

**ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTOR AUDIT REPORT**

For

**THE LINES COMPANY  
NZBN: 9429038879517**



Prepared by: Steve Woods and Rebecca Elliot

Date audit commenced: 2 December 2021

Date audit report completed: 31 March 2022

Audit report due date: 16 March 2022

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## EXECUTIVE SUMMARY

This Distributor audit was performed at the request of **The Lines Company Ltd (TLC)** to encompass the Electricity Industry Participation Code requirement for an audit as required by clause 11.10 of part 11. The audit was carried out at via teams from 15 – 18 March 2022.

The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the Electricity Authority.

TLC have moved from the Orion platform to Axos during the audit period and this coincided with a move from direct customer billing to line charge billing via retailers. A material change audit was conducted in relation to the change of platform which resulted in the next audit due date being shortened from 21 June, 2022 to 16 March, 2022.

During this time TLC have also gone through an organisational restructure which has meant a loss of knowledgeable resource that has caused some delays in updates to the registry and some errors made by new staff coming up to speed. I found that despite these challenges the change has gone smoothly with just a few areas needing focus to improve compliance:

- Validation reporting to identify discrepancies between the registry and Axos. This is being addressed.
- Reviewing the process for tracking the electrical connection of streetlights.
- Review the EIEP1 file to identify ICPs with distributed generation recorded and TLC has none.
- Investigate Axos' ability to have a relationship between transformer and NSP so the selection of the transformer automatically selects the correct NSP.

This audit found 16 areas of non-compliance and makes four recommendations for improvement. The future risk rating is 26, indicating that the next audit be due in six months. I have considered this in conjunction with:

- eight of the 16 non-compliances identified having strong controls,
- additional clauses being included in this audit from last,
- the small number of ICPs affected by the non-compliances identified, and
- TLC's responses.

Therefore, I recommend that the next audit be in 12 months time.

The matters raised are set out in the table below.

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Audit Submission	1.12	16A.13(1)	Late submission of audit report.	Strong	Low	1	Cleared
Requirement to provide complete and accurate information	2.1	11.2(1)	<p>Data validation reporting not in place since Axos was deployed in October 2021 to compare registry vs. Axos data which could result in data mismatches not being identified. One instance was identified of this.</p> <p>Nine ICPs incorrectly recorded against NSP WKM0331.</p> <p>Five ICPs had incorrect initial electrical connection dates, which were corrected during the audit.</p> <p>ICP 0003271548WM74C has no initial electrical connection date recorded.</p> <p>Five of seven ICPs sampled had the incorrect distributed generation kW value. Backdated corrections to the capacities were processed during the audit.</p> <p>Three of seven ICPs sampled had the incorrect date of distributed generation installation recorded.</p> <p>Two ICPs with a generation value but no fuel type and an installation type of L.</p> <p>ICP 0001113502WM7A6 incorrectly recorded with unmetered load.</p>	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			Three ICPs with the incorrect wattage value recorded in the unmetered load details.  Five of ten ICPs sampled decommissioned for the incorrect event date.				
Requirement to correct errors	2.2	11.2(2) and 10.6(2)	Data validation reporting not in place since Axos was deployed in October 2021 to compare registry vs. Axos data which has resulted in data mismatches not being identified. One instance was identified of this.	Moderate	Low	2	Identified
Provision of ICP Information to the registry manager	3.3	11.7	One electrically connected ICP with no initial electrical connection date populated.	Strong	Low	1	Identified
Timeliness of Provision of ICP Information to the registry manager	3.4	7(2) of Schedule 11.1	Six ICPs not created prior to electricity being traded.	Strong	Low	1	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late population of the initial electrical connection dates for 28 ICPs.	Strong	Low	1	Identified
Management of "new" status	3.13	13 of Schedule 11.1	ICP 110000009WM2FC incorrectly recorded at the "new" status.	Moderate	Low	2	Identified
Electrical connection of a point of connection	3.16	10.33A	No trader acceptance prior to the electrical connection of new streetlights to the network.	Weak	Low	3	Investigating
Meter bridging	3.18	10.33C	Traders not notified of bridged meters.	Strong	Low	1	Identified
Changes to registry information	4.1	8 Schedule 11.1	Ten late address updates.  521 late pricing events.  69 late updates to decommissioned status.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			<p>13 late distributed generation updates.</p> <p>Eight late network updates to other network fields, excluding initial updates to initial electrical connection dates and the addition of distributed generation.</p>				
Notice of NSP for each ICP	4.2	7(1),(4) and (5) Schedule 11.1	Nine ICPs incorrectly recorded against NSP WKM0331.	Weak	Low	3	Investigating
ICP location address	4.4	2 Schedule 11.1	<p>Two ICPs with addresses not readily locatable.</p> <p>One ICP with the incorrect town recorded, which was corrected during the audit.</p>	Strong	Low	1	Identified
Distributors to Provide ICP Information to the Registry manager	4.6	7(1) Schedule 11.1	<p>Five ICPs had incorrect initial electrical connection dates, which were corrected during the audit.</p> <p>ICP 0003271548WM74C has no initial electrical connection date recorded.</p> <p>Five of seven ICPs sampled had the incorrect distributed generation kW value. Backdated corrections to the capacities were processed during the audit.</p> <p>Three of seven ICPs sampled had the incorrect date of distributed generation installation recorded.</p> <p>Two ICPs with a generation value but no fuel type and an installation type of L.</p>	Moderate	Low	2	Investigating

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			ICP 0001113502WM7A6 incorrectly recorded with unmetered load.  Three ICPs with the incorrect wattage value recorded in the unmetered load details.				
Management of "decommissioned" status	4.11	20 of Schedule 11.1	Five of ten ICPs sampled decommissioned for the incorrect event date.	Strong	Low	1	Identified
Maintenance of price category codes	4.12	23 of Schedule 11.	Price category code CAPDED not notified two months before coming into effect.	Strong	Low	1	Identified
Responsibility for metering information for NSP that is not a POC to the grid	6.8	10.25(1) & 10.26(1)	WKM0331 meter was uncertified from 23/09/21-19/10/21  The meter certification expiry date was not updated within 20 business days of the meter certification.	Moderate	Low	2	Identified
Future Risk Rating						26	

Future risk rating	0-1	2-5	6-8	9-20	21-29	30+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

## RECOMMENDATIONS

Subject	Section	Recommendation	Description
Requirement to provide complete and accurate information	2.1	Registry – Axos validation	Validate data in fields held in Axos against the registry at least weekly and investigate and resolve any discrepancies.
Electrical connection of a point of connection	3.16	Electrical connection of streetlights	Review the electrical connection of streetlights to ensure that a trader has accepted responsibility for the additional load.
ICP location address	4.4	ICP location address	Periodically check for ICPs with Lot numbers recorded.



Subject	Section	Recommendation	Description
Distributors to Provide ICP Information to the Registry man	4.6	Investigate ICPs where distributed generation is indicated, but an application has not been received.	<p>At least monthly, compare ICPs which have an EG1 or PV1 profile on the registry list to the list of ICPs which distributed generation applications have been received for.</p> <p>It may also be helpful to cross check to the MEP's meter channel records to determine whether injection registers are installed, and the high risk database may also contain information on generation installation (<a href="https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home">https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home</a>).</p> <p>Monitor EIEP1 files to identify ICPs with generation recorded where TLC has none.</p> <p>Follow up with the trader and/or customer to determine whether generation is installed.</p>

## ISSUES

Subject	Section	Issue	Description
		Nil	

## 1. ADMINISTRATIVE

### 1.1. Exemptions from Obligations to Comply with Code (Section 11)

#### **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**

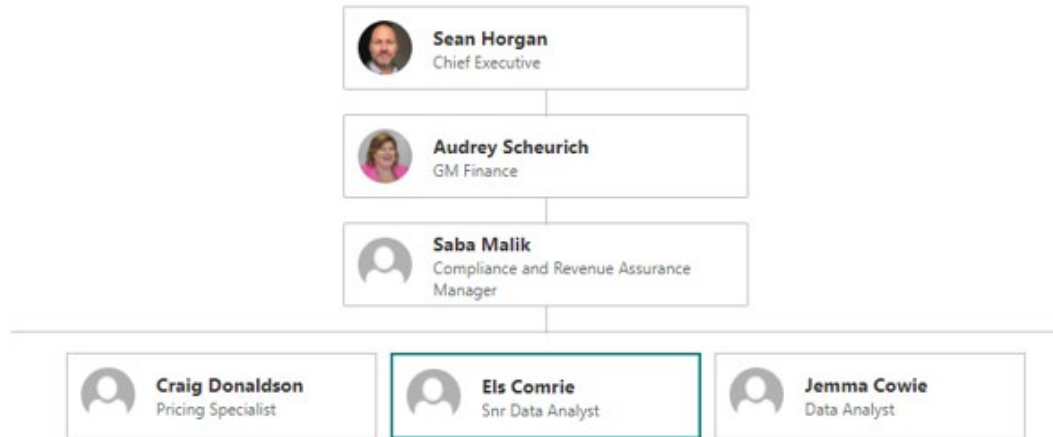
The Authority website was checked to determine whether there are code exemptions in place.

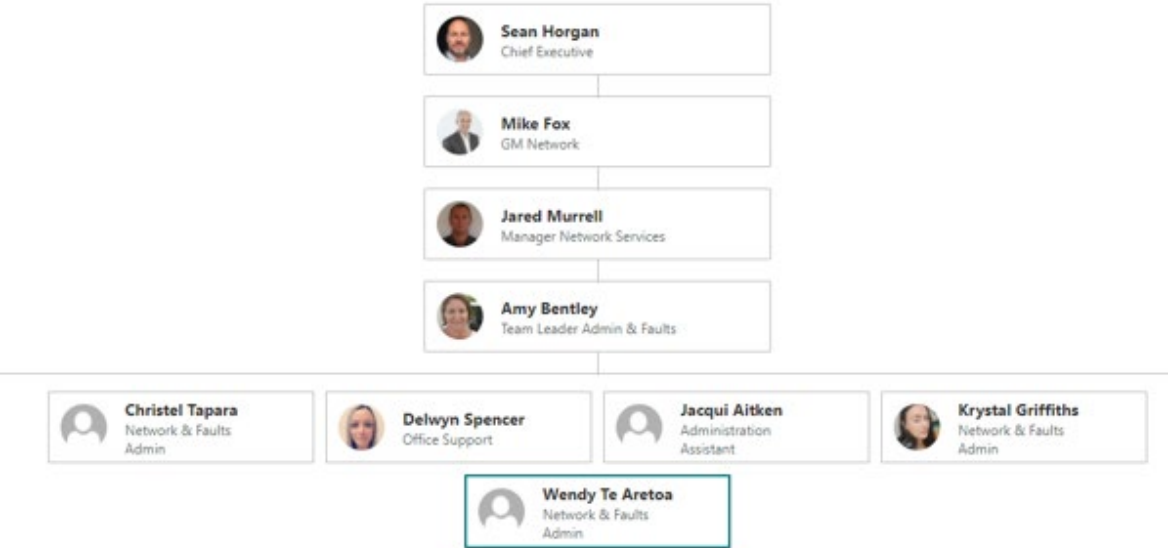
#### **Audit commentary**

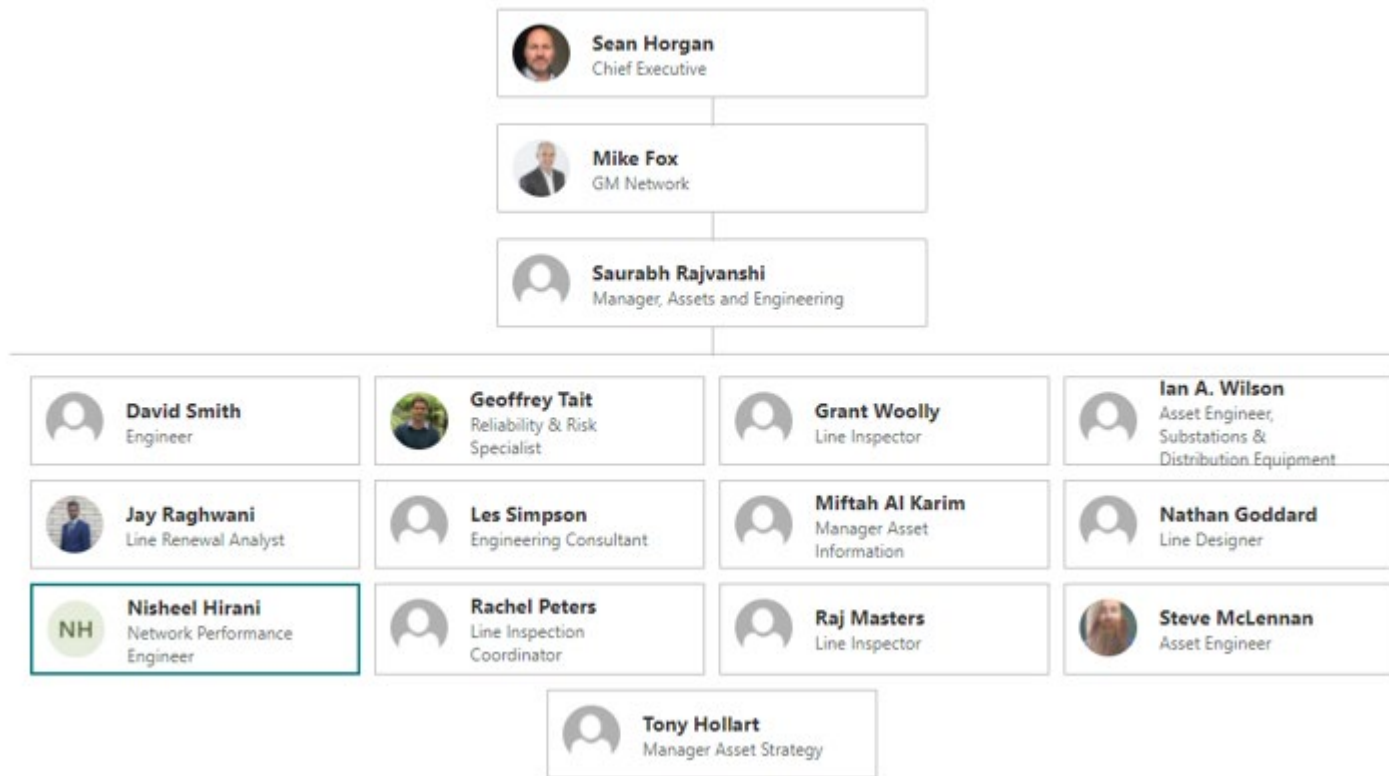
Review of exemptions on the Authority website confirmed that there are no exemptions in place relevant to the scope of this audit.

## 1.2. Structure of Organisation

TLC provided an organisational structure. The relevant parts are detailed below:







### 1.3. Persons involved in this audit

Auditor:

Name	Company	Role
Steve Woods	Veritek Limited	Lead Auditor
Rebecca Elliot	Veritek Limited	Supporting Auditor

Personnel assisting in this audit were:

Name	Title	Organisation
Craig Donaldson	Pricing Specialist	The Lines Company
Delwyn Spencer	Office Support	The Lines Company
Els Comrie	Senior Data Analyst	The Lines Company
Jarred Murrell	Manager Network Services	The Lines Company
Nisheel Hirani	Network Performance Engineer	The Lines Company

### 1.4. Use of contractors (Clause 11.2A)

#### Code reference

Clause 11.2A

#### Code related audit information

*A participant who uses a contractor*

- *remains responsible for the contractor's fulfilment of the participants Code obligations*
- *cannot assert that it is not responsible or liable for the obligation due to the action of a contractor*
- *must ensure that the contractor has at least the specified level of skill, expertise, experience, or qualification that the participant would be required to have if it were performing the obligation itself.*

#### Audit observation

TLC does not normally subcontract any activities within the scope of this audit however one independent contractor is used if the workload in the field requires this.

