

**ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT**

For

THE LINES COMPANY

Prepared by: Tara Gannon

Date audit commenced: 14 January 2020

Date audit report completed: 13 February 2020

Audit report due date: 21 December 2019

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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 TLC's premises in Te Kuiti on 14 January 2020.

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

TLC moved from Gentrack to Orion on 01/10/18, and a material change audit was completed in September 2018. During the audit period, processes (including data validation) have been handed over from the project team to operations staff. Coupled with this, there have been some key staff changes during the audit period. New and existing staff needed to learn the new processes, which caused some late updates and data exceptions.

I found that TLC were already aware of the key issues found during the audit and have been working to resolve them. TLC is focussed on improving data accuracy and timeliness, and I saw evidence of projects underway to resolve historic issues relating to addresses, ICPs which should be decommissioned, and private streetlights. Improvements have been made to distributed generation processes, the asset team has been working with the network services team to improve the timeliness of paperwork returns.

TLC put considerable effort into investigating and correcting the discrepancies found during the pre-audit analysis and delayed the on-site audit to complete this.

The key areas where improvement is required are:

- corrections of inaccurate data identified during the audit (which has not been corrected yet)
- improving the timeliness of registry updates, particularly for network updates including population of initial electrical connection dates
- updating NSP metering details on the NSP table; and
- completion of the loss factor review.

This audit found 11 areas of non-compliance and makes four recommendations for improvement. The future risk rating is 22, indicating that the next audit should be due in 6 months. Taking into account that:

- most data accuracy issues identified during the audit were cleared immediately
- there was only one issue with a risk rating above two, and this non-compliance has now been cleared
- excluding the cleared non-compliances reduce the future risk rating to 17, which indicates a next audit period of 12 months
- TLC intends to implement internal audit processes to detect and correct compliance issues; and
- there are plans to clear the remaining issues with the exception of late provision of metering certification details for NSP meters, which TLC have disputed.

To allow time for the issues to be resolved and improved compliance to be demonstrated, and given that this audit was completed two months late, I recommend that the next audit is completed 12 months from the audit due date on 21 December 2020.

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
Participants to give access	11.12	16A.4	Late provision of audit information.	Moderate	Low	2	Identified
Requirement to provide complete and accurate information	2.1	11.2(1)	<p>The registry validation does not identify ICPs which may have distributed generation where TLC has not received an application.</p> <p>One network update (0001113048WM297) and three status updates to decommissioned (0007301240WM664, 0004040132WMDF5, and 0048060010WMDFD) had incorrect event dates applied.</p> <p>Three discrepancies identified in the previous audit (0001112461WMC32, 0001112847WMCE4, 0003330318WM71B and all ICPs with dedicated NSP set to “yes”) have not been corrected.</p>	Strong	Low	1	Identified
Distributors must create ICPs	3.1	11.4	ICPs are not created for ten streetlights.	Strong	Low	1	Investigating
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 61 ICPs.	Moderate	Low	2	Identified
Connection of NSP that is not point of connection to grid	3.9	10.30	Metering certification details for TLC0111LINENP were provided more than five business days after electrical connection.	Moderate	Low	2	Disputed
Management of “new” status	3.13	13 Schedule 11.1	Eight ICPs temporarily had “new” status applied in error. All were corrected to “ready” and then “active” status prior to the audit.	Moderate	Low	2	Cleared

