagh/Colombo	1	1			
Colombo/Kilmore	1	1			
Bealey/Colombo	1	1			
Colombo/Edgeware	1	1			
Colombo/Xing (Cycleway S Canon)	1	1			
<b>Outer Streets</b>					
Ferry/Hargood/Radley	1	1			
Bridal Path/Ferry/Main Road	1	1			
Ferry/Humphreys	1	1			
Ferry/Palinurus/Rutherford	1	1			
Ferry/Xing	1	1			
Aldwins/Ensors/Ferry	1	1			
Ferry/Moorhouse/Wilsons	1	1			
Ferry/Fitzgerald	1	1			
Montreal/Salisbury/Victoria	1	1			
Madras/Salisbury	1	1			
Durham/Salisbury	1	1			
Manchester/Salisbury	1	1			
Barbadoes/Salisbury	1	1			

Masham/Russley/Yaldhurst	1	1			
Curletts/Peer/Yaldhurst	1	1			
Avonhead/Middlepark/Yaldhurst	1	1			
CCTV Pound/West Coast/Yaldhurst	1	1			
SZ Yaldhurst Model School (School)	2	2			
CCTV Harewood/Johns/Russley	1	1			
Memorial/Russley	1	1			
SZ Russley School (Cutts)	1	1			
Marshland/New Brighton/North Parade/Shirley	1	1			
Shirley/Xing	1	1			
North Avon/North Parade	1	1			Lights not in service
Averill/North Parade	1	1			
North Parade/Xing (Shirley Boys HS/Marian College)	1	1			
CCTV Johns/Clearwater	1	1			
Johns/Main North	1	1			
CCTV Johns/Gardiners	0	0			To be confirmed not connected
CCTV Johns/Sawyers Arms	1	1			
CCTV Johns/Wilkinsons	1	1			
Hargood/Keighleys/Linwood	1	1			
Marshland/Palms	1	1			
Briggs/Lake Terrace/Marshland	1	1			
Homebase/Marshland	1	1			
Marshland/QEII	1	1			
Mairehau/Marshland	1	1			
Marshland/Prestons	1	1			

I did not identify any load missing from the database.

#### Audit outcome

Compliant

## 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

Any changes that are made during any given month take effect from the beginning of that month.

On September 20<sup>th</sup> 2012, the Authority sent a memo to Retailers and auditors advising that tracking of load changes at a daily level was not required as long as the database contained an audit trail. I have interpreted this to mean that the production of a monthly “snapshot” report is sufficient to achieve compliance.

For new traffic light connections, the process is well defined and requires paperwork to be completed before each job can progress to next stage. Once accepted an “as built” is provided. This includes a check for the correct NSP to allocate it to. The access database is updated only once all paperwork is returned and completion is confirmed. New traffic lights are commissioned by CTOC, the traffic lights must be programmed before they will start working. Therefore, all new lights will be captured in the month of connection.

The city rebuild continues and as part of that existing traffic lights are turned off as roading repairs continue, but these are not made inactive in the database therefore in these instances over submission will be occurring. The over submission is recorded as a non-compliance in 2.1 above, and the lack of accurate load tracking is recorded as non-compliance below.

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 2.6 With: Clause 11(3) of Schedule 15.3  From/to: entire audit period	Disconnected traffic lights not tracked in the database  Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as moderate, because they are sufficient to ensure that lamp information is correctly recorded most of the time.  The impact is rated as low as there is a nominal effect on the submission GENE makes.		
Actions taken to resolve the issue	Completion date	Remedial action status	
Genesis will contact CCT and discuss the content of this audit, with the intent of improving both database and data reporting to Genesis.	12/2018	Unknown	
Preventative actions taken to ensure no further issues will occur	Completion date		
Genesis will make recommendations with the intent to improve CCT’s current processes	12/2018		



## 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

COTC maintain an Access database, there is no audit trail of additions and changes to the database information. However historic reports are able to be compared for a clear picture of any changes made from one month to the next.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.7 With: Clause 11(4) of Schedule 15.3  From/to: entire audit period	No audit trail of changes made in the access database.  Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as moderate, because they are sufficient to ensure that lamp information is correctly recorded most of the time.  The impact is rated as none as there is no effect on the submission GENE makes.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis will contact CCT and discuss the content of this audit, with the intent of improving both database processes and data reporting to Genesis.		12/2018	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis will make recommendations with the intent to improve CCT's current processes		12/2018	

### 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	Christchurch City Council Unmetered Traffic Lights
Strata	The database contains 368 items of load in the CCC area.  The processes for the management of 368 items of load are the same, but I decided to place the items of load into two strata, as follows:  <ol style="list-style-type: none"><li>1. CBD</li><li>2. Outer Streets</li></ol>
Area units	I created a pivot table of the traffic light database and I used a random number generator. In order of the random number assigned, I then searched for and selected any traffic lights in associated streets with each of the top random numbers until I had a total of 100 subunits.
Total items of load	100 items of load were checked.

I checked 100 traffic light locations and all were confirmed correct.

##### Audit commentary

The database was found to contain zero inaccuracies.

The field data was 100% of the database data for the sample checked. The total wattage recorded in the database for the sample was 819 watts. The total wattage found in the field for the sample checked was 819 watts, no difference of watts. This will result in no submission of difference.

##### Audit outcome

Compliant

### 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

Submission for March 2018 was not based on the database information, as explained in section 2.1.

I recalculated the submission for March 2018 using CTOC's Power Invoice Listing for the March period and believe there was an under submission of 1,268.42 kWh for the period.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c)  From: 01 March 18 To: 31 March 18	Under submission for the March 2018 period due to the incorrect monthly report being used to calculate the submission.  Potential impact: Low  Actual impact: Low  Audit history: Once  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as moderate, because they are sufficient to ensure that submission information is correct most of the time.  The impact is rated as low due to the kWh.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis will contact CCT and discuss the content of this audit, with the intent of improving both database and data reporting to Genesis.		12/2018	Unknown
Preventative actions taken to ensure no further issues will occur		Completion date	

Genesis will make recommendations with the intent to improve CCT's current processes	12/2018	
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## CONCLUSION

The Christchurch City Council's – Christchurch Transport Operation Centre (**CTOC**) manage an access database for Unmetered Traffic Lights. An audit of the DUML database and processes was conducted at the request of Genesis Energy Limited.

The audit found five non-compliances and makes no recommendations.

The field audit found no discrepancies.

The database accuracy is assessed to be 100% indicating no over or under submission but there was a discrepancy found with the March 2018 submission.

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

## PARTICIPANT RESPONSE

Genesis endeavour working with CCT to improve upon the database and processes currently in place. Timing of the report and June 1<sup>st</sup> deadline has meant Genesis is yet to discuss the audit findings. Genesis will over the coming months be working with contracted parties to improve on database content.