#### Audit commentary

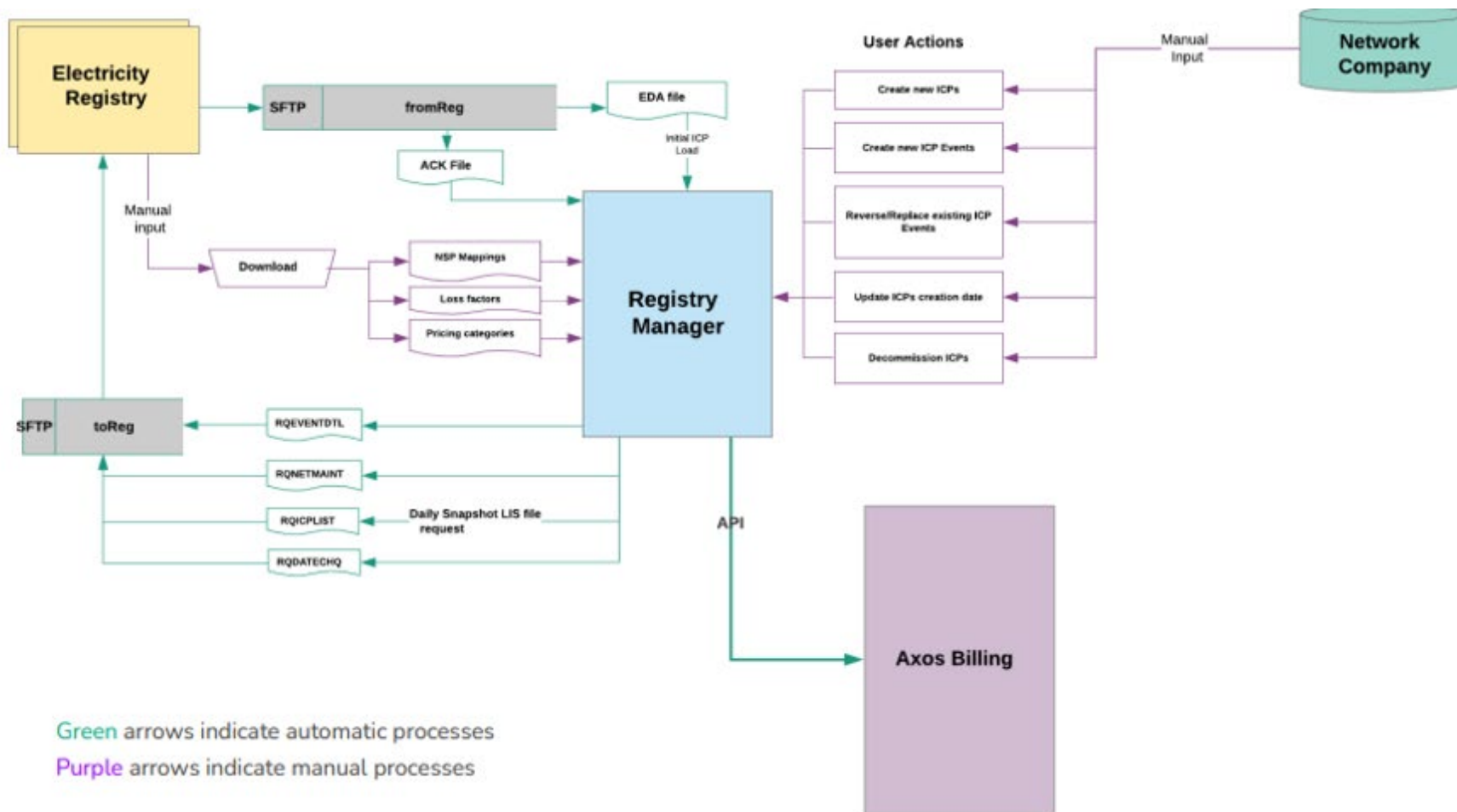
Wayne Pooley is engaged by TLC on occasion to assist when the workload requires this. He is a qualified electrician and electrical inspector.

### 1.5. Supplier list

TLC occasionally subcontracts dependent on workload requirements as detailed above.

## 1.6. Hardware and Software

TLC has changed from Orion to Axos during the audit period. A material change audit was completed in relation to this. TLC provided the diagram below showing the integration of the Axos Registry Manager system with other systems and processes:



Axos backups are created each morning and retained for 30 days.

Access to TLC's systems is restricted through individual logins and passwords. An audit trail of user actions is kept within Axos.

Basix is TLC's asset management system. NSP information held in Basix is manually updated in Axos.

### 1.7. Breaches or Breach Allegations

The last audit report recorded one alleged breach relevant to the scope of this audit and this has since been closed with "no further action" finding. I have included the details below for reference:

Ref	Breach Description	Clause	Target EGR Date	Outcome
2008LINE1	<p>Approximately 800 ICPs had an incorrect dedicated NSP flag recorded on the registry. All ICPs on the TLC network can be fed by more than one NSP and should all be recorded as not dedicated.</p> <p>Backdated corrections were processed prior to the audit, and no active or inactive ICPs had a dedicated NSP flag set to "no" on the registry list as of 2 September 2020.</p>	Part 11 clause 11.2	02/12/20	<p>No further action.</p> <p>Training has been conducted to prevent recurrence of the issue.</p>

There have been no alleged breaches during the audit period.

### 1.8. ICP and NSP Data

The table below lists the relevant NSPs, and their associated balancing areas. There have been no changes made during the audit period. Active ICP numbers are as of 30 November 2021.

Dist	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
LINE	ATI0111	ATIAMURI	HTI0331	LINE	NORTHLINEG	I	1/05/08	-
LINE	HTI0331	HANGATIKI			NORTHLINEG	G	1/02/12	11,576
LINE	HTI1101	HANGATIKI			NORTHLINEG	G	25/2/19	-
LINE	MEP0112	MOKAI	HTI0331	LINE	NORTHLINEG	I	16/02/12	-
LINE	MEP0113	MOKAI	HTI0331	LINE	NORTHLINEG	I	16/02/12	-
LINE	NPK0331	NATIONAL PARK			CENTRALLINEG	G	1/07/11	833
LINE	OKN0111	OHAKUNE			OKN0111LINEG	G	1/05/08	2,082
LINE	ONG0331	ONGARUE			CENTRALLINEG	G	1/05/08	4,481
LINE	TKU0331	TOKAANU			CENTRALLINEG	G	1/05/08	4,911



Dist	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
LINE	TLC0111	TANGIWAI OHAKUNE INTERCONNECT	OKN0111	LINE	OKN0111LINEG	I	01/07/19	-
LINE	WKM0331	WHAKAMARU	HTI0331	LINE	NORTHLINEG	I	1/05/08	2

A summary of TLC's ICPs as of 30 November 2021 by status is shown in the table below:

Status	Number of ICPs 2021	Number of ICPs 2020	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017	Number of ICPs 2016
Distributor (888)	0	0	0	0	0	0
New (999)	2	1	3	1	0	0
Ready (000)	32	21	13	26	8	9
Active (2,0)	23,885	23,649	23,593	23,596	23,501	23,311
Inactive - new connection in progress (1,12)	54	45	44	37	34	28
Inactive – vacant (1,4)	268	308	298	295	435	752
Inactive - reconciled elsewhere (1,5)	0	0	0	0	1	0
Inactive – AMI remote disconnection (1,7)	28	4	3	0	1	0
Inactive – disconnected due to meter disconnected (1,8)	28	38	41	64	50	38
Inactive – at pole fuse (1,9)	1	4	2	2	1	1
Inactive – disconnected at meter box switch (1,10)	0	0	0	1	0	0
Inactive - at meter box switch (1,11)	1	2	3	5	9	57
Inactive – ready for decommissioning (1,6)	12	8	5	42	76	52
Decommissioned (3)	3,682	3,546	3,465	3,175	2,832	2,502

## 1.9. Authorisation Received

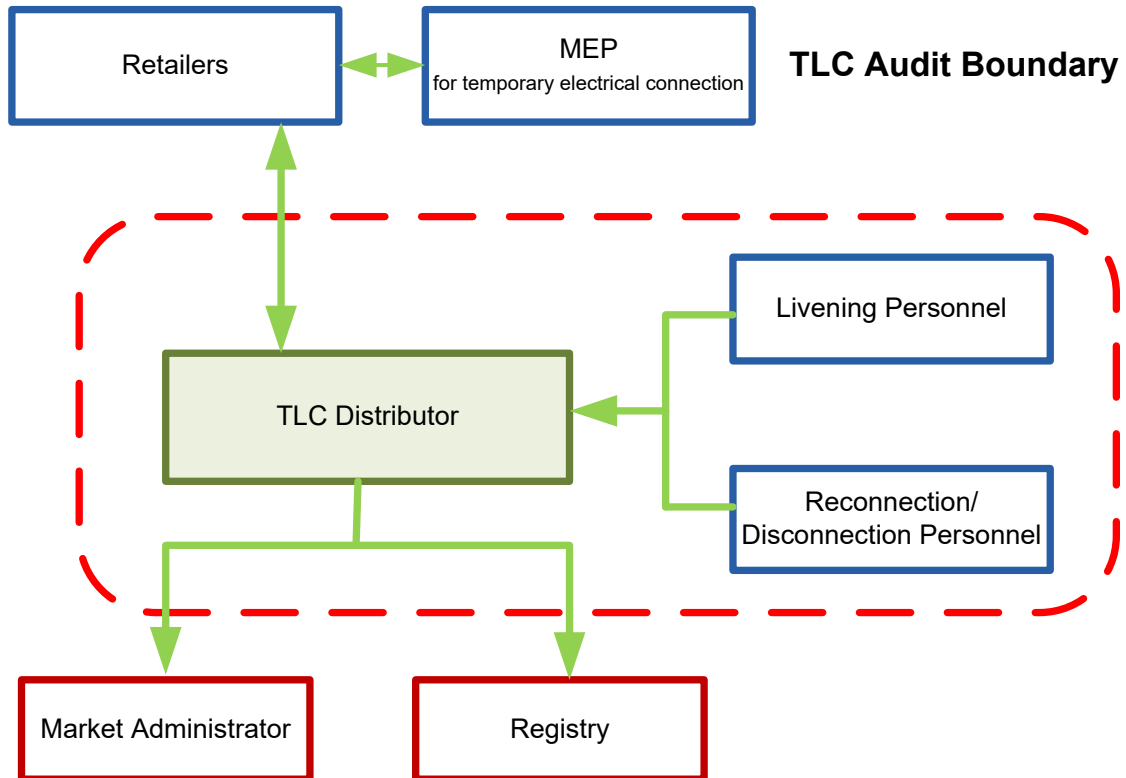
TLC provided a letter of authorisation to Veritek.

### 1.10. Scope of Audit

This Distributor audit was performed at the request of TLC to encompass the Electricity Industry Participation Code requirement for an audit as required by clause 11.10 of part 11. The audit was carried out remotely due to the COVID 19 pandemic on 15-17 March 2022.

The audit was conducted in accordance with the Guideline for Distributor Audits V7.2, which was produced by the Electricity Authority.

The scope of the audit is shown in the diagram below, with the TLC audit boundary shown for clarity.



All activities covered by this audit are conducted at TLC's office in Te Kuiti.

## 1.11. Summary of previous audit

I reviewed the previous audit conducted in February 2020 and the material change audit undertaken in August 2021. Both conducted by Tara Gannon of Veritek Limited. The February 2020 audit recorded seven non-compliances described in the table below and made four recommendations. The material change audit made three recommendations. The current status of the non-compliances and recommendations for each report is listed below.

### **TLC Distributor Audit 2020**

#### **Table of Non-compliances**

Subject	Section	Clause	Non-compliance	Status
Requirement to provide complete and accurate information	2.1	11.2(1)	<p>One pricing event and one network event had incorrect event dates and were corrected during the audit.</p> <p>Seven ICPs had incorrect initial electrical connection dates and were corrected during the audit.</p> <p>ICP 0001113309WMF74 had its chargeable capacity for pricing recorded in the generation capacity field due to a data entry error and was corrected during the audit.</p> <p>Distributed generation updates for ICPs 0004050770WM132, 0001120420WMOBE, 0001062900WM45A, and 0001112481WM688 had their generation capacity rounded to the nearest kW. Backdated corrections to the capacities were processed during the audit.</p> <p>Alleged breach 2008LINE1 was recorded for incorrect dedicated NSP information. All affected ICPs have had their dedicated NSP status corrected.</p>	Still existing
Distributors must create ICPs	3.1	11.4	ICPs are not created for ten unmetered streetlights.	Cleared
Participants may request distributors to create ICPs	3.2	11.5(3)	Four ICPs were not created within three business days of a request from a trader, and the reasons for the late update were not provided to the trader.	Cleared
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late population of the initial electrical connection dates for 27 ICPs.	Still existing
Changes to registry information	4.1	8 Schedule 11.1	<p>97 late address updates.</p> <p>812 late updates to dedicated NSP status.</p> <p>14 late updates to other network fields, excluding initial updates to initial electrical connection dates.</p> <p>44 late updates to decommissioned status.</p>	Still existing

Subject	Section	Clause	Non-compliance	Status
ICP location address	4.4	2 Schedule 11.1	88 ICPs had incomplete or duplicate address information; 85 were corrected during the audit, one relates to DUML load, and two are under investigation.  Nine ICPs had some incorrect address information, which was corrected during the audit.	
Distributors to Provide ICP Information to the Registry man	4.6	7(1) Schedule 11.1	The pricing update for ICP 0001113191WM880 had an incorrect event date; it was processed effective from the update date in error. The event date was corrected during the audit.  ICP 0001113309WMF74 had its chargeable capacity for pricing recorded in the generation capacity field due to a data entry error and was corrected during the audit.  At least seven ICPs had incorrect initial electrical connection dates, which were corrected during the audit.  Distributed generation updates for ICPs 0004050770WM132, 0001120420WM0BE, 0001062900WM45A, and 0001112481WM688 had their generation capacity rounded to the nearest kW. Backdated corrections to the capacities were processed during the audit.	Still existing

### **Table of Recommendations**

Subject	Section	Recommendation	Status
ICP location address	4.4	To identify ICPs with incorrect addresses and/or NSPs assigned: <ol style="list-style-type: none"> <li>1. Regularly review the registry audit compliance report AC020Distributor10 to identify ICPs where the NSP assigned differs from the expected value for the street.</li> <li>2. Use a registry snapshot report to identify ICPs connected to NSPs where less than 50% of the ICPs in that town are connected to that NSP.</li> </ol> Investigate any discrepancies to determine whether the address and NSP assigned are correct.	Adopted  Not yet adopted
Distributors to Provide ICP Information to the Registry man	4.6	Validate initial electrical connection dates against the trader's earliest active date and the MEP's meter certification date, to identify discrepancies which may require investigation and correction.  The registry audit compliance report could be used to identify discrepancies.	Adopted

Subject	Section	Recommendation	Status
Distributors to Provide ICP Information to the Registry man	4.6	At least monthly, compare ICPs which have an EG1 or PV1 profile on the registry list to the list of ICPs which distributed generation applications have been received for.  It may also be helpful to cross check to the MEP's meter channel records to determine whether injection registers are installed, and the high risk database may also contain information on generation installation ( <a href="https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home">https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home</a> ).  Follow up with the trader and/or customer to determine whether generation is installed.	Not yet adopted- has been repeated.
Management of "decommissioned" status	4.11	Query the status of ICPs 0001017920WM496 and 0005820970WM048 with Trustpower.  0001017920WM496 still has the trader listed as KING and was potentially not switched to Trustpower because it was expected to be decommissioned.	Cleared

### TLC Material Change Audit September 2021

#### Table of Recommendations

Subject	Section	Recommendation	Status
Requirement to provide complete and accurate information	2.1	Validate data in fields held in Axos against the registry at least weekly and investigate and resolve any discrepancies.	Not yet adopted- has been repeated.
Requirement to provide complete and accurate information	2.1	Review the registry AC020 audit compliance reports at least monthly to identify potentially inaccurate information which requires investigation and correction.  This check includes potentially inaccurate NSPs, duplicate and incomplete addresses, active ICPs without initial electrical connection dates, ICPs with initial electrical connection dates which are not active, initial electrical connection dates inconsistent with meter certification and/or active dates, and distributed generation discrepancies.	Adopted
Distributors to Provide ICP Information to the Registry manager	4.6	At least monthly, compare ICPs which have an EG1 or PV1 profile on the registry list to the list of ICPs which distributed generation applications have been received for.  It may also be helpful to cross check to the MEP's meter channel records to determine whether injection registers are installed, and the high risk database may also contain information on generation installation ( <a href="https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home">https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home</a> ).  Follow up with the trader and/or customer to determine whether generation is installed.	Not yet adopted- repeated

## 1.12. Audit Submission (Clause 16A.13(1))

### Code reference

Clause 11.2(1) and 10.6(1)

### Code related audit information

A participant must give the final audit report to the Authority no later than the date by which the audit is due to be completed.