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Changes to registry information	4.1	8 Schedule 11.1	<p>34 late address updates.</p> <p>Ten late network updates to distributed generation details.</p> <p>149 late network updates to fields other than distributed generation details.</p> <p>45 late updates to decommissioned status.</p>	Moderate	Low	2	Identified
Notice of NSP for each ICP	4.2	7(1),(4) and (5) Schedule 11.1	0003330318WM71B is connected to ONG0331 but recorded as connected to TKU0331.	Moderate	Low	2	Identified
ICP location address	4.4	2 Schedule 11.1	<p>110 ICPs have incomplete or duplicate address information; nine of the affected ICPs had their addresses corrected during the audit.</p> <p>Ten ICPs had incorrect address regions recorded and were corrected during the audit.</p>	Strong	Low	1	Identified
Distributors to Provide ICP Information to the Registry man	4.6	7(1) Schedule 11.1	<p>The dedicated NSP flag is incorrectly set to "Y" for 787 ICPs which are not connected to a dedicated NSP.</p> <p>Some initial electrical connection date discrepancies were not identified and corrected prior to the audit, including:</p> <ul style="list-style-type: none"> • 0001113125WMB38 which was corrected during the audit. • 0001113145WM4C8 has an incorrect initial electrical connection date (24/10/19 but should have been 23/10/19) • 0001112841WMD6B has a missing initial electrical connection date (blank but should be 31/05/18) 	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			<ul style="list-style-type: none"> 0001112706WMD0B has a missing initial electrical connection date (blank but should be 26/01/18) ICP 0001112680WM0CA has an incorrect initial electrical connection (14/10/17 but should be 04/10/17); and ICP 0001112847WMCE4 has an incorrect initial electrical connection (09/08/18 but should be 07/08/18). <p>ICP 0001062900WM45A had distributed generation added and inspected, but Orion and the registry had not been updated. Orion and the registry were updated during the audit.</p> <p>ICP 0001112718WM43D had missing unmetered load information on the registry and was updated during the audit.</p>				
GPS coordinates	4.8	7(8) and (9) Schedule 11.1	11 ICPs had GPS coordinates populated in the WGS84 format instead of NZTM2000 format.	Weak	Low	3	Cleared
Responsibility for metering information for NSP that is not a POC to the grid	6.8	10.25(1) and 10.25(3)	<p>Meter certification details for WKM0331 were not provided to the reconciliation manager within 20 business days of recertification.</p> <p>Certification for WKM0331 is expired on the NSP table.</p>	Moderate	Low	2	Disputed
Future Risk Rating						22	

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	Discrepancy reporting	Check the discrepancy report to confirm that they are including all valid discrepancies and excluding data which matches.
Requirement to provide complete and accurate information	2.1	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 (https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home).</p> <p>Follow up with the trader and/or customer to determine whether generation is installed.</p>
Monitoring of "new" & "ready" statuses	3.14	Monitoring of "new" & "ready" statuses	Ensure that traders are contacted about ICPs at "new" or "ready" status before they have remained at that status for over 24 months.
Distributors to Provide ICP Information to the Registry man	4.6	Rounding of kW capacity information for distributed generation	Round kW capacity for distributed generation to one instead of zero decimal places.