### Audit commentary

The TLC audit was delayed due to the COVID-19 pandemic and has been completed as soon as possible. This causes a technical non-compliance for not submitting the report to the Electricity Authority by the due date.

Non-compliance	Description	
Audit Ref: 1.12 With: Clause 11.7  From: 16-Mar-22 To: 31-Mar-22	Late submission of audit report.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Strong  Breach risk rating: 1	
Audit risk rating	Rationale for audit risk rating	
<b>Low</b>	The controls are recorded as strong as TLC made every effort to complete this audit by the due date.  The audit risk rating is assessed to be low as the audit report will be submitted in sufficient time to not impact the setting of the next audit due date.	
Actions taken to resolve the issue	Completion date	Remedial action status
The audit was planned to be onsite but required postponing due to illness, COVID close contacts etc. A new onsite date was set, however, illness prevented this date, too. The audit was then conducted over Teams and took multiple days.  The timing of the audit also coincided with distributor price-setting and multiple other audits meaning mitigations in place were not available.	19/04/2022	Cleared
Preventative actions taken to ensure no further issues will occur	Completion date	

## 2. OPERATIONAL INFRASTRUCTURE

### 2.1. Requirement to provide complete and accurate information (Clause 11.2(1) and 10.6(1))

#### Code reference

*Clause 11.2(1) and 10.6(1)*

#### Code related audit information

*A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under Parts 10 or 11 is:*

- a) complete and accurate*
- b) not misleading or deceptive*
- c) not likely to mislead or deceive.*

#### Audit observation

I walked through the process to ensure that registry information is complete, accurate and not misleading or deceptive, including viewing reports used to resolve discrepancies.

The registry list for 30 November 2021 and combined AC020 reports for 1 November 2020 to 31 October 2021 and event detail report for 1 November 2020 to 30 November 2021 were examined to determine compliance.

#### Audit commentary

##### Registry synchronisation

ICP status, address, network, and pricing information is maintained in Axos. Each event type has an event date field, which defaults to today's date and can be modified.

Axos validates the data to ensure that the data meet's the registry's requirements for registry fields; and drop-down boxes are used to restrict values where practical. There are some system controls over data consistency, for example:

- generation capacity and fuel type can only be populated if the installation type is B or G,
- initial electrical connection dates cannot be future dated, and
- if GPS northing or easting is populated, the other must also be populated.

Axos will automatically update the registry for all distributor-maintained events and can also process event reversals and replacements. A synchronisation is completed each day to capture registry data updates within the last seven days unless it is manually triggered as an operator makes a change.

Axos retrieves registry acknowledgement files every five minutes. The files are reviewed in the registry manager to identify successful and failed updates, and failed updates will be investigated.

##### Registry and data validation

The registry synchronisation ensures that the current values recorded in Axos match the registry. Unsuccessful updates are identified and resolved through the synchronisation process.

As detailed in the material change audit, it is possible for events to be deleted prior to synchronisation, which could result in a mismatch. Because only the registry events in the last 15 days are considered, any backdated earlier than this will not be updated, which could also cause a mismatch. It was recommended that registry data is matched to Axos at least weekly. TLC has set up a data warehouse and exception reporting is currently being developed from this. As detailed in **section 4.11**, I found one instance where the status in Axos was different to the registry. ICP 0003535151WM7AF was at “ready for decommissioning” on 9 August 2021 but was at “inactive - vacant” in Axos and as a result it was not updated to decommissioned until 25 January 2022. I repeat the recommendation made in the material change audit to maintain visibility:

Recommendation	Description	Audited party comment	Remedial action
Registry – Axos validation	Validate data in fields held in Axos against the registry at least weekly and investigate and resolve any discrepancies.	Finalisation of the further development of discrepancy reporting is complete (as at 5/04/2022) with a Power BI being set to overlay the reporting.	Identified

The AC020 reports are being used to identify discrepancies monthly once billing is completed. During this audit I found, a small number of data accuracy issues which are discussed in **section 4.6**.

**Event dates**

Event dates should reflect the date from which the attribute values for the event apply. In the previous Orion system event dates would sometimes be incorrect if the operator did not update this field. In Axos the event date defaults to the current date and the majority of updates are made on the same date, so this has improved the overall accuracy. The event date is aligned with the initial electrical connection date.

**Data accuracy issues**

- ICP 0003535151WM7AF at the incorrect status in Axos preventing this being decommissioned.
- Nine ICPs recorded against the incorrectly recorded against WKM0331. Two active ICPs (1100000008WMEB9 active since 16 November 2021 and 1100000029WMFA9 active since 17 November 2021), six “new connection in progress” ICPs and one ICP at the “ready” status incorrectly recorded against WKM0331. This is an interconnection point and not a grid connected NSP and should not have any ICPs recorded against it. The interconnection NSPs are included in the Axos drop-down box but are being removed. The active ICPs were corrected during the audit. This process is discussed in **section 4.2**.
- Five ICPs had incorrect initial electrical connection dates, which were corrected during the audit.
- ICP 0003271548WM74C has no initial electrical connection date recorded. This has since been populated correctly.
- Five of seven ICPs sampled had the incorrect distributed generation kW value. Backdated corrections to the capacities were processed during the audit.
- Three of seven ICPs sampled had the incorrect date of distributed generation installation recorded.
- Two ICPs with a generation value but no fuel type and an installation type of L.
- ICP 0001113502WM7A6 incorrectly recorded with unmetered load.
- Three ICPs with the incorrect wattage value recorded in the unmetered load details.
- Five of ten ICPs sampled were decommissioned for the incorrect event date.

**Audit outcome**

Non-compliant



Non-compliance	Description		
<p>Audit Ref: 2.1 With: Clause 11.2(1)</p> <p>From: 01-Sep-20 To: 30-Nov-21</p>	<p>Data validation reporting not in place since Axos was deployed in October 2021 to compare registry vs. Axos data which could result in data mismatches not being identified. One instance was identified of this.</p> <p>Nine ICPs incorrectly recorded against NSP WKM0331.</p> <p>Five ICPs had incorrect initial electrical connection dates, which were corrected during the audit.</p> <p>ICP 0003271548WM74C has no initial electrical connection date recorded.</p> <p>Five of seven ICPs sampled had the incorrect distributed generation kW value. Backdated corrections to the capacities were processed during the audit.</p> <p>Three of seven ICPs sampled had the incorrect date of distributed generation installation recorded.</p> <p>Two ICPs with a generation value but no fuel type and an installation type of L. ICP 0001113502WM7A6 incorrectly recorded with unmetered load.</p> <p>Three ICPs with the incorrect wattage value recorded in the unmetered load details.</p> <p>Five of ten ICPs sampled decommissioned for the incorrect event date.</p> <p>Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
<p><b>Low</b></p>	<p>I have rated the controls as moderate as they will mitigate risk most of the time but there is room for improvement.</p> <p>The audit risk rating is assessed as low as the volume of errors is small in relation to the number of ICPs managed.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Continuing to correct the issues listed.		31/05/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Further training and discrepancy reporting.		31/05/2022 and ongoing	

## 2.2. Requirement to correct errors (Clause 11.2(2) and 10.6(2))

### Code reference

Clause 11.2(2) and 10.6(2)

### Code related audit information

*If the participant becomes aware that in providing information under this Part, the participant has not complied with that obligation, the participant must, as soon as practicable, provide such further information as is necessary to ensure that the participant does comply.*

### Audit observation

TLC's data management processes were examined. The registry list for 30 November 2021 and the combined AC020 reports for 1 November 2020 to 30 November 2021 were examined to determine compliance.

### Audit commentary

TLC have processes in place to identify and resolve registry discrepancies as described in **section 2.1**. The material change audit recommended that registry validation reporting be put in place to identify any registry and Axos mismatches. This is now being progressed, but the lack of this reporting has resulted in not all discrepancies being identified and therefore not corrected as soon as practicable. This is recorded as non-compliance below.

### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.2 With: Clause 11.2(2) and 10.6(2)  From: 01-Sep-20 To: 30-Nov-21	Data validation reporting not in place since Axos was deployed in October 2021 to compare registry vs. Axos data which has resulted in data mismatches not being identified. One instance was identified of this.  Potential impact: Low  Actual impact: Low  Audit history: Multiple times  Controls: Moderate  Breach risk rating: 2
Audit risk rating	Rationale for audit risk rating
<b>Low</b>	I have rated the controls as moderate as they will mitigate risk most of the time but there is room for improvement.  The audit risk rating is assessed as low as the volume of errors is small in relation to the number of ICPs managed.

Actions taken to resolve the issue	Completion date	Remedial action status
Discrepancy reporting.	5/04/2022	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Adopt recommended reviewing times of the different reports – minimum of weekly or monthly.	Ongoing	

### 2.3. Removal or breakage of seals (Clause 48(1A) and 48(1B) of Schedule 10.7)

#### Code reference

*Clause 48(1A) and 48(1B) of Schedule 10.7*

#### Code related audit information

*If the distributor provides a load control signal to a load control switch in the metering installation, the distributor can remove or break a seal without authorisation from the MEP to bridge or unbridge the load control device or load control switch – as long as the load control switch does not control a time block meter channel.*

*If the distributor removes or breaks a seal in this way, it must:*

- *ensure personnel are qualified to remove the seal and perform the permitted work and they replace the seal in accordance with the Code*
- *replace the seal with its own seal*
- *have a process for tracing the new seal to the personnel*
- *notify the metering equipment provider and trader*

#### Audit observation

Processes for removal or breakage of seals were reviewed.

#### Audit commentary

Only qualified personnel complete work on meters including removal or breakage of seals. I sighted the training records to confirm this. All qualified personnel have their own seals to use which are able to be traced to the person. TLC will only undertake this work on Influx meters, and they advise Influx in every instance.

#### Audit outcome

Compliant

## 2.4. Provision of information on dispute resolution scheme (Clause 11.30A)

### Code reference

Clause 11.30A

### Code related audit information

*A distributor must provide clear and prominent information about Utilities Disputes:*

- *on their website*
- *when responding to queries from consumers*
- *in directed outbound communications to consumers about electricity services and bills.*

*If there are a series of related communications between the distributor and consumer, the distributor needs to provide this information in at least one communication in that series.*

### Audit observation

The process to ensure that information on Utilities Disputes is provided to customers was discussed. TLC's website, email footers, and Utilities Disputes Messaging documentation was reviewed.

### Audit commentary

Information on Utilities Disputes is provided:

- as part of the customer services script when responding to inbound calls, and in person enquiries at TLC's office,
- as a written response to Facebook direct messages,
- as part of the email signature for emails,
- on outbound communications regarding pricing,
- on TLC's website, and
- on outbound communications regarding service and service changes, including planned outages, and maintenance.

### Audit outcome

Compliant

## 3. CREATION OF ICPS

### 3.1. Distributors must create ICPs (Clause 11.4)

#### Code reference

Clause 11.4

#### Code related audit information

*The distributor must create an ICP identifier in accordance with Clause 1 of Schedule 11.1 for each ICP on the distributor's network. This includes an ICP identifier for the point of connection at which an embedded network connects to the distributor's network.*

#### Audit observation

The new connection process was examined in detail and is described in **section 3.2** below.

30 new connection applications of the 362 ICPs created since 1 September 2020 were checked from the point of application through to when the ICP was created to confirm the process and controls.

#### Audit commentary

TLC creates ICPs as required by clause 1 of schedule 11.1. The sample checked confirmed that they were created compliantly.

ICPs are created in Axos, and the user populates the address, and network event information at the same time. There are controls over fields to ensure that they are consistent and meet the registry requirements.

Once the required fields are populated the user selects the "up sync" button to send the events to the registry, which creates the ICP with the "new" status.

Once the event acknowledgements have been received by Axos the user creates a distributor pricing event. Once this pricing event has been sent and accepted by the registry, the status is updated to the "ready" status.

The previous audit recorded non-compliance for a small number of unmetered streetlights which were not associated with a DUML ICP and did not have an unmetered load ICP created. The affected lights now have standard unmetered load created. Subsequent streetlight audits have identified additional private lights and standard unmetered load have been created for all those confirmed. There are a number of private lights identified from the Ruapehu DC streetlight audit, discussed in **sections 4.6**, that are being investigated to confirm if these are electrically connected to a metered supply or need to be added to an existing ICP as standard unmetered load or a separate unmetered load needs to be created.

The distributor is responsible for creating the ICP for the point of connection for an embedded network to its parent network. There have been no new embedded networks created during the audit period.

Shared unmetered load is discussed further in **section 7.1**.

#### Audit outcome

Compliant

### 3.2. Participants may request distributors to create ICPs (Clause 11.5(3))

#### Code reference

Clause 11.5(3)

#### Code related audit information

*The distributor, within 3 business days of receiving a request for the creation of an ICP identifier for an ICP, must either create a new ICP identifier or advise the participant of the reasons it is unable to comply with the request.*

#### Audit observation

The new connection process was examined in detail. 30 new connection applications of the 336 ICPs created since 1 September 2020 were checked to determine whether the ICPs had been created within three business days of a request by a trader. The sample included various traders.

#### Audit commentary

New connection data is entered into Axos and transferred to the registry.

1. An application for new load (AFL) is provided to TLC by the customer, the customer's agent, or the trader.
2. The AFL is approved or declined.
3. A request for approval is sent to the proposed trader indicated by the customer.
4. The ICP is created in Axos and data is transferred to the registry.
5. Once the proposed trader has confirmed acceptance and requested livening, TLC schedules the connection to be completed.

A very small number of new connection requests are made by Retailers. The vast majority are made by the electrician or the customer. If an ICP cannot be created on request because not all the requested information is provided, the trader and/or customer will be advised via email of the reasons for the delay. No recent examples of this were available.

The process ensures that ICPs are created on time but will not be made "ready" without the trader's approval. Copies of all documents are scanned and filed on TLC's network.

I checked a sample of 30 new ICPs and those requested by the trader were created within three business days of the request.

#### Audit outcome

Compliant

### 3.3. Provision of ICP Information to the registry manager (Clause 11.7)

#### Code reference

Clause 11.7

#### Code related audit information

*The distributor must provide information about ICPs on its network in accordance with Schedule 11.1.*

### Audit observation

A diverse characteristics sample of 30 new connection applications of the 336 ICPs created since 1 September 2020 were checked from the point of application through to when the ICPs were created, to confirm the process and controls worked in practice.

Data populated on the registry was checked for all new connections during the audit period, to confirm that required fields were populated.

### Audit commentary

TLC receives new connection requests from customers or their agents, and a service request from the retailer confirming their trader acceptance.

ICPs are created in Axos, and the user populates the address, and network event information at the same time. There are controls over fields to ensure that they are consistent and meet the registry requirements.

Once the required fields are populated the user selects the “up sync” button to send the events to the registry, which creates the ICP with the “new” status.

After the registry acknowledgement file has been received by Axos the user creates a distributor pricing event. Once this event is sent and accepted by the registry, the status will be updated to the “ready” status.

When creating an ICP, the operator:

- checks the address in Axos, on the registry and in the Basix GIS system before creating the ICP, to ensure that there are no existing ICPs with the same address (Axos will flag to an operator if there is another ICP with the same address, but it must be exactly the same to flag correctly),
- the transformer and NSP are selected manually in Axos, these details are determined from Basix,
- the loss factor is determined based on geography, and
- enters the pricing details are entered provided by the Senior Data Analyst.

ICP information provided to the registry was correct for the sample of ICPs checked against application and connection details. The required fields were populated on the registry for all new connections.

Information was provided as required by this clause, except for nine electrically connected ICPs with no initial electrical connection dates recorded. These were examined and found:

- eight have since been populated as part of BAU, and
- ICP 0003271548WM74C has been noted in the last two audit reports as this site is part of an ICP amalgamation that was moved by King Country Energy from “ready” to a “vacant” status on 19 October 2000 and was first made “active” on 30 May 2017 - TLC have since updated the registry with the first active date. This is recorded as a technical non-compliance below and in **section 4.6**.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.3 With: Clause 11.7  From: 30-May-17 To: 31-Dec-21	One electrically connected ICP with no initial electrical connection date populated. 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 recorded as strong as the processes in place will mitigate risk to an acceptable level.  The audit risk rating is assessed to be low as only one ICP was affected, and this has no direct impact on reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
Connections updated process documentation and trained new staff to forward IECD documentation.		31/03/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing training and reminders.		Ongoing	

#### 3.4. Timeliness of Provision of ICP Information to the registry manager (Clause 7(2) of Schedule 11.1)

##### Code reference

Clause 7(2) of Schedule 11.1

##### Code related audit information

*The distributor must provide information specified in Clauses 7(1)(a) to 7(1)(o) of Schedule 11.1 as soon as practicable and prior to electricity being traded at the ICP.*

##### Audit observation

The registry list for 30 November 2021, event detail report for 1 September 2020 to 30 November 2021, and combined AC020 reports for 1 November 2020 to 30 November 2021 were examined to determine the timeliness of the provision of ICP information for new connections. All updates were checked, to determine whether they were on time.

##### Audit commentary

TLC continues to create ICPs at “ready”, unless they know a network extension is needed. Then the ICP is not created until the ICP is ready for connection.



The event detail report identified that 284 new ICPs were created and electrically connected. The audit compliance reports identified four ICPs of the 284 ICPs (99% compliance) that were made “ready” after electrical connection had occurred. These were examined and found:

- three were delayed due to human errors that prevented the ICP updating on the registry, and all occurred before Axos was deployed,
- ICP 0001113548WM792 was created on 24 May 2021 and backdated to 18 May 2021 to account for the unmetered lighting identified on Kaka Street in the last audit, but as this was existing load it should have been backdated to the date it was removed from the Waitomo District Council streetlight database, or if this cannot be determined, backdated 14 months to enable the reconciliation of the missing volume for the available revision period.

ICPs 0001113530WM0DB and 0001113529WM427 were created on 15 April 2021 and made active for the same date to account for the two lights outside the TLC depot in Taumararui (one ICP would have been sufficient), but as this was existing load the ICPs should have been backdated to the date they were removed from the Ruapehu District Council streetlight database, or if this cannot be determined, backdated 14 months to enable the reconciliation of the missing volume for the available revision period.

The timeliness of provision of initial electrical connection dates is discussed separately in **section 3.5** and the accuracy of the initial electrical connection dates is discussed in **section 4.6**.

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 3.4 With: Clause 7(2) of Schedule 11.1 From: 01-Apr-20 To: 24-May-21	Six ICPs not created prior to electricity being traded. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as strong now as TLC now has a better understanding of reconciliation impacts due to the change in line charge billing. The audit risk rating is assessed to be low as only three ICPs were affected, and the market impact is minor.		
Actions taken to resolve the issue		Completion date	Remedial action status
Training and a better understanding of reconciliation impacts.		13/04/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing training and process reminders.		Ongoing.	

### 3.5. Timeliness of Provision of Initial Electrical Connection Date (Clause 7(2A) of Schedule 11.1)

#### Code reference

Clause 7(2A) of Schedule 11.1

#### Code related audit information

*The distributor must provide the information specified in subclause (1)(p) to the registry manager no later than 10 business days after the date on which the ICP is initially electrically connected.*

#### Audit observation

The process for populating initial electrical connection dates was examined.

The AC020 report for 1 November 2020 to 30 November 2021 was examined to determine the timeliness of initial electrical connection dates. A typical sample of late updates were checked.

#### Audit commentary

##### Initial electrical connection date process

TLC's network services team complete initial electrical connection and provide paperwork confirming the date. In many cases one person completes the network connection and metering installation at the same time. If different people are involved in the connection, the visit is coordinated so that the meter installation and connection occur on the same day. If it is not possible for the meter installation and connection to be completed on the same day, the network services team ensures that the ICP is not connected, and electricity is not flowing into the installation until after the meter is installed.

Initial electrical connection dates are entered into Axos, and data is automatically transferred from Axos to the registry. The synchronisation processes discussed in **section 2.1**.

The last audit's recommendation to use the AC020 report to validate the initial electrical connection dates against the trader's earliest active date and the MEP's meter certification date was adopted in August 2021.

##### Late initial electrical connection date updates

The AC020 report recorded 30 initial electrical connection dates which were populated more than ten business days after initial electrical connection. None were populated within 30 business days of initial electrical connection, 23 were populated within 90 business days, and 29 were populated within 171 business days. ICP 0001112650WMD88 was backdated 1190 days but this was not the population of the initial electrical connection date, but the correction the NSP dedication flag.

I checked ten late updates after the initial electrical connection date and found:

- seven updates were identified via the AC020 and were corrected in August,
- two were backdated unmetered load connections for streetlights identified via the Ruapehu District Council private unmetered streetlights, as these were existing electrical connections the population of the initial electrical connections was missed and was corrected in August 2021, and
- ICP 0001113310WMB88 was incorrectly recorded as this was a change to distributed generation details, and not the population of the initial electrical connection date.

The accuracy of the dates is discussed in **section 4.6**.

All ICPs checked had the correct initial electrical connection date, apart from 0001113258WM23D which was recorded as 8 July 2020 instead of 7 August 2020 due to a typing error. The date was corrected during the audit.

Late update of the initial electrical connection dates on the registry is recorded as non-compliance below.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: Clause 7(2A) of Schedule 11.1  From: 01-Jul-17 To: 04-Oct-21	Late population of the initial electrical connection dates for 28 ICPs.  Potential impact: Low  Actual impact: Low  Audit history: Multiple  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	I have rated the controls as strong as the processes in place will mitigate risk to an acceptable level.  The audit risk rating is low this has no direct impact on reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
More trained staff actively populating IECD.		31/03/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
More trained staff actively populating IECD.		31/03/2022	

### 3.6. Connection of ICP that is not an NSP (Clause 11.17)

#### Code reference

Clause 11.17

#### Code related audit information

*A distributor must, when connecting an ICP that is not an NSP, follow the connection process set out in Clause 10.31.*

*The distributor must not connect an ICP (except for an ICP across which unmetered load is shared) unless a trader is recorded in the registry as accepting responsibility for the ICP.*

*In respect of ICPs across which unmetered load is shared, the distributor must not connect an ICP unless a trader is recorded in the registry as accepting responsibility for the shared unmetered load, and all traders that are responsible for an ICP on the shared unmetered load have been advised.*

#### Audit observation

The new connection process was examined in **sections 3.1** and **3.2**.

The registry list for 1 December 2021 and event detail report for 1 September 2020 to 30 November 2021 were examined to determine compliance.

No new shared unmetered load was created during the audit period.

#### Audit commentary

ICPs will not be electrically connected without the agreement from the trader. Trader acceptance is confirmed during the application process.

Review of the registry list confirmed that:

- a trader is recorded for all ICPs with “active” or “inactive” status,
- a proposed trader is recorded for all ICPs with “ready” status, and
- shared unmetered load is not recorded for ICPs on TLC’s network.

As discussed in **section 3.4**, 284 of the 362 ICPs created after 1 September 2020 had an initial electrical connection date recorded, indicating that they were electrically connected during the period. All ICPs with an initial electrical connection date had a proposed trader recorded on the registry prior to initial electrical connection.

#### Audit outcome

Compliant

### 3.7. Connection of ICP that is not an NSP (Clause 10.31)

#### Code reference

*Clause 10.31*

#### Code related audit information

*A distributor must not connect an ICP that is not an NSP unless requested to do so by the trader trading at the ICP, or if there is only shared unmetered load at the ICP and each trader has been advised.*

#### Audit observation

The new connection process was examined in **sections 3.1** and **3.2**.

30 new connection applications of the 336 ICPs created since 1 September 2020 were checked to determine whether ICPs were connected at the request of the trader.

The registry list as of 1 December 2021 was reviewed to confirm that all active ICPs had a trader recorded.

#### Audit commentary

ICPs will not be electrically connected without the agreement from the trader, who in turn has an agreement with an MEP for the ICP. Trader acceptance is confirmed during the application process.

A sample of 30 new connections were checked, and trader responsibility was consistently accepted prior to electrical connection.

As discussed in **section 3.4**, 284 ICPs were electrically connected during the audit period. All ICPs with an initial electrical connection date had a proposed trader recorded on the registry prior to initial electrical connection.

#### Audit outcome

Compliant

### 3.8. Temporary electrical connection of ICP that is not an NSP (Clause 10.31A)

#### Code reference

Clause 10.31A

#### Code related audit information

*A distributor may only temporarily electrically connect an ICP that is not an NSP if requested by an MEP for a purpose set out in clause 10.31A(2), and the MEP:*

- *has been authorised to make the request by the trader responsible for the ICP; and*
- *the MEP has an arrangement with that trader to provide metering services.*

*If the ICP is only shared unmetered load, the distributor must advise the traders of the intention to temporarily connect the ICP unless:*

*advising all traders would impose a material cost on the distributor, and in the distributor's reasonable opinion, the advice would not result in any material benefit to any of the traders.*

#### Audit observation

The new connection process was examined in **sections 3.1** and **3.2**. The registry list for 1 December 2021 and AC020 report for 1 November 2020 to 30 November 2021 were examined to determine compliance.

#### Audit commentary

An ICP will not be electrically connected without the agreement from the trader, who in turn has an agreement with an MEP for the ICP.

TLC's network services team complete initial electrical connection and provide paperwork confirming the date. In many cases one person completes the network connection and metering installation at the same time. If different people are involved in the connection, the visit is coordinated so that the meter installation and connection occur on the same day. If it is not possible for the meter installation and connection to be completed on the same day, the network services team ensures that the ICP is not connected, and electricity is not flowing into the installation until after the meter is installed.

Any ICPs that are temporarily electrically connected follow the same process as all other new connections.

Four ICPs were identified with meter certification dates prior to the initial electrical connection date and first active date. These were examined and found that:

- two were due to ICP deconsolidation and therefore it was a paperwork exercise, and the meter certification was earlier than the first active date,
- the MEP has since corrected the meter certification date, and this now aligns with the initial electrical connection date and the first active date, and
- I reviewed the paperwork for ICP 0001113635WME97 and it was confirmed as temporarily electrically connected on 10 September 2021 to certify the meter, but the initial electrical connection date and first active date are recorded as 14 September 2021, which is recorded as non-compliance in **section 4.6**.

#### Audit outcome

Compliant

### 3.9. Connection of NSP that is not point of connection to grid (Clause 10.30)

#### Code reference

Clause 10.30

#### Code related audit information

*A distributor must not connect an NSP on its network that is not a point of connection to the grid unless requested to do so by the reconciliation participant responsible for ensuring there is a metering installation for the point of connection.*

*The distributor must, within five business days of connecting the NSP that is not a point of connection to the grid, advise the reconciliation manager of the following in the prescribed form:*

- *the NSP that has been connected*
- *the date of the connection*
- *the participant identifier of the MEP for each metering installation for the NSP*
- *the certification expiry date of each metering installation for the NSP.*

#### Audit observation

The NSP table and notifications to the reconciliation manager were reviewed.

#### Audit commentary

No new NSPs were created by TLC during the audit period.

#### Audit outcome

Compliant

### 3.10. Temporary electrical connection of NSP that is not point of connection to grid (Clause 10.30(A))

#### Code reference

Clause 10.30(A)

#### Code related audit information

*A distributor may only temporarily electrically connect an NSP that is not a point of connection to the grid if requested by an MEP for a purpose set out in clause 10.30A(3), and the MEP:*

- *has been authorised to make the request by the reconciliation participant responsible for the NSP; and*
- *the MEP has an arrangement with that reconciliation participant to provide metering services.*

#### Audit observation

The NSP table was reviewed.

#### Audit commentary

No new NSPs were created by TLC during the audit period.

#### Audit outcome

Compliant

### 3.11. Definition of ICP identifier (Clause 1(1) Schedule 11.1)

#### Code reference

*Clause 1(1) Schedule 11.1*

#### Code related audit information

*Each ICP created by the distributor in accordance with Clause 11.4 must have a unique identifier, called the “ICP identifier”, determined in accordance with the following format:*

*xxxxxxxxxxxccc where:*

- *xxxxxxxxxx is a numerical sequence provided by the distributor*
- *xx is a code that ensures the ICP is unique (assigned by the Authority to the issuing distributor)*
- *ccc is a checksum generated according to the algorithm provided by the Authority.*

#### Audit observation

The new connection process was examined, and a sample of 15 ICPs were checked.

#### Audit commentary

ICP numbers are created in the correct format by AXOS, and there are processes in place to ensure that ICP numbers in AXOS and Orion do not overlap.

#### Audit outcome

Compliant

### 3.12. Loss category (Clause 6 Schedule 11.1)

#### Code reference

*Clause 6 Schedule 11.1*

#### Code related audit information

*Each ICP must have a single loss category that is referenced to identify the associated loss factors.*

#### Audit observation

The process of allocation of the loss category was examined. The list file as of 1 December 2021 was examined to confirm all active ICPs have a single loss category code.

#### Audit commentary

The loss category is assigned to the ICP based on the transformer, which is mapped to the NSP. For large ICPs the asset management group will advise the correct loss factor to be applied.

Each active and inactive ICP only has a single loss category, which clearly identifies the relevant loss factor. I checked loss factor assignments against the NSP for all active ICPs and confirmed they were correct.

#### Audit outcome

Compliant

### 3.13. Management of “new” status (Clause 13 Schedule 11.1)

#### Code reference

Clause 13 Schedule 11.1

#### Code related audit information

The ICP status of “New” must be managed by the distributor to indicate:

- the associated electrical installations are in the construction phase (Clause 13(a) of Schedule 11.1)
- the ICP is not ready for activation (Clause 13(b) of Schedule 11.1).

#### Audit observation

The ICP creation process was reviewed. The registry list for 1 December 2021, event detail report for 1 September 2020 to 30 November 2021, and combined AC020 reports for 1 November 2020 to 30 November 2021 were examined to determine compliance.

#### Audit commentary

As discussed in **section 3.2**, ICPs are normally created at “ready” once they are ready to be connected. The “new” status is not expected to be used but this sometimes occurs if the ICP has details missing and therefore it updates to the registry at the “new” status. The registry discrepancy reporting being put in place will assist with identifying such ICPs.

A review of the list file identified two ICPs at the “new” status. ICP 0001113549WMBD7 has since been decommissioned as set up error. This was due to individual ICPs being created in error for the private unmetered lights in Kaka Street. These are discussed further in **section 4.6**. ICP 110000009WM2FC is at the new status in error as no price category had been entered. This has been corrected and the ICPs has is now at “ready”

The monitoring of ICPs at the “new” and “ready” statuses is discussed in **section 3.14**.

#### Audit outcome

Non-compliant



Non-compliance	Description		
Audit Ref: 3.13 With: Clause 13 of Schedule 11.1 From: 01-Oct-21 To: 31-Mar-22	ICP 110000009WM2FC incorrectly recorded at the “new” status. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	I have rated the controls as moderate as there is room for improvement. The audit risk rating is low as only one ICP was affected.		
Actions taken to resolve the issue		Completion date	Remedial action status
Axos now has a dropdown box for status, it is easy to filter to “New” and identify these ICPs.		5/04/2022 Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Check the status every few days using the above tool		Ongoing	

### 3.14. Monitoring of “new” & “ready” statuses (Clause 15 Schedule 11.1)

#### Code reference

Clause 15 Schedule 11.1

#### Code related audit information

*If an ICP has had the status of “New” or has had the status of “Ready” for 24 months or more:*

- *the distributor must ask the trader who intends to trade at the ICP whether the ICP should continue to have that status (Clause 15(2)(a) of Schedule 11.1)*
- *the distributor must decommission the ICP if the trader advises that the ICP should not continue to have that status (Clause 15(2)(b) of Schedule 11.1).*

#### Audit observation

The process to monitor ICPs at “new” and “ready” status was reviewed. The registry list for 1 December 2021 and AC020 report for 1 November 2020 to 30 November 2021 were examined to determine compliance.

#### Audit commentary

As noted in the material change audit, the process to monitor ICPs at “new” and “ready” status has changed with the implementation of Axos. There is reporting in place, but this is not currently being used instead a “current details” report from the registry is run twice monthly, and this identifies all ICPs at the “new” or “ready” status and these are passed to the network services team to review. This is done as resource allows.