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

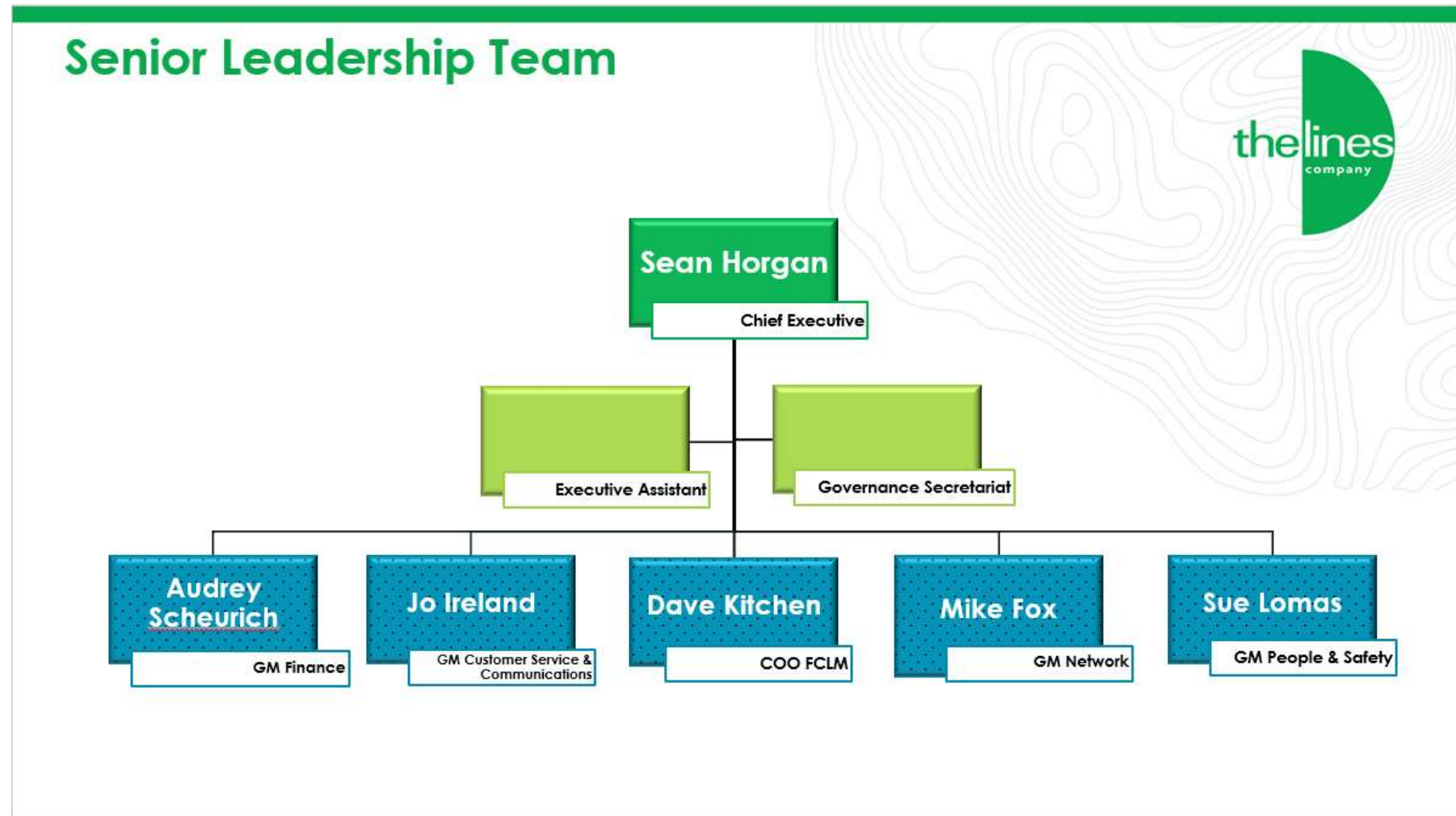
The Authority website was checked to determine whether there are code exemptions in place.

Audit commentary

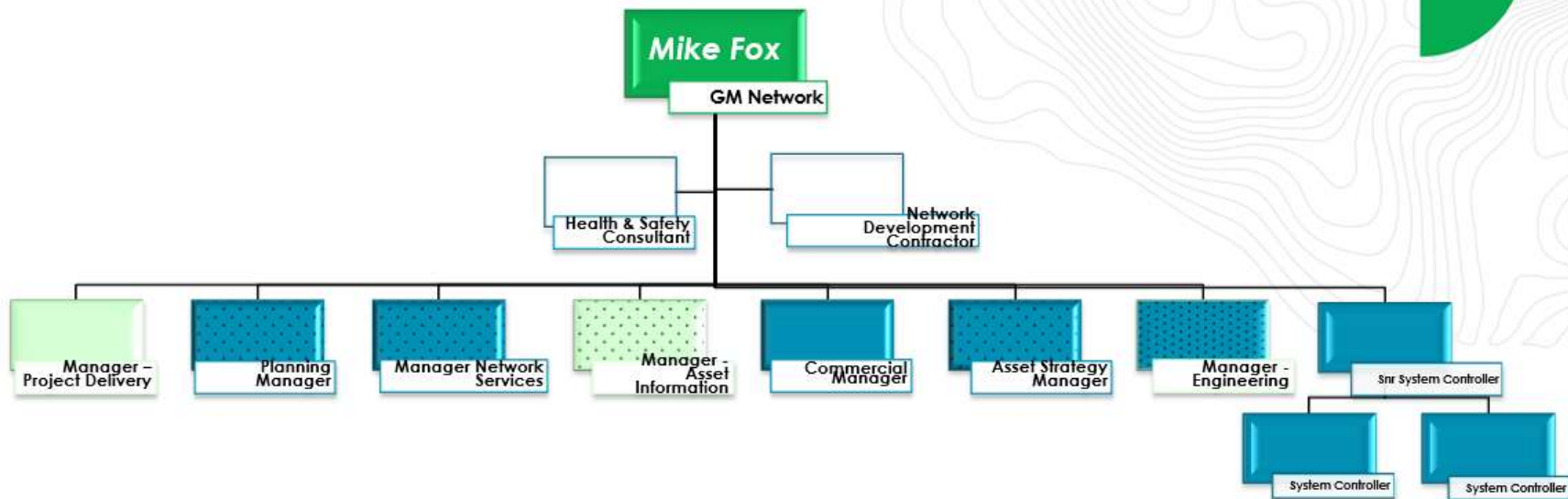
Review of exemptions on the Authority website confirmed that there are no exemptions in place relevant to the scope of this audit.