No ICPs have been at the “new” status for more than 24 months.

Two ICPs were identified on the audit compliance report as having been at the “ready” status for more than 24 months. These have since been confirmed as no longer required and have been decommissioned.

#### **Audit outcome**

Compliant

### 3.15. Embedded generation loss category (Clause 7(6) Schedule 11.1)

#### **Code reference**

*Clause 7(6) Schedule 11.1*

#### **Code related audit information**

*If the ICP connects the distributor's network to an embedded generating station that has a capacity of 10 MW or more (clause 7(1)(f) of Schedule 11.1):*

- *The loss category code must be unique; and*
- *The distributor must provide the following to the reconciliation manager:*
  - o *the unique loss category code assigned to the ICP*
  - o *the ICP identifier of the ICP*
  - o *the NSP identifier of the NSP to which the ICP is connected*
  - o *the plant name of the embedded generating station.*

#### **Audit observation**

The EMI wholesale data set as of 16 February 2022 and registry list as of 1 December 2021 were reviewed to identify any generation stations with capacity of 10 MW or more and determine compliance.

#### **Audit commentary**

TLC has no embedded generation greater than 10 MW, and no ICPs require a unique loss category.

#### **Audit outcome**

Compliant

### 3.16. Electrical connection of a point of connection (Clause 10.33A)

#### **Code reference**

*Clause 10.33A(4)*

#### **Code related audit information**

*No participant may electrically connect a point of connection or authorise the electrical connection of a point of connection, other than a reconciliation participant.*

#### **Audit observation**

Sub-clause (4) states that no participant may electrically connect a point of connection without the permission of the Reconciliation Participant. The electrical connection of streetlight circuits which are a point of connection was examined.

### Audit commentary

The process of new streetlights being electrically connected on the network was reviewed. The expectation is that any new streetlights being added will be managed through the new connection process even if being added to an existing streetlight ICP. Examination of the process in the streetlight audits indicates that streetlights are being electrically connected by TLC with no knowledge of these occurring in the new connections area, therefore no trader has accepted responsibility for the additional load and therefore it is unlikely to be being reconciled, or if it is added to a council streetlight database they are not receiving any notification of the electrical connection date so it will not be accounted for from the correct date. This was evident in the recent Ruapehu District Council DUML audit. This is recorded as non-compliance below, and I recommend this process is reviewed.

Recommendation	Description	Audited party comment	Remedial action
Electrical connection of a point of connection	Review the electrical connection of streetlights to ensure that a trader has accepted responsibility for the additional load.	Internal parties to collaborate to resolve issues of missing new or additional streetlight information.	Investigating

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.16 With: Clause 10.33A  From: 01-Sep-20 To: 30-Nov-21	No trader acceptance prior to the electrical connection of new streetlights to the network.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Weak  Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as weak as the process does not have sufficient controls to mitigate risk to an acceptable level.  The audit risk rating is assessed to be low as the volume of new streetlights on the TLC network is expected to be small.		
Actions taken to resolve the issue		Completion date	Remedial action status
Internal parties to collaborate to resolve issues of missing new or additional streetlight information.		31/05/2022	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Plan of action from above.		31/05/2022	

### 3.17. Electrical disconnection of a point of connection (Clause 10.30C and 10.31C)

#### Code reference

*Clause 10.30C and 10.31C*

#### Code related audit information

*A distributor can only disconnect, or electrically disconnect an ICP on its network:*

- *if empowered to do so by legislation (including the Code)*
- *under its contract with the trader for that ICP or NSP*
- *under its contract with the consumer for that ICP*

#### Audit observation

The disconnection process was examined.

#### Audit commentary

TLC will only undertake an electrical disconnection when a request is received from a trader or for safety. In both instances TLC will liaise with the relevant trader.

#### Audit outcome

Compliant

### 3.18. Meter bridging (Clause 10.33C)

#### Code reference

*Clause 10.33C*

#### Code related audit information

*A distributor may only electrically connect an ICP in a way that bypasses a meter that is in place ("bridging") if the distributor has been authorised by the responsible trader.*

*The distributor can then only proceed with bridging the meter if, despite best endeavours:*

- *the MEP is unable to remotely electrically connect the ICP*
- *the MEP cannot repair a fault with the meter due to safety concerns*
- *the consumer will likely be without electricity for a period which would cause significant disadvantage to the consumer*

*If the distributor bridges a meter, the distributor must notify the responsible trader within 1 business day and include the date of bridging in its advice.*

#### Audit observation

Processes for meter bridging were reviewed.

#### Audit commentary

Bridging will only occur in accordance with clause 10.33C. These are notified to the MEP but not the trader. This is recorded as non-compliance below.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.18 With: Clause 10.33C  From: 01-Sep-20 To: 30-Nov-21	Traders not notified of bridged meters.  Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as strong as TLC have updated their processes so that the trader will be notified going forward.  The audit risk rating is assessed to be low as the volume of bridged meters is small and therefore the potential impact of reconciliation is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Manager Network Services has been made aware of the issue.		17/03/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Process updates and training.		31/05/2022	

## 4. MAINTENANCE OF REGISTRY INFORMATION

### 4.1. Changes to registry information (Clause 8 Schedule 11.1)

#### Code reference

*Clause 8 Schedule 11.1*

#### Code related audit information

*If information held by the registry that relates to an ICP for which the distributor is responsible changes, the distributor must give written notice to the registry manager of that change.*

*Notification must be given by the distributor within three business days after the change takes effect, unless the change is to the NSP identifier of the NSP to which the ICP is usually connected (other than a change that is the result of the commissioning or decommissioning of an NSP).*

*In those cases, notification must be given no later than eight business days after the change takes effect.*

*If the change to the NSP identifier is for more than 10 business days, the notification must be provided no later than the 13<sup>th</sup> business day and be backdated to the date the change took effect.*

*In the case of decommissioning an ICP, notification must be given by the later of three business days after the registry manager has advised the distributor that the ICP is ready to be decommissioned, or three business days after the distributor has decommissioned the ICP.*

#### Audit observation

The management of registry updates and NSP changes was reviewed. The combined AC020 audit compliance reports for 1 November 2020 to 30 November 2021 were reviewed to determine compliance. A diverse sample of a minimum of five (or all if there were less than ten examples) backdated events by event type were reviewed to determine the reasons for the late updates.

#### Audit commentary

When information recorded in the registry changes, the distributor should ensure that the registry is updated within three business days. This section assesses compliance for updates to existing information, and initial population of data for new ICPs is assessed in **sections 3.4** and **3.5**.

The user selects the event type which requires update in Axos, and the screen is automatically populated with the existing values for each field in Axos and today's event date. The user modifies the event and event date information as required. Future event dates are not allowed, and drop-down lists and field validations are set to help to ensure only valid values are entered. Once saved, the changes are automatically synchronised to the registry during the next scheduled synchronisation which occurs nightly. Synchronisation can be triggered manually where an immediate change is required.

Axos retrieves registry acknowledgement files every five minutes. The files are reviewed in the registry manager to identify successful and failed updates. Failed updates appear as synchronisation status alerts on the landing page in Axos and are investigated.

If an event needs to be changed, it can be deleted before the record is synchronised with the registry, otherwise Axos allows event reversals and replacements to be sent. Events can only be reversed if they are the latest event for that event type, and if an older event needs to be reversed all later events must be reversed or the update will need to be manually processed on the registry.

Axos will automatically update the registry for all distributor-maintained events.

Registry events processed by other parties are updated in Axos daily. A synchronisation is completed each morning at 4am to capture registry data updates within the last seven days. Axos does not use notification files.

I have repeated the recommendation made in the material change audit, to validate Axos data against the registry, in **section 2.1**.

The table below details the quantity and compliance of registry updates.

Update	Date	Late	% Compliant	Average days
Address	2020	97	88.21%	N/A
	<b>2021</b>	<b>10</b>	<b>99.13%</b>	<b>5.04</b>
Price codes	2020	0	100%	N/A
	<b>2021</b>	<b>521</b>	<b>N/A</b>	<b>N/A</b>
Status	2020	44	44.63%	18.43
	<b>2021</b>	<b>2</b>	<b>66.67%</b>	<b>9.50</b>
Network (excl. new connection & Distributed Generation)	2020	8	N/A	N/A
	<b>2021</b>	<b>8</b>	<b>N/A</b>	<b>N/A</b>
Distributed Generation	2020	15	11.76%	123.35
	<b>2021</b>	<b>2</b>	<b>33.33%</b>	<b>215</b>
NSP Changes	2020	2	N/A	N/A
	<b>2021</b>	<b>0</b>	<b>100%</b>	<b>N/A</b>

**Address events**

There were ten late address updates. A typical sample of five ICPs were examined and found four were updates directly in the registry where the event date was not changed so the update was backdated. ICP 0001113110WM18F was a keying error where the wrong year was entered. This is recorded as non-compliance below.

**Pricing events**

The combined AC020 reports reported 521 pricing updates made more than three business days after the event date. 512 of these were made prior to the Axos deployment. A typical sample of six ICPs these events were examined and found all were due to a backlog of changes needing to be processed hence these were backdated. This was caused by the change from direct billing and retailer billing where the customer service team were made redundant and started to leave, leaving the team under resourced while transitioning.

A sample of four of the nine late pricing updates made post the Axos deployment were examined and found that three were on the general price category code as they were thought to be unoccupied dwellings but the EIEP1 file identified these were occupied so the price category was backdated to be correct. ICP 0001903300WM2B5 was backdated as requested by the trader.

The code change that came into effect on 31 December 2021 to allow the distributor's to backdate price category codes more than three days if agreed with the trader will improve compliance in this area.

### **Status events**

The management of decommissioned ICPs and accuracy of ICP dates is discussed in **section 4.11**.

The AC020 report for the period from 1 November 2020 to 31 October 2021 recorded that 67 ICPs had their status updated to decommissioned more than three business days after the event date, and more than three business days after the trader's update to "ready for decommissioning" status prior to the Axos deployment. 38.53% of updates to decommissioned status were on time, and the average business days between the event date and update date was 15.93. I checked a typical sample of ten of these and found that these were due to late paperwork from the field or a resource constraint resulting in updates to the registry being late.

There have been two late status changes post the Axos deployment (audit period 1 November 2021 to 30 November 2021). 66.67% of updates to decommissioned were on time, and an average of 9.5 days. I checked both late updates and found they were due to late paperwork.

The accuracy of the decommissioning events is discussed in **section 4.11**.

### **Network events**

The network events evaluated excluded those relating to the population of the initial electrical connection dates (discussed in **section 3.5**), and the initial network events relating to the creation of ICPs.

The network event compliance report was examined and found eight genuine late network updates. These were examined and found:

- four were due to removal of the direct billed distributor reference needed as part of the move to Axos,
- three were due to the correction of the ICP dedication flag that was discussed in the previous audit, and
- ICP 0001113309WMF74 had the distributed generation details removed.

### **Network events – distributed generation**

The process is discussed in **section 4.6**.

The AC020 report for the period from 1 November 2020 to 31 October 2021 recorded that 11 ICPs had distributed generation added more than three business days after the event date prior to the Axos deployment. 31.25% of the distributed generation updates were on time, and the average business days between the event date and update date was 120.44. I checked a typical sample of five of these and found that these were due to either late notification or resource constraint.

There have been two late updates post the Axos deployment (audit period 1 November 2021 to 30 November 2021). 33.33% of the updates were on time, and an average of 215 days. I checked both late updates and found that these were due to late notification.

The accuracy of the distributed generation details is discussed in **section 4.6**.



## NSP changes

The process is discussed in **section 4.2**.

The combined AC020 reports found no late NSP changes have occurred during the audit period.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: Clause 8 of Schedule 11.1  From: 01-Sep-20 To: 30-Nov-21	Ten late address updates. 521 late pricing events. 69 late updates to decommissioned status. 13 late distributed generation updates. Eight late network updates to other network fields, excluding initial updates to initial electrical connection dates and the addition of distributed generation. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate with room for improvement. The audit risk rating is assessed as low as the impact on reconciliation is minor.		
Actions taken to resolve the issue		Completion date	Remedial action status
Check: daily for status 999, weekly DG updates, weekly status 1 and 6, and monthly status 0.		Commencing 04/04/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above.			

## 4.2. Notice of NSP for each ICP (Clauses 7(1),(4) and (5) Schedule 11.1)

### Code reference

*Clauses 7(1), 7(4) and 7(5) Schedule 11.1*

### Code related audit information

*Under Clause 7(1)(b) of Schedule 11.1, the distributor must provide to the registry manager the NSP identifier of the NSP to which the ICP is usually connected.*

*If the distributor cannot identify the NSP that an ICP is connected to, the distributor must nominate the NSP that the distributor thinks is most likely to be connected to the ICP, taking into account the flow of electricity within its network, and the ICP is deemed to be connected to the nominated NSP.*

### Audit observation

The process to determine the correct NSP was examined. The registry list for 1 December 2021 and combined AC020 reports for 1 November 2020 to 30 November 2021 were examined to determine compliance.

### Audit commentary

For new connections, transformer numbers were provided by the asset management group to the connections team. In the Orion system the selection of the transformer was mapped to the correct NSP. These fields are not linked in Axos, and the operator must select the transformer and then the NSP. This introduces the risk of human error as the fields are not linked. Examination of the list file identified nine ICPs incorrectly recorded against WKM0331. This included:

- two active ICPs (1100000008WMEB9 active since 16 November 2021 and 1100000029WMFA9 active since 17 November 2021),
- six “new connection in progress” ICPs, and
- one ICP at the ready status.

This is an interconnection point and not a grid connected NSP and should not have any ICPs recorded against it. The interconnection NSPs are included in the Axos drop-down box and these are being removed so they cannot be selected in error. This highlights the importance of having the registry discrepancy reporting in place detailed in **section 2.1**.

NSP changes are recorded in Basix. The material change recorded that any changes made in Basix will be reconciled to the registry via a daily reconciliation between Basix and the registry. There is no direct update between Basix and the registry. NSP changes are sent via the transformer update file. This is sent to the Senior Data Analyst on a monthly basis. All changes are then updated in Axos within two business days of receipt of the monthly file. As this is a monthly process any NSP changes are unlikely to be updated within the required timeframe. However, NSP changes are rare and no late NSP changes were identified as detailed in **section 4.1**.

The AC020 report identified four ICPs on a street where 10% or fewer ICPs on the street have a different NSP to the other ICPs, and where the number of ICPs with a different NSP is less than three:

- two (0001111028WME27 and 0008809295WM05A) were confirmed as correct,
- ICP 0001113369WM084 was incorrect as the wrong transformer was entered in the previous Orion system and this caused the incorrect NSP to be selected. This was corrected as part of BAU on 07/12/21 post the AC020 report being run, and
- ICP 0001112575WME91 had the incorrect town recorded which has been corrected.

Comparison of NSP and address data identified three towns which had ICPs connected to more than one NSP, shown in the table below:

Address town	HTI0331	NPK0331	OKN0111	ONG0331	TKU0331	Grand Total
Turangi		1		1	219	221
Ohakune		1	271			272
Owhango		1		33		34
Waimiha	2			11		13

I checked NSP assignment where less than 50% of the ICPs in a town are assigned to that NSP and found two of the ICPs had the incorrect NSP assigned, and one ICP had the incorrect town recorded which was updated during the audit.

Address town	Findings
Turangi	ICP 0001111028WME27 (ONG0331) is one of the four ICPs identified in the AC020 report and is correctly addressed and had the correct NSP assigned.
Ohakune	ICP 0001113369WM084 is one of the four ICPs identified in the AC020 and is recorded against the incorrect NSP and is discussed above.
Owhango	ICP 0001112575WME91 had an addressing error and is one of the four ICPs identified in the AC020 discussed above. The ICP is connected to the correct NSP. This is recorded as non-compliance in <b>section 4.4</b> .
Kuratau	ICP 0008809295WM05A is one of the four ICPs identified in the AC020 report and is correctly addressed and had the correct NSP assigned as discussed above.
Waimiha	Both ICPs were confirmed to have the correct NSP and address.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: Clause 7(1),(4) and (5) Schedule 11.1  From: 15-Oct-20 To: 30-Oct-21	Nine ICPs incorrectly recorded against NSP WKM0331.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Weak  Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	I have rated the controls as weak as the NSP data is static data which could result in incorrect NSP selections and there is room for improvement in the discrepancy reporting to check for outliers.  The audit risk rating is low as the ICPs with the incorrect NSPs were all connected to another NSP in the same balancing area.		
Actions taken to resolve the issue		Completion date	Remedial action status
Tested removing NSP choices from the dropdown box – follow up with Axos to see whether the change will affect anything else, plus further training.		28/04/2022	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
A shortened list to choose from and removal of WKM.		28/04/2022	

#### 4.3. Customer queries about ICP (Clause 11.31)

##### Code reference

Clause 11.31

##### Code related audit information

*The distributor must advise a customer (or any person authorised by the customer) or embedded generator of the customer or embedded generator's ICP identifier within 3 business days after receiving a request for that information.*

##### Audit observation

TLC has moved line charge billing to be via the trader and only bills its major customers directly therefore customer enquiries have decreased significantly.

##### Audit commentary

TLC does receive requests for ICP identifiers from customers, and the information is provided immediately. TLC invoices major customers directly and the ICP is contained on all invoices.

##### Audit outcome

Compliant

#### 4.4. ICP location address (Clause 2 Schedule 11.1)

##### Code reference

Clause 2 Schedule 11.1

##### Code related audit information

Each ICP identifier must have a location address that allows the ICP to be readily located.

##### Audit observation

The process to determine correct and unique addresses was examined. The registry list for 1 December 2021 and AC020 report for 1 November 2020 to 30 November 2021 were examined to determine compliance.

##### Audit commentary

Axos uses a combination of NZ Post, LINZ, and Statistics NZ information in its address search function. The user begins typing an address and Axos looks up to the linked information and the user can select the valid address. If the address cannot be found the details are manually populated.

Axos system controls prevent duplicate addresses from being entered, an error message is produced if a user attempts to create an ICP with an address that matches an existing ICP.

Review of the AC020 report identified two ICPs with duplicate addresses. These have been resolved before the audit via the BAU process and the addresses are readily locatable.

A check of the list file identified three active ICPs with only a lot number as the street address reference. These were examined and found:

- ICP 0003906071WM2FC is a domestic pump and has been electrically connected since 1 April 1999 with the address of Lot 1, Moutere Point, Te Rangiiita; TLC have emailed the trader to see if a readily locatable address can be found,
- ICP 0005710561WM5FA was investigated and has since had a street number added, and
- ICP 1100000028WM3EC has yet to have a street number assigned by the council.

The two ICPs without readily locatable addresses are recorded as non-compliance below. Lot numbers are generally removed when the ICP is moved from a BTS to a permanent supply, but I recommend that a check for ICPs with lot numbers is undertaken periodically to ensure addresses are as accurate as possible.

Recommendation	Description	Audited party comment	Remedial action
ICP location address	Periodically check for ICPs with Lot numbers recorded.	Adopted recommendation.	Identified

I checked the two ICPs with incomplete addresses that were under investigation in the last audit and confirmed these are now readily locatable.

As detailed in **section 4.2**, ICP 0001112575WME91 had the incorrect town recorded. This has been corrected.

##### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: Clause 2 Schedule 11.1  From: 01-Sep-20 To: 30-Nov-21	Two ICPs with addresses not readily locatable. One ICP with the incorrect town recorded, which was corrected during the audit. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as strong overall as they mitigate risk to an acceptable level. The audit risk rating is low based as the number of ICPs with no readily locatable address is very small.		
Actions taken to resolve the issue		Completion date	Remedial action status
Adopted recommendation and further detailed reviews of addresses.		28/04/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above.		28/04/2022	

#### 4.5. Electrically disconnecting an ICP (Clause 3 Schedule 11.1)

##### Code reference

Clause 3 Schedule 11.1

##### Code related audit information

*Each ICP created after 7 October 2002 must be able to be electrically disconnected without electrically disconnecting another ICP, except for ICPs that are the point of connection between a network and an embedded network, or ICPs that represent the consumption calculated by the difference between the total consumption for the embedded network and all other ICPs on the embedded network.*

##### Audit observation

This was examined as part of the new connection process and proof of process was checked as part of the sample of new connections examined.

##### Audit commentary

TLC's new connections process contains a step that ensures that any ICP can be disconnected without disconnecting any other ICP, and electricians working on the network are advised of this requirement.

Shared service mains are allowed as long as dedicated isolation points are provided, and they were connected prior to 2002. TLC owns some shared service mains, and TLC endeavours to work with affected customers to replace these as they are discovered.

## Audit outcome

Compliant

### 4.6. Distributors to Provide ICP Information to the Registry manager (Clause 7(1) Schedule 11.1)

#### Code reference

Clause 7(1) Schedule 11.1

#### Code related audit information

For each ICP on the distributor's network, the distributor must provide the following information to the registry manager:

- the location address of the ICP identifier (Clause 7(1)(a) of Schedule 11.1)
- the NSP identifier of the NSP to which the ICP is usually connected (Clause 7(1)(b) of Schedule 11.1)
- the installation type code assigned to the ICP (Clause 7(1)(c) of Schedule 11.1)
- the reconciliation type code assigned to the ICP (Clause 7(1)(d) of Schedule 11.1)
- the loss category code and loss factors for each loss category code assigned to the ICP (Clause 7(1)(e) of Schedule 11.1)
- if the ICP connects the distributor's network to an embedded generating station that has a capacity of 10MW or more (Clause 7(1)(f) of Schedule 11.1):
  - a) the unique loss category code assigned to the ICP
  - b) the ICP identifier of the ICP
  - c) the NSP identifier of the NSP to which the ICP is connected
  - d) the plant name of the embedded generating station
- the price category code assigned to the ICP, which may be a placeholder price category code only if the distributor is unable to assign the actual price category code because the capacity or volume information required to assign the actual price category code cannot be determined before electricity is traded at the ICP (Clause 7(1)(g) of Schedule 11.1)
- if the price category code requires a value for the capacity of the ICP, the chargeable capacity of the ICP as follows (Clause 7(1)(h) of Schedule 11.1):
  - a) a placeholder chargeable capacity if the distributor is unable to determine the actual chargeable capacity
  - b) a blank chargeable capacity if the capacity value can be determined for a billing period from metering information collected for that billing period
  - c) if there is more than one capacity value at the ICP, and at least one, but not all, of those capacity values can be determined for a billing period from the metering information collected for that billing period-
    - (i) no capacity value recorded in the registry field for the chargeable capacity; and
    - (ii) either the term "POA" or all other capacity values, recorded in the registry field in which the distributor installation details are also recorded
  - d) if there is more than one capacity value at the ICP, and none of those capacity values can be determined for a billing period from the metering information collected for that billing period-
    - (i) the annual capacity value recorded in the registry field for the chargeable capacity; and
    - (ii) either the term "POA" or all other capacity values, recorded in the registry field in which the distributor installation details are also recorded

- e) *the actual chargeable capacity of the ICP in any other case*
- *the distributor installation details for the ICP determined by the price category code assigned to the ICP (if any), which may be placeholder distributor installation details only if the distributor is unable to assign the actual distributor installation details because the capacity or volume information required to assign the actual distributor installation details cannot be determined before electricity is traded at the ICP (Clause 7(1)(i) of Schedule 11.1)*
- *the participant identifier of the first trader who has entered into an arrangement to sell or purchase electricity at the ICP (only if the information is provided by the first trader) (Clause 7(1)(j) of Schedule 11.1)*
- *the status of the ICP (Clause 7(1)(k) of Schedule 11.1)*
- *designation of the ICP as "Dedicated" if the ICP is located in a balancing area that has more than 1 NSP located within it, and the ICP will be supplied only from the NSP advised under Clause 7(1)(b) of Schedule 11.1, or the ICP is a point of connection between a network and an embedded network (Clause 7(1)(l) of Schedule 11.1)*
- *if unmetered load, other than distributed unmetered load, is associated with the ICP, the type and capacity in kW of unmetered load (Clause 7(1)(m) of Schedule 11.1)*
- *if shared unmetered load is associated with the ICP, a list of the ICP identifiers of the ICPs that are associated with the unmetered load (Clause 7(1)(n) of Schedule 11.1)*
- *if the ICP is capable of generating into the distributors network (Clause 7(1)(o) of Schedule 11.1):*
  - a) *the nameplate capacity of the generator; and*
  - b) *the fuel type,*
- *the initial electrical connection date of the ICP (Clause 7(1)(p) of Schedule 11.1).*

### **Audit observation**

The management of registry information was reviewed. The registry list for 1 December 2021 and combined AC020 reports for 1 November 2020 to 30 November 2021 were examined to determine compliance. A typical sample of data discrepancies were checked.

Registry data validation processes are discussed in **section 2.1**.

### **Audit commentary**

Review of the registry list and AC020 audit compliance report identified some data discrepancies. Non-compliance is recorded where data remained incorrect at the time of the on-site audit or was not identified and corrected through TLC's processes. Compliance is confirmed unless discussed below:

#### **Initial Electrical Connection Date**

TLC's network services team complete the initial electrical connection and provide paperwork confirming the initial electrical connection date. In many cases the same person completes the network connection and metering installation. If different people are involved in the connection, the visit is coordinated so that the meter installation and connection occur on the same day. If it is not possible for the meter installation and connection to be completed on the same day, the network services team ensures that the ICP is not connected, and electricity is not flowing into the installation until after the meter is installed.

Initial electrical connection dates will be entered into Axos, and data is automatically transferred from Axos to the registry. The synchronisation processes discussed in **section 2.1**.

The last audit's recommendation to use the AC020 report to validate the initial electrical connection dates against the trader's earliest active date and the MEP's meter certification date was adopted in August 2021.



### Initial electrical connection date accuracy

The audit compliance report identified eight ICPs with date discrepancies. All were checked and six had the correct initial electrical connection date. ICP 0001113258WM23D which was recorded as 8 July 2020 instead of 7 August 2020 due to a typing error. The date was corrected during the audit. As discussed in **section 3.8**, ICP 0001113635WME97 was confirmed as temporarily electrically connected on 10 September 2021 to certify the meter but the initial electrical connection date and first active date is recorded as 14 September 2021.

The combined AC020 reports identified nine ICPs electrically connected post 29 August 2013 with no initial electrical connection date recorded. These were examined and found:

- eight have since been populated as part of BAU but two (0001113594WM9CE and 0001113593WM404) were found to have the incorrect initial electrical connection dates recorded which is recorded as non-compliance below. Both have since been corrected, and
- 0003271548WM74C has been noted in the last two audit reports as this site is part of an ICP amalgamation that was moved by King Country Energy from “ready” to a “vacant” status on 19 October 2000 and was first made “active” on 30 May 2017 - TLC have updated the registry with the first active date. This is recorded as a technical non-compliance below and in **section 3.3**.

The combined AC020 reports identified five ICPs at the “ready” status with an initial electrical connection date recorded. These were examined and found all but one, have since been made active by the trader for the same date. ICP 1100000023WMD38 had an initial electrical connection date populated in error. This has since been corrected.

### **Distributed Generation**

I walked through the process for distributed generation:

1. TLC requires an application before any distributed generation is connected to their network. TLC closely monitors this area due to the health and safety risks associated, and applications are tracked via a spreadsheet.
2. The network services team update the registry once confirmation of compliant metering has been installed if required. If no meter change is required, then as soon as the COC has been received.
3. The connections team are also expected to check the spreadsheet weekly and populate the generation details in Axos for any ICPs which have all the required details and the effective date populated. If a record is partially completed, the connections team queries the ICP with the network team to confirm whether it is ready to be inputted and obtain any missing details. Due to a resource constraint the spreadsheet is not currently being monitored.
4. Axos updates the registry overnight with the distributed generation details.

Late updates are recorded as non-compliance in **section 4.1**.

TLC have not yet adopted the last audit’s recommendation to validate generation information against trader and meter owner records. I repeat this recommendation to maintain visibility. I have also recommended that the EIEP1 file is monitored to identify ICPs with generation recorded where TLC has none.

Recommendation	Description	Audited party comment	Remedial action
Investigate ICPs where distributed generation is indicated, but an application has not been received.	<p>At least monthly, compare ICPs which have an EG1 or PV1 profile on the registry list to the list of ICPs which distributed generation applications have been received for.</p> <p>It may also be helpful to cross check to the MEP's meter channel records to determine whether injection registers are installed, and the high risk database may also contain information on generation installation (<a href="https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home">https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home</a>).</p> <p>Monitor EIEP1 files to identify ICPs with generation recorded where TLC has none.</p> <p>Follow up with the trader and/or customer to determine whether generation is installed.</p>	Initial reporting recommendation completed with further investigation required.	Investigating

#### Generation information completeness

Review of the registry list found 107 ICPs have generation capacity recorded by TLC.

All ICPs with generation capacity had an installation type of B or G recorded and a fuel type recorded except for ICPs 0001113341WMFC5 and 0001113342WM305. Both have a capacity recorded but no fuel type and have an installation type of "L" These were examined and found the there is no injection channel and no evidence of generation being present. This is recorded as non-compliance below.

The AC020 report recorded 11 ICPs where the trader's profile indicated generation was present but no distributed generation details were recorded by TLC. These were examined and found:

- nine have injection registers on the meter but no application for distributed generation has been received and these are being investigated (Google maps indicates that solar panels are present at ICP 0006101351WM7E9 and the high-risk database recorded a distributed generation installation has been completed for ICP 0002071560WM66C), and
- three (0026049680WM404 installed 8 October 2020, 0001110597WM7EE installed 19 October 2021 and 0001112571WMF9B installed 29 March 2021) have since had distributed generation details updated on the registry.

A sample of seven updates were checked for accuracy:

- two were recorded correctly,
- five had the incorrect kW value recorded of which:
  - four were due to the previous system Orion, recording only whole numbers for distributed generation which was corrected in Orion just prior to the move to Axos, and while TLC reviewed and corrected those recorded prior to the move to Axos, it appears these were missed,
  - ICP 0001504760WM7EA was due to human error, and
- three had the incorrect event date and these were all prior to Axos and were due to human error.

### Generation information accuracy

I checked the accuracy of fuel types by comparing them to the trader's profile. In all cases, TLC's fuel type was confirmed to be consistent with the trader's profile where it indicated the fuel type.

11 ICPs with generation recorded by TLC did not have a generation compatible profile recorded by the trader. These were checked to confirm if distributed generation is still present and found:

- nine were confirmed to have distributed generation present and the trader has the incorrect profile (six of these were due to one trader's inability to update the registry with RPS PV1 profiles which is discussed in their audit), and
- two ICPs (0006121651WMB21 and 0074010550WM044) appear to have the distributed generation removed and these are being investigated.

### **Unmetered Load**

Part 11 states the distributors must provide unmetered load type and capacity of the unmetered load to the registry "if known". If distributor unmetered load is populated, it is required to be accurate.

Unmetered load data is entered into Axos and transferred to the registry.

### New connections

35 new connections with unmetered load were created and electrically connected during the audit period. 41 of these relate to 28 streetlights with individual ICPs in Taharoa. Eight of these were examined in the new connection sample and confirmed to be compliant.

### Unmetered load information accuracy

The accuracy of unmetered load information was assessed.

- ICPs 0001050011WM9D7 and 0001113502WM7A6 have distributor unmetered load recorded and the trader has none. These were examined and found that the load for ICP 0001050011WM9D7 has been metered and is accounted for on ICP 0001050010WM592. Therefore, the load is being submitted twice. The ICP has since been decommissioned. ICP 0001113502WM7A6 is a metered supply. TLC have since removed the unmetered load.
- 46 had trader unmetered load recorded without distributor unmetered load. All were created in 2008 or earlier, and TLC had not populated unmetered load details for these ICPs because they were not aware of the unmetered load and were therefore not required to update their distributor unmetered load details.
- For the 58 ICPs where distributor unmetered load was in a format which enabled recalculation, I compared the figures to the trader unmetered load. In all but three cases the calculation matched the trader's unmetered load figure within  $\pm 0.01$  kWh. These were examined and found that the unmetered load details had the incorrect wattage value. These have since been corrected.