1.2. Structure of Organisation

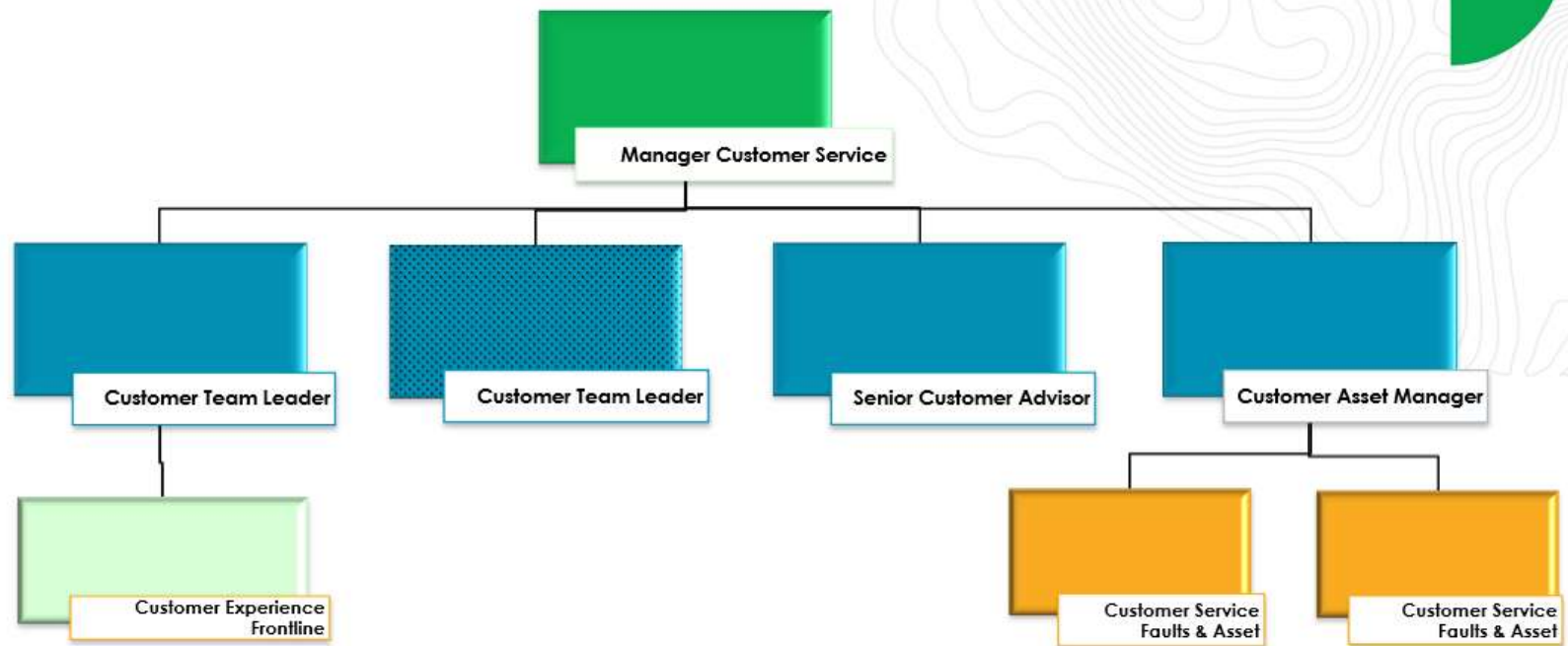
TLC provided an organisational structure:



Network



Customer Services



1.3. Persons involved in this audit

Auditor:

Tara Gannon

Veritek Limited

Electricity Authority Approved Auditor

Personnel assisting in this audit were:

Name	Title	Organisation
Brabbyn Osburn	Network Performance Engineer	The Lines Company
Craig Donaldson	Pricing Manager	The Lines Company
Delwyn Spencer	Customer Asset Manager	The Lines Company
Dr. Miftah Al Karim	Manager, Asset Information	The Lines Company
Els Comrie	Senior Data Analyst	The Lines Company
Tiffany Caine	Project Manager	The Lines Company
Tony McGeady	Director	Prova Concepts Ltd

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 subcontract any activities within the scope of this audit.

Audit commentary

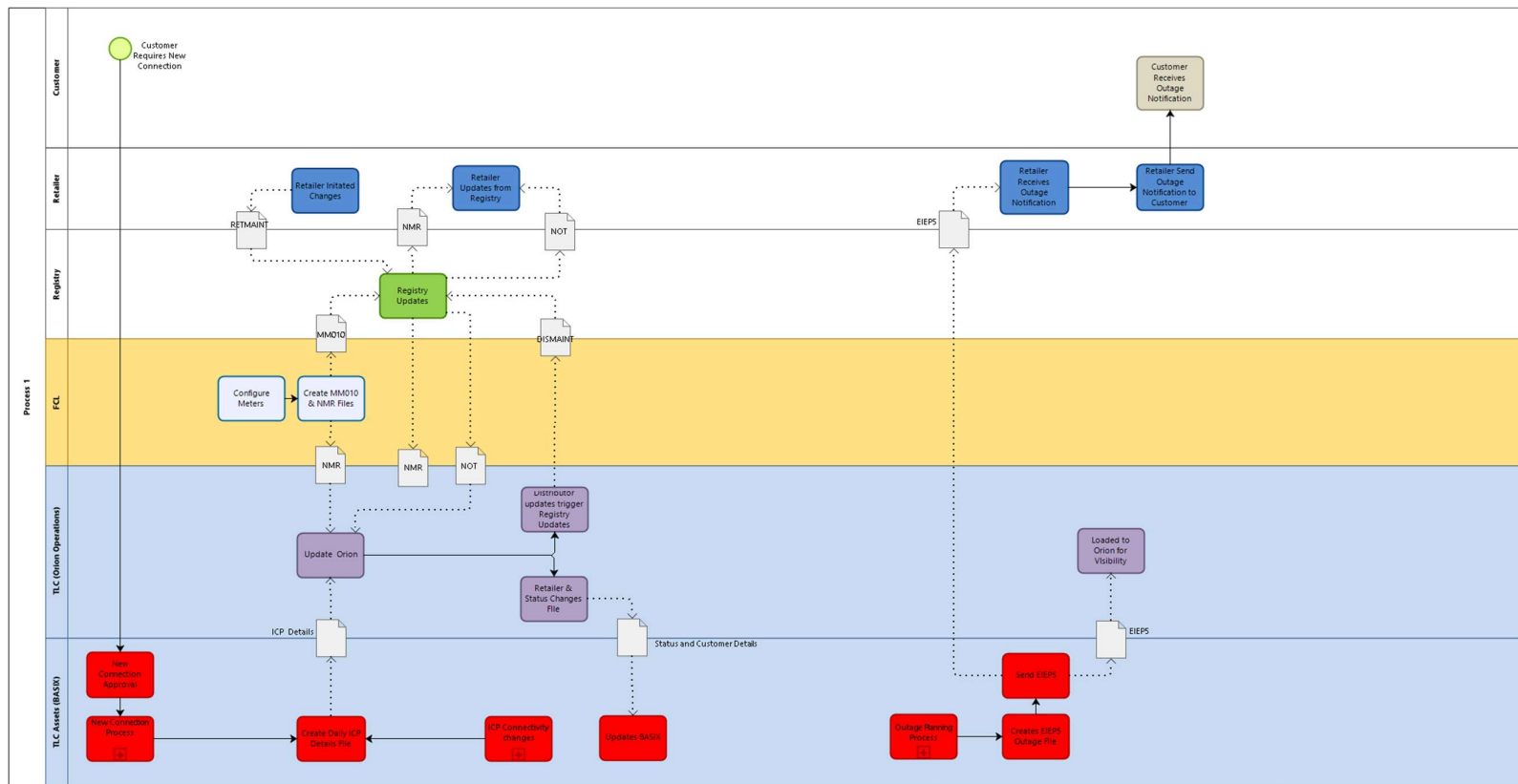
Not applicable

1.5. Supplier list

TLC does not subcontract any activities within the scope of this audit.