### DUML and shared unmetered load

DUML audits for streetlight databases on TLC's network were reviewed to determine whether there were any issues relating to distributor unmetered load records:

Database	Comment
Waitomo District Council	<p>The December 2021 audit identified ten private lights which were excluded from submission information and did not have standard or shared unmetered load created. These were identified in the previous audit also.</p> <p><u>Kaka Street</u></p> <p>TLC have accepted that these do not belong to WDC and have created ICP 0001113548WM792 to account for this unmetered load. These lights were made active from 18 May 2021. The ICP should have been backdated 14 months to enable the trader to submit the missing submission for the available revision period. This is recorded as non-compliance in <b>section 3.4</b>.</p> <p><u>Waitomo Village Rd</u></p> <p>TLC have been to site and confirmed that the light has been removed.</p>
DOC Whakapapa Village lights	<p>The January 2019 audit did not identify any missing shared unmetered load.</p>
Ruapehu District Council	<p>The December 2021 audit confirmed that the 16 unmetered lights are now being reconciled in Department of Conservation lights Whakapapa DOC database.</p> <p>The two unmetered private lights that are located TLC's depot have had ICPs created for them and are being traded.</p> <p>The audit identified a further three private lights. Two are located in the grounds of the Top Ten Holiday Park in Ohakune and one is located in the National Park School. These are being investigated to confirm if these are electrically connected to a metered supply or need to be added to an existing ICP as standard unmetered load or a separate unmetered load needs to be created.</p>
Taupo District Council	<p>The March 2022 audit did not identify any missing shared unmetered load.</p>
Otorohanga District Council	<p>As reported in the last audit, the June 2019 audit did not identify any missing shared unmetered load. The next audit of this database is due to be completed in June 2022.</p>

### **Audit outcome**

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.6 With: 7(1) of Schedule 11.1</p> <p>From: 01-Sep-20 To: 30-Nov-21</p>	<p>Five ICPs had incorrect initial electrical connection dates, which were corrected during the audit.</p> <p>ICP 0003271548WM74C has no initial electrical connection date recorded.</p> <p>Five of seven ICPs sampled had the incorrect distributed generation kW value. Backdated corrections to the capacities were processed during the audit.</p> <p>Three of seven ICPs sampled had the incorrect date of distributed generation installation recorded.</p> <p>Two ICPs with a generation value but no fuel type and an installation type of L. ICP 0001113502WM7A6 incorrectly recorded with unmetered load.</p> <p>Three ICPs with the incorrect wattage value recorded in the unmetered load details.</p> <p>Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Moderate Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
<p><b>Low</b></p>	<p>I have rated the controls as moderate as they will mitigate risk most of the time but there is room for improvement.</p> <p>The audit risk rating is assessed as low as the volume of errors is small in relation to the number of ICPs managed.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Some are resolved while others are being investigated.		31/05/2022	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Internal parties to collaborate to resolve issues of missing new or additional streetlight information with the planned outcome being an action plan.			

#### 4.7. Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1)

##### Code reference

Clause 7(3) Schedule 11.1

##### Code related audit information

The distributor must provide the following information to the registry manager no later than 10 business days after the trading of electricity at the ICP commences:

- the actual price category code assigned to the ICP (Clause 7(3)(a) of Schedule 11.1)
- the actual chargeable capacity of the ICP determined by the price category code assigned to the ICP (if any) (Clause 7(3)(b) of Schedule 11.1)
- the actual distributor installation details of the ICP determined by the price category code assigned to the ICP (if any) (Clause 7(3)(c) of Schedule 11.1).

##### Audit observation

The management of registry information was reviewed. The registry list for 1 December 2021 and combined AC020 reports for 1 November 2020 to 30 November 2021 were reviewed to determine compliance.

##### Audit commentary

TLC has moved from customer billing in Orion (where all ICPs have the same price category applied on the registry) to retailer billing in Axos, where different ICPs will have different price categories.

All new ICPs created during the audit period had pricing information loaded prior to initial electrical connection.

##### Audit outcome

Compliant

#### 4.8. GPS coordinates (Clause 7(8) and (9) Schedule 11.1)

##### Code reference

Clause 7(8) and (9) Schedule 11.1

##### Code related audit information

*If a distributor populates the GPS coordinates (optional), it must meet the NZTM2000 standard in a format specified by the Authority.*

##### Audit observation

The registry list as of 1 December 2021 was reviewed to determine compliance. ICPs with GPS coordinates were checked to determine whether they were accurate and in the correct format.

##### Audit commentary

GPS coordinates are optional, but if populated the registry requires New Zealand Transverse Mercator 2000 (NZTM2000 easting, northing) coordinates. The previous audit recorded that Orion's GPS fields did not allow sufficient digits to store NZTM GPS data. The issue was resolved during the audit period.

GPS coordinates were recorded for 147 active and inactive ICPs on the registry list. I plotted all ICPs and confirmed that the coordinates were in NZTM2000 format and consistent with the other addressing information.

### Audit outcome

Compliant

## 4.9. Management of “ready” status (Clause 14 Schedule 11.1)

### Code reference

Clause 14 Schedule 11.1

### Code related audit information

*The ICP status of “Ready” must be managed by the distributor and indicates that:*

- *the associated electrical installations are ready for connecting to the electricity supply (Clause 14(1)(a) of Schedule 11.1); or*
- *the ICP is ready for activation by a trader (Clause 14(1)(b) of Schedule 11.1)*

*Before an ICP is given the “Ready” status in accordance with Clause 14(1) of Schedule 11.1, the distributor must:*

- *identify the trader that has taken responsibility for the ICP (Clause 14(2)(a) of Schedule 11.1)*
- *ensure the ICP has a single price category (Clause 14(2)(b) of Schedule 11.1).*

### Audit observation

The management of ICPs in relation to the use of the “ready” status was examined. The registry list for 1 December 2021 and combined AC020 reports for 1 November 2020 to 30 November 2021 were examined to determine compliance.

### Audit commentary

TLC’s new connections process includes step to confirm trader acceptance before livening is scheduled. Each ICP has a single price category, as TLC only has one price category.

All 32 ICPs at “ready” status had a single price category assigned and proposed trader identified. The timeliness of updates to “ready” is discussed in **section 3.4**.

Monitoring of ICPs at “ready” status is discussed in **section 3.14**.

### Audit outcome

Compliant

## 4.10. Management of “distributor” status (Clause 16 Schedule 11.1)

### Code reference

Clause 16 Schedule 11.1

### Code related audit information

*The ICP status of “distributor” must be managed by the distributor and indicates that the ICP record represents a shared unmetered load installation or the point of connection between an embedded network and its parent network.*

### Audit observation

Processes to manage the distributor status were reviewed. The registry list for 1 December 2021 and combined AC020 reports for 1 November 2020 to 30 November 2021 were examined to determine compliance.

### Audit commentary

Analysis of the registry list confirmed that no ICPs are at “distributor” status. There are no embedded networks or shared unmetered load connections on TLC’s network.

The potential shared unmetered load that was identified as a result of streetlight audits, has been investigated and in the process of being resolved. Shared unmetered load is discussed further in **section 7.1**.

### Audit outcome

Compliant

## 4.11. Management of “decommissioned” status (Clause 20 Schedule 11.1)

### Code reference

*Clause 20 Schedule 11.1*

### Code related audit information

*The ICP status of “decommissioned” must be managed by the distributor and indicates that the ICP is permanently removed from future switching and reconciliation processes (Clause 20(1) of Schedule 11.1).*

*Decommissioning only occurs when:*

- *electrical installations associated with the ICP are physically removed (Clause 20(2)(a) of Schedule 11.1); or*
- *there is a change in the allocation of electrical loads between ICPs with the effect of making the ICP obsolete (Clause 20(2)(b) of Schedule 11.1); or*
- *in the case of a distributor-only ICP for an embedded network, the embedded network no longer exists (Clause 20(2)(c) of Schedule 11.1).*

### Audit observation

The decommissioning process was discussed.

The registry list for 1 December 2021 and combined AC020 reports for 1 November 2020 to 30 November 2021 were reviewed to identify ICPs at “decommissioned” or “ready for decommissioning” status and check compliance.

A sample of ten “decommissioned” ICPs was examined. I also examined all eight ICPs at “ready for decommissioning” status.

### Audit commentary

TLC’s ICP decommissioning processes requires a request to be made either directly to approved contractors, or to TLC via either the database or asset teams. If via approved contractors, they must provide notification to TLC. TLC then confirms the ICP ownership and gains permission prior to decommissioning. TLC’s policy is to change the status upon receipt of the appropriate paperwork. This includes confirmation that metering has been removed.

Status updates to “new” and “ready” are created by the registry once the information required to achieve the status has been populated. ICPs can be reversed from “ready” to “new” status by removing the distributor pricing information in Axos and the update being synchronised with the registry. The “new” and “ready” status information is imported back into Axos through the registry synchronisation process. ICPs can be moved to “distributor” or “decommissioned” statuses according to the general registry event update process, where the change is processed in Axos and then synchronised with the registry.



Axos provides better visibility of these jobs, and the tracking of these jobs has been improved providing the team with greater visibility of these.

TLC’s “questionable ICP project” has been paused for the foreseeable future. This was where ICPs have been identified which may have been decommissioned without their knowledge or may need to be decommissioned. These require site visits to determine the correct status of each ICP.

I checked a sample of ten decommissioned ICPs for accuracy and found five were decommissioned for the event date. An event on the registry post the decommissioning date prevented TLC from decommissioning three ICPs (0007813031WM91F, 0007520480WME87 and 0005311020WM600) for the correct date. ICP 0003020992WME9F was decommissioned on 05 February 2021 but the trader has made it ready for decommissioning from 26 May 2021. TLC are working with the trader to get this corrected. Two ICPs (0001111285WM364 and 0031019950WME96) were decommissioned for the incorrect date due to human error. This was due to a new staff member. Further training has been provided.

Examination of the list file found 12 ICPs are at “ready for decommissioning” status. Three have since been decommissioned.

Number of ICPs 2021	Number of ICPs 2020	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017	Number of ICPs 2016
12	8	5	42	76	52

I checked all 12 ICPs at “ready for decommissioning” status to determine why they had not been decommissioned:

- five were timing differences and the ICPs have since been decommissioned,
- four are part of the “questionable ICP” project which has been paused,
- two have not been completed because TLC have not had signed paperwork from the property owner as they do not acknowledge the contract with TLC and therefore the decommission cannot progress, and
- ICP 0003535151WM7AF was at “ready for decommissioning” on the registry but at “inactive vacant” in Axos, and now been decommissioned; TLC were emailing the trader to request they update the status, but it was already at the correct status which highlights the need for the registry discrepancy reporting as discussed in **section 2.1**.

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 4.11 With: Clause 20 of Schedule 11.1 From: 01-Sep-20 To: 30-Nov-21	Five of ten ICPs sampled decommissioned for the incorrect event date. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong as the registry update process has improved over the audit period. Further training has been carried out. The audit risk rating is assessed to be low as the first inactive date and therefore reconciliation have been correctly recorded for all but one of the ten ICPs sampled.		
Actions taken to resolve the issue		Completion date	Remedial action status
Further training was provided and monthly of status 1,6.		06/04/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing training and decommission process review.		31/05/2022	

#### 4.12. Maintenance of price category codes (Clause 23 Schedule 11.1)

##### Code reference

Clause 23 Schedule 11.1

##### Code related audit information

*The distributor must keep up to date the table in the registry of the price category codes that may be assigned to ICPs on each distributor's network by entering in the table any new price category codes.*

*Each entry must specify the date on which each price category code takes effect, which must not be earlier than 2 months after the date the code is entered in the table.*

*A price category code takes effect on the specified date.*

##### Audit observation

The price category code table on the registry was examined.

##### Audit commentary

With the change to Axos, TLC now bill retailers instead of directly billing their end-consumers. Price categories are updated on the registry via the Axos registry manager.

89 new pricing codes were added to the registry price category table. 88 of these were notified two months before they came into effect.

Price category CAPDED was added on 30 August 2021 with an effective date of 1 September 2021. This was created for major customer pricing and was created after discussion with traders which caused it to be late. This is recorded as non-compliance below.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.12 With: 23 of Schedule 11.1 From: 01-Jul-21 To: 01-Sep-21	Price category code CAPDED not notified two months before coming into effect. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	I have rated the controls as strong, as the processes in place are robust. The audit risk rating is low as this affected only 89 customers and the traders of these customers were all aware of the price category code despite it being notified to the registry late.		
Actions taken to resolve the issue		Completion date	Remedial action status
No action is required.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We are now aware of the requirement but note that this was completed in consultation with retailers.			

## 5. CREATION AND MAINTENANCE OF LOSS FACTORS

### 5.1. Updating table of loss category codes (Clause 21 Schedule 11.1)

#### Code reference

*Clause 21 Schedule 11.1*

#### Code related audit information

*The distributor must keep the registry up to date with the loss category codes that may be assigned to ICPs on the distributor's network.*

*The distributor must specify the date on which each loss category code takes effect.*

*A loss category code takes effect on the specified date.*

#### Audit observation

The loss category code table on the registry was examined.

#### Audit commentary

TLC has not created any new loss factors during the audit period.

#### Audit outcome

Compliant

### 5.2. Updating loss factors (Clause 22 Schedule 11.1)

#### Code reference

*Clause 22 Schedule 11.1*

#### Code related audit information

*Each loss category code must have a maximum of 2 loss factors per calendar month. Each loss factor must cover a range of trading periods within that month so that all trading periods have a single applicable loss factor.*

*If the distributor wishes to replace an existing loss factor on the table in the registry, the distributor must enter the replaced loss factor on the table in the registry.*

#### Audit observation

The loss category code table on the registry was examined.

#### Audit commentary

TLC has not changed any loss factors during the audit period.

#### Audit outcome

Compliant

## 6. CREATION AND MAINTENANCE OF NSPS (INCLUDING DECOMMISSIONING OF NSPS AND TRANSFER OF ICPS)

### 6.1. Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1)

#### Code reference

*Clause 11.8 and Clause 25 Schedule 11.1*

#### Code related audit information

*If the distributor is creating or decommissioning an NSP that is an interconnection point between 2 local networks, the distributor must give written notice to the reconciliation manager of the creation or decommissioning.*

*If the embedded network owner is creating or decommissioning an NSP that is an interconnection point between 2 embedded networks, the embedded network owner must give written notice to the reconciliation manager of the creation or decommissioning.*

*If the distributor is creating or decommissioning an NSP that is a point of connection between an embedded network and another network, the distributor must give written notice to the reconciliation manager of the creation or decommissioning.*

*If the distributor wishes to change the record in the registry of an ICP that is not recorded as being usually connected to an NSP in the distributor's network, so that the ICP is recorded as being usually connected to an NSP in the distributor's network (a "transfer"), the distributor must:*

- *give written notice to the reconciliation manager*
- *give written notice to the Authority*
- *give written notice to each affected reconciliation participant*
- *comply with Schedule 11.2.*

#### Audit observation

The NSP table was examined.

#### Audit commentary

TLC did not create or decommission any NSPs during the audit period.

#### Audit outcome

Compliant

### 6.2. Provision of NSP information (Clause 26(1) and (2) Schedule 11.1)

#### Code reference

*Clause 26(1) and (2) Schedule 11.1*

#### Code related audit information

*If the distributor wishes to create an NSP or transfer an ICP as described above, the distributor must request that the reconciliation manager create a unique NSP identifier for the relevant NSP.*

*The request must be made at least 10 business days before the NSP is electrically connected, in respect of an NSP that is an interconnection point between 2 local networks. In all other cases, the request must be made at least 1 month before the NSP is electrically connected or the ICP is transferred.*

#### Audit observation

The NSP table was examined.

### **Audit commentary**

No new NSPs were created by TLC during the audit period.

### **Audit outcome**

Compliant

## **6.3. Notice of balancing areas (Clause 24(1) and Clause 26(3) Schedule 11.1)**

### **Code reference**

*Clause 24(1) and Clause 26(3) Schedule 11.1*

### **Code related audit information**

*If a participant has notified the creation of an NSP on the distributor's network, the distributor must give written notice to the reconciliation manager of the following:*

- *if the NSP is to be located in a new balancing area, all relevant details necessary for the new balancing area to be created and notification that the NSP to be created is to be assigned to the new balancing area*
- *in all other cases, notification of the balancing area in which the NSP is located.*

### **Audit observation**

The NSP table was reviewed.