1.6. Hardware and Software

TLC provided the diagram below showing the integration of the Orion system with other systems and processes:



TLC's systems are backed up to a back-up server every 24 hours. Orion servers are backed up using VEEAM and replicated to VGRID, a cloud hosting provider. In the event of a disaster situation, TLC can swap to the VGRID hosted Orion version.

Access to TLC's systems is restricted through logins and passwords.

1.7. Breaches or Breach Allegations

TLC has no breach allegations recorded by the Electricity Authority.

1.8. ICP and NSP Data

The table below lists the relevant NSPs, and their associated balancing areas. Two new NSPs were created during the audit period, and no NSPs were transferred or decommissioned. Active ICP numbers are as at 13/11/19.

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	11,452
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	819
LINE	OKN0111	OHAKUNE			OKN0111LINEG	G	1/05/08	2,032
LINE	ONG0331	ONGARUE			CENTRALLINEG	G	1/05/08	4,462
LINE	TKU0331	TOKAANU			CENTRALLINEG	G	1/05/08	4,828
LINE	WKM0331	WHAKAMARU	HTI0331	LINE	NORTHLINEG	I	1/05/08	-
New NSPs created since the 2018 audit								
Dist	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
LINE	HTI1101	Hangatiki			NORTHLINEG	G	25/2/19	-
LINE	TLC0111	Tangiwai Ohakune Interconnect	OKN0111	LINE	OKN0111LINEG	I	01/07/19	-

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

Status	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017	Number of ICPs 2016	Number of ICPs 2015
Distributor (888)	0	0	0	0	0
New (999)	3	1	0	0	0
Ready (000)	13	26	8	9	7
Active (2,0)	23,593	23,596	23,501	23,311	23,766
Inactive - new connection in progress (1,12)	44	37	34	28	25
Inactive – vacant (1,4)	298	295	435	752	909
Inactive - reconciled elsewhere (1,5)	0		1		
Inactive – AMI remote disconnection (1,7)	3		1	0	1
Inactive – disconnected due to meter disconnected (1,8)	41	64	50	38	104
Inactive – at pole fuse (1,9)	2	2	1	1	0
Inactive – disconnected at meter box switch (1,10)	0	1	0	0	0
Inactive - at meter box switch (1,11)	3	5	9	57	415
Inactive – ready for decommissioning (1,6)	5	42	76	52	67
Decommissioned (3)	3,465	3,175	2,832	2,502	2,269

1.9. Authorisation Received

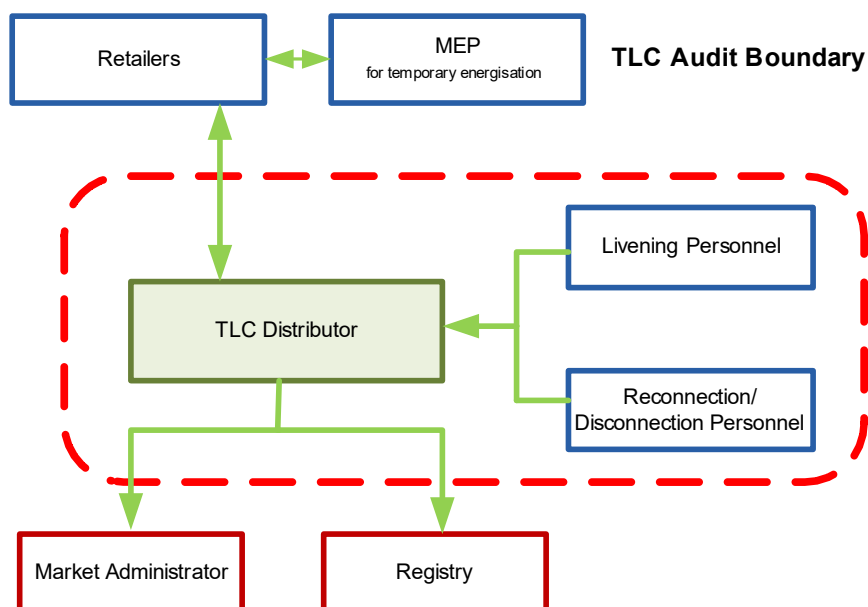
TLC provided a letter of authorisation to Veritek, permitting the collection of data from other parties for matters directly related to the audit.

1.10. Scope of Audit

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 TLC's premises in Te Kuiti on 14 January 2020.

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

TLC provided a copy of their previous audit conducted in December 2018 by Rebecca Elliot of Veritek Limited. The audit recorded 11 non-compliances described in the table below and made three recommendations. The current status of the non-compliances and recommendations is listed below.

Subject	Section	Clause	Non-compliance	Status
Provide complete and accurate information	2.1	11.2(1)	Registry validation not identifying active ICPs with missing initial electrical connection dates or potential distributed generation where TLC have none recorded. Two ICPs with the incorrect decommission event date recorded.	Still existing
Create ICPs	3.1	11.4	ICP not created for lighting for flats in Kaka Street.	Still existing
Participants may request distributor to create ICPs	3.2	11.5(3)	ICPs not created within 3 days of request from retailer.	Cleared
Timeliness of provision of information	3.4	7(2) of Schedule 11.1	Required information for one ICP not populated to registry prior to electricity being traded.	Cleared

Subject	Section	Clause	Non-compliance	Status
Timeliness of provision of the initial electrical connection date	3.5	7(2A) of Schedule 11.1	Late population of the initial electrical connection date for five ICPs.	Still existing
Connection of ICPs	3.6	11.17	One ICP electrically connected before the trader's information was populated to the registry.	Cleared
Management of "new" status	3.13	13 of Schedule 11.1	ICP 0001112806WM204 incorrectly recorded at the "new" status on the registry.	Still existing
Changes to registry information	4.1	8 of Schedule 11.1	Some backdated price, network, status, and address changes.	Still existing
ICP location address	4.4	2 Schedule 11.1	96 duplicate addresses exist, and 58 addresses do not have street numbers or other information to allow the ICP to be readily located.	Still existing
Distributors to Provide ICP Information to the Registry	4.6	7(1) Schedule 11.1	Incorrect ICP designation flag for 778 ICPs. 37 active ICPs with no initial electrical connection dates recorded. One incorrect initial electrical connection date. 2 ICPs with incorrect distributed generation details (one incorrect fuel type and one with the incorrect event date).	Some exceptions are still existing

Subject	Section	Recommendation	Description	Status
Provision of ICP Information to the registry manager	3.3	Consider automating the population of the "export network changes" field to minimise the possibility of data not being populated on the registry.	This recommendation is included in stage 2 deliverables of ORION project. Delivery 2019 Q1	Not implemented
Electrical connection of a point of connection	3.16	Review streetlight circuit connection process to ensure that these are associated with an ICP prior to electrical connection.	Streetlight circuit process to be reviewed.	Implemented

Subject	Section	Recommendation	Description	Status
Distributors to Provide ICP Information to the Registry	4.6	Livening paperwork is provided to support electrical connection dates advised from FCLM.	Review planned of new connection process and end to end workflow.	Implemented

1.12. Participants to give access (Clause 16A.4)

Code reference

Clause 16A.4

Code related audit information

A participant must give the Authority or an auditor full access to all information that may be required for the purposes of carrying out an audit.

(2) The participant must provide the information—

(a) at no charge; and

(b) no later than 15 business days after receiving a request for the information from the Authority or an auditor, as the case may be.

Audit observation

The information request was provided to TLC on 13/09/19. The information was due to be provided to Veritek by 7/10/2019.

Audit commentary

The information was not received in full until the 18/11/2019. The provision of information to undertake an audit is critical to ensure that all the required analysis can be undertaken. The late provision of information is recorded as non-compliance.

Non-compliance	Description
<p>Audit Ref: 1.12</p> <p>With: Clause 16A.4</p> <p>From: 07-Oct-19</p> <p>To: 18-Nov-19</p>	<p>Late provision of audit information.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>
Audit risk rating	Rationale for audit risk rating
Low	Controls are rated as moderate, the delays were primarily caused by staffing changes. This was the first audit for the staff who provided the audit information. The impact is assessed to be low.