### **Audit commentary**

No balancing area changes occurred during the audit period.

### **Audit outcome**

### **Audit outcome**

Compliant

## **6.4. Notice of supporting embedded network NSP information (Clause 26(4) Schedule 11.1)**

### **Code reference**

*Clause 26(4) Schedule 11.1*

### **Code related audit information**

*If a participant notifies the creation of an NSP, or the transfer of an ICP to an NSP that is a point of connection between a network and an embedded network owned by the distributor, the distributor must give notice to the reconciliation manager at least 1 month before the creation or transfer of:*

- *the network on which the NSP will be located after the creation or transfer (Clause 26(4)(a))*
- *the ICP identifier for the ICP that connects the network and the embedded network (Clause 26(4)(b))*
- *the date on which the creation or transfer will take effect (Clause 26(4)(c)).*

### **Audit observation**

The NSP table was reviewed.

### **Audit commentary**

TLC has not created any new embedded networks during the audit period.

### **Audit outcome**

Compliant

## 6.5. Maintenance of balancing area information (Clause 24(2) and (3) Schedule 11.1)

### **Code reference**

*Clause 24(2) and (3) Schedule 11.1*

### **Code related audit information**

*The distributor must give written notice to the reconciliation manager of any change to balancing areas associated with an NSP supplying the distributor's network. The notification must specify the date and trading period from which the change takes effect and be given no later than three business days after the change takes effect.*

### **Audit observation**

The NSP table was reviewed.

### **Audit commentary**

No balancing area changes have occurred during the audit period.

### **Audit outcome**

Compliant

## 6.6. Notice when an ICP becomes an NSP (Clause 27 Schedule 11.1)

### **Code reference**

*Clause 27 Schedule 11.1*

### **Code related audit information**

*If a transfer of an ICP results in an ICP becoming an NSP at which an embedded network connects to a network, or in an ICP becoming an NSP that is an interconnection point, in respect of the distributor's network, the distributor must give written notice to any trader trading at the ICP of the transfer at least 1 month before the transfer.*

### **Audit observation**

The NSP table was reviewed.

### **Audit commentary**

No existing ICPs became NSPs during the audit period.

### **Audit outcome**

Compliant

## 6.7. Notification of transfer of ICPs (Clause 1 to 4 Schedule 11.2)

### Code reference

Clause 1 to 4 Schedule 11.2

### Code related audit information

*If the distributor wishes to transfer an ICP, the distributor must give written notice to the Authority in the prescribed form, no later than 3 business days before the transfer takes effect.*

### Audit observation

The NSP table was reviewed.

### Audit commentary

TLC has not initiated the transfer of any ICPs during the audit period.

### Audit outcome

Compliant

## 6.8. Responsibility for metering information for NSP that is not a POC to the grid (Clause 10.25(1) and 10.25(3))

### Code reference

Clause 10.25(1) and 10.25(3)

### Code related audit information

*A network owner must, for each NSP that is not a point of connection to the grid for which it is responsible, ensure that:*

- *there is one or more metering installations (Clause 10.25(1)(a)); and*
- *the electricity is conveyed and quantified in accordance with the Code (Clause 10.25(1)(b))*

*For each NSP covered in 10.25(1) the network owner must, no later than 20 business days after a metering installation at the NSP is recertified advise the reconciliation manager of:*

- *the reconciliation participant for the NSP*
- *the participant identifier of the metering equipment provider for the metering installation*
- *the certification expiry date of the metering installation*

### Audit observation

The Network Supply Points (NSP) table was examined to determine compliance.



## Audit commentary

The NSP table was reviewed:

Distributor	NSP POC	Description	MEP	Certification Expiry
LINE	ATI0111	ATIAMURI	MRPL	16/08/2022
LINE	MEP0112	MOKAI	FCLM	16/02/2022
LINE	MEP0113	MOKAI	FCLM	16/02/2022
LINE	TLC0111	TANGIWAI OHAKUNE INTERCONNECT	FCLM	18/08/2023
LINE	WKM0331	WHAKAMARU	FCLM	23/09/2021

WKM0331's meter is recorded with an expired meter certification. This was confirmed as having been recertified on 19/10/21. The meter was uncertified from 23/09/21- 19/10/21. This was missed due to human error and is recorded as non-compliance below.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.8 With: Clause 10.25(1) & 10.26(1)  From: 23-Sep-21 To: 30-Nov-21	WKM0331 meter was uncertified from 23/09/21-19/10/21  The meter certification expiry date was not updated within 20 business days of the meter certification.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate with room for improvement.  The audit risk rating is assessed as low as the impact on reconciliation is minor.		
Actions taken to resolve the issue		Completion date	Remedial action status
Discussed with Influx.		06/04/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Set tasks in calendars as a reminder of expiry dates.		06/04/2022	

## 6.9. Responsibility for metering information when creating an NSP that is not a POC to the grid (Clause 10.25(2))

### Code reference

Clause 10.25(2)

### Code related audit information

*If the network owner proposes the creation of a new NSP which is not a point of connection to the grid it must:*

- *assume responsibility for being the metering equipment provider (Clause 10.25(2)(a)(i)); or*
- *contract with a metering equipment provider to be the MEP (Clause 10.25(2)(a)(ii)); and*
- *no later than 20 business days after identifying the MEP advise the reconciliation manager in the prescribed form of:*
  - a) the reconciliation participant for the NSP (Clause 10.25(2)(b)(i)); and*
  - b) the MEP for the NSP (Clause 10.25(2)(b)(ii)); and*
  - c) no later than 20 business days after the data of certification of each metering installation, advise the reconciliation participant for the NSP of the certification expiry date (Clause 10.25(2)(c)).*

### Audit observation

The NSP table was reviewed.

### Audit commentary

TLC has not created any new NSPs during the audit period.

### Audit outcome

Compliant

## 6.10. Obligations concerning change in network owner (Clause 29 Schedule 11.1)

### Code reference

Clause 29 Schedule 11.1

### Code related audit information

*If a network owner acquires all or part of a network, the network owner must give written notice to:*

- *the previous network owner (Clause 29(1)(a) of Schedule 11.1)*
- *the reconciliation manager (Clause 29(1)(b) of Schedule 11.1)*
- *the Authority (Clause 29(1)(c) of Schedule 11.1)*
- *every reconciliation participant who trades at an ICP connected to the acquired network or part of the network acquired (Clause 29(1)(d) of Schedule 11.1).*

*At least one month's notification is required before the acquisition (Clause 29(2) of Schedule 11.1).*

*The notification must specify the ICPs to be amended to reflect the acquisition and the effective date of the acquisition (Clause 29(3) of Schedule 11.1).*

### Audit observation

The NSP table on the registry was examined.

### Audit commentary

TLC have not initiated any changes of network owner.

### **Audit outcome**

Compliant

## 6.11. Change of MEP for embedded network gate meter (Clause 10.22(1)(b))

### **Code reference**

*Clause 10.22(1)(b)*

### **Code related audit information**

*If the MEP for an ICP which is also an NSP changes the participant responsible for the provision of the metering installation under Clause 10.25, the participant must advise the reconciliation manager and the gaining MEP.*

### **Audit observation**

The NSP supply point table was examined.

### **Audit commentary**

No MEP changes occurred for embedded network gate meters during the audit period.

### **Audit outcome**

Compliant

## 6.12. Confirmation of consent for transfer of ICPs (Clauses 5 and 8 Schedule 11.2)

### **Code reference**

*Clauses 5 and 8 Schedule 11.2*

### **Code related audit information**

*The distributor must give the Authority confirmation that it has received written consent to the proposed transfer from:*

- *the distributor whose network is associated with the NSP to which the ICP is recorded as being connected immediately before the notification (unless the notification relates to the creation of an embedded network) (Clause 5(a) of Schedule 11.2)*
- *every trader trading at an ICP being supplied from the NSP to which the notification relates (Clause 5(b) of Schedule 11.2).*

*The notification must include any information requested by the Authority (Clause 8 of Schedule 11.2).*

### **Audit observation**

The NSP table was reviewed.

### **Audit commentary**

TLC has not initiated the transfer of any ICPs during the audit period.

### **Audit outcome**

Compliant

### 6.13. Transfer of ICPs for embedded network (Clause 6 Schedule 11.2)

#### **Code reference**

*Clause 6 Schedule 11.2*

#### **Code related audit information**

*If the notification relates to an embedded network, it must relate to every ICP on the embedded network.*

#### **Audit observation**

The NSP table was reviewed.

#### **Audit commentary**

TLC has not initiated the transfer of any ICPs during the audit period.

#### **Audit outcome**

Compliant

## 7. MAINTENANCE OF SHARED UNMETERED LOAD

### 7.1. Notification of shared unmetered load ICP list (Clause 11.14(2) and (4))

#### Code reference

Clause 11.14(2) and (4)

#### Code related audit information

*The distributor must give written notice to the registry manager and each trader responsible for the ICPs across which the unmetered load is shared of the ICP identifiers of those ICPs.*

*A distributor who receives notification from a trader relating to a change under Clause 11.14(3) must give written notice to the registry manager and each trader responsible for any of the ICPs across which the unmetered load is shared of the addition or omission of the ICP.*

#### Audit observation

The registry list for 1 November 2020 to 30 November 2021 was reviewed to identify all ICPs with shared unmetered load. Findings of streetlight audits on the network were considered.

#### Audit commentary

TLC has no existing shared unmetered load.

#### Waitomo District Council (WDC)

##### Kaka Street

TLC have accepted that the Kaka Street private lights identified in the last audit do not belong to WDC and have created ICP 0001113548WM792 to account for this unmetered load. This is not shared unmetered load.

##### Waitomo Village Rd

TLC have been to site and confirmed that the light has been removed. No shared unmetered load exists.

#### DOC Whakapapa Village lights

The January 2019 audit did not identify any missing shared unmetered load.

#### Ruapehu District Council

The private lights identified in the last audit have either been added to a streetlight database or an ICP has been created to account for this load.

The December 2021 audit identified three additional private streetlights. These were examined and found two are located in the grounds of the Top Ten Holiday Park in Ohakune and one is located in the National Park School. These are being investigated to confirm if these are electrically connected to a metered supply or need to be added to an existing ICP as standard unmetered load or a separate unmetered load needs to be created.

#### Taupo District Council

The March 2022 audit did not identify any missing shared unmetered load.

#### Otorohanga District Council

The June 2019 audit did not identify any missing shared unmetered load.

#### Audit outcome

Compliant

## 7.2. Changes to shared unmetered load (Clause 11.14(5))

### **Code reference**

Clause 11.14(5)

### **Code related audit information**

*If the distributor becomes aware of a change to the capacity of a shared unmetered load ICP or if a shared unmetered load ICP is decommissioned, it must give written notice to all traders affected by that change or decommissioning as soon as practicable after the change or decommissioning.*

### **Audit observation**

The registry list 1 September 2020 to 30 November 2021 was reviewed to identify all ICPs with shared unmetered load.

### **Audit commentary**

Review of the registry list confirmed that no ICPs have shared unmetered load recorded, and there have been no changes to shared unmetered load information.

### **Audit outcome**

Compliant

## 8. CALCULATION OF LOSS FACTORS

### 8.1. Creation of loss factors (Clause 11.2)

#### Code reference

Clause 11.2

#### Code related audit information

A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under Part 11 is:

- complete and accurate
- not misleading or deceptive
- not likely to mislead or deceive.

#### Audit observation

The “Guidelines on the calculation and the use of loss factors for reconciliation purposes” was published on 26 June 2018. I have assessed TLC’s process and compliance against the guideline’s recommended thresholds.

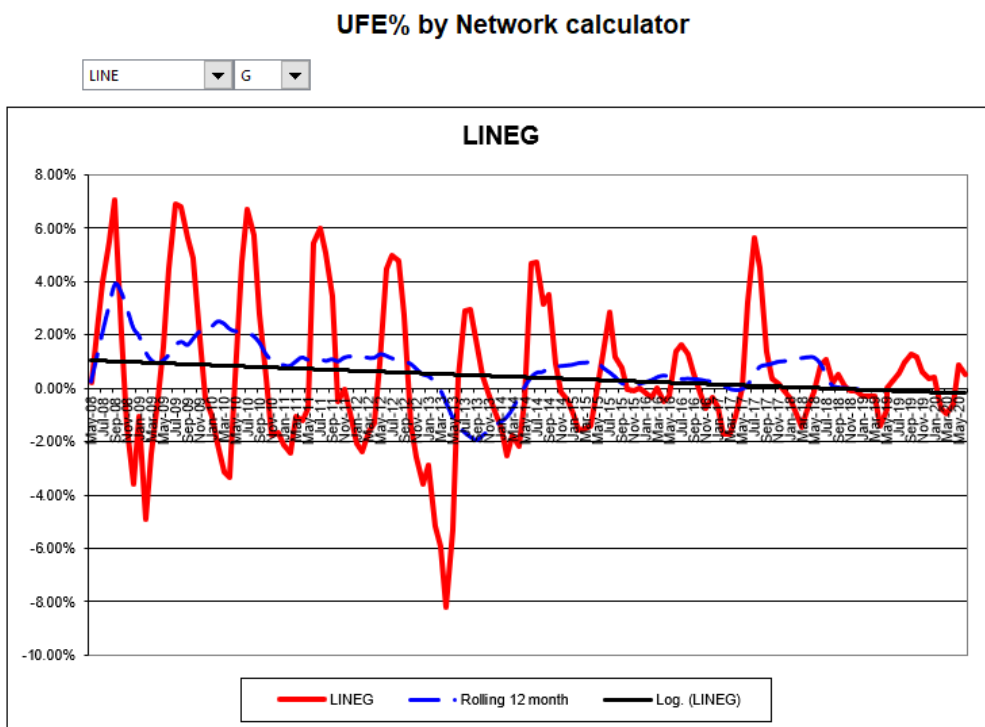
A summary outlining the loss factor review process was provided.

#### Audit commentary

Loss factor reviews were historically conducted every ten years, or if a major change to the network occurs which is likely to have a material impact on loss factors. TLC’s loss factors were last updated in April 2008.

The review of loss factors is still in progress and is expected to be in place by June 2022.

I was provided by the Electricity Authority the reconciliation losses by for the Lines Company network. The chart below indicates losses for the network are tracking within the +/- 1% threshold.



**Audit outcome**

Compliant



## CONCLUSION

TLC have moved from the Orion platform to Axos during the audit period and this coincided with a move from direct customer billing to line charge billing via retailers. A material change audit was conducted in relation to the change of platform which resulted in the next audit due date being shortened from 21 June, 2022 to 16 March, 2022.

During this time TLC have also gone through an organisational restructure which has meant a loss of knowledgeable resource that has caused some delays in updates to the registry and some errors made by new staff coming up to speed. I found that despite these challenges the change has gone smoothly with just a few areas needing focus to improve compliance:

- Validation reporting to identify discrepancies between the registry and Axos. This is being addressed.
- Reviewing the process for tracking the electrical connection of streetlights.
- Review the EIEP1 file to identify ICPs with distributed generation recorded and TLC has none.
- Investigate Axos' ability to have a relationship between transformer and NSP so the selection of the transformer automatically selects the correct NSP.

This audit found 16 areas of non-compliance and makes four recommendations for improvement. The future risk rating is 26, indicating that the next audit be due in six months. I have considered this in conjunction with:

- eight of the 16 non-compliances identified having strong controls,
- additional clauses being included in this audit from last,
- the small number of ICPs affected by the non-compliances identified, and
- TLC's responses.

Therefore, I recommend that the next audit be in 12 months time.

## PARTICIPANT RESPONSE

TLC moved to retailer billing on 1 October 2021 with the implementation of a new billing and registry management system. This coincided with restructures within TLC and our teams needing to learn new tasks and processes and different ways of viewing and using our data, particularly over the last six months.

We have been supported by our new billing and registry management provider, and others, and continue to improve by implementing checks and training to ensure accuracy. Also, to keep all Axos Registry Manager Users up to date we have created an Axos channel in Microsoft Teams and set up a meeting with all users once a month to discuss any issues, and update improvements and results of Axos Registry reconciliation.

We appreciate the guidance given to us during the audit and have, or are in the process, of adopting the learnings and recommendations.