Actions taken to resolve the issue	Completion date	Remedial action status
TLC has proposed extension of the audit deadline and the authority approved that request. The new dates were informed to the auditor.	11/12/2019	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
<p>TLC has identified the key gaps that have contributed in late provisioning of the audit information. In order to prevent such occurrence TLC has proposed the following actions to be implemented before the next audit:</p> <ol style="list-style-type: none"> 1. Apply delegation strategies by forming a team rather than making one person to collect all the information. 2. Track key deliverables against deadlines. 3. Be prepared for the uncertainties such as leaves, resignations etc. 	29 th May 2020	

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 file as at 13/11/19, event detail report for 01/12/18 to 15/11/19, and AC020 audit compliance report for 01/12/18 to 06/11/19 were examined to confirm compliance.

Audit commentary

Registry synchronisation

Network maintained information is automatically transferred from Orion to the registry. When a field that is recorded on the registry is updated in Orion, the user must specify that the updated information is to be sent to the registry by:

1. entering the event date for the appropriate event type (network, address, pricing, or status) on the registry tab;
2. ticking the box to update the registry for the appropriate event type (network, address, pricing, or status) on the registry tab;
3. changing the status dropdown box to “NOTYETSENT” on the registry tab; and
4. saving changes.

Overnight, Orion will generate a file for the registry for ICPs where the status dropdown is “NOTYETSENT” for the event types which are ticked. The file will contain the current Orion values for each field for the event type, and the event date specified on the registry tab.

If step 1 is missed, the event date may be recorded incorrectly. If any one of steps 2-4 are missed, the registry update will not be sent. I saw evidence that registry updates were sometimes not completed because steps of the registry update process were missed when checking late updates.

TLC has also found missing registry updates through their discrepancy reporting processes and is currently investigating to determine whether these missed updates are caused by update process steps being missed, or if there are other issues with the update process.

Registry acknowledgement and notification files are automatically loaded into Orion. The DC-010 exception report is reviewed daily, which shows failed registry updates and instances where a trader has changed information about one of TLC’s ICPs. The report is reviewed manually and ICP information is updated as necessary.

Registry and data validation

Monthly, a suite of reports are run which show discrepancies between Orion and the registry, including:

- **address_discrepancy**; where one or more address fields are different;
- **retailer_discrepancy**; where the trader is different;
- **network_discrepancy**; where the connection type, installation type, distributor unmetered load details, generation capacity, generation fuel type or initial electrical connection date are different;
- **status_discrepancy**; where the status or status reason is different; and
- **pricing_discrepancy**; where the price code, loss code, or chargeable capacity is different.

The reports are worked through and Orion and/or the registry are updated as necessary. The reports help to identify instances where Orion has been updated, but the registry update has not been sent.

When reviewing the reports for January 2020, I found that some ICPs where Orion and registry data matched were included. This was particularly noticeable in the Address_discrepancy report and the Retailer_discrepancy report.

I did see evidence that discrepancies were being identified and corrected through the discrepancy process, but there were some exceptions which had not been resolved such as 000112718WM43D where unmetered load had been updated in Orion but had not been transferred to the registry. This was corrected during the audit but should have been identified and corrected through the registry discrepancy process.

I recommend that this is investigated to confirm that the reports are functioning as expected.

Recommendation	Description	Audited party comment	Remedial action
Discrepancy reporting	Check the discrepancy report to confirm that they are including all valid discrepancies and excluding data which matches.	TLC will start having an internal audit to review the automation processes in place. The Original equipment manufacturer of ORION would be involved in testing the existing applications.	Identified

The previous audit noted that TLC intended to develop some new reports to identify the discrepancies shown in the table below. None of these reports have been developed yet, and there are no immediate plans to create them.

Discrepancy type	Existing controls in place
Discrepancies between the trader's earliest active date and initial electrical connection date	<p>Addition and modification of trader active dates is identified and reviewed through the PR-010 discrepancy reporting process. Each ICP which becomes active is checked and updated in Orion.</p> <p>The controls in place mitigate the risk of an ICP becoming active without TLC's knowledge. Most initial electrical connection dates appear to be accurate based on the sample of ICPs reviewed in section 4.6. I found four incorrect initial electrical connection dates, and two of those were for historic ICPs created before the audit period.</p>
ICPs with distributed generation profiles and no generation recorded by TLC	<p>There is currently no check to identify ICPs which have had generation metering installed, or a generation profile recorded without an application being received.</p> <p>There are not sufficient controls in place to mitigate the risk of missing generation details.</p> <p>During the audit I found 0001062900WM45A had PV1 profile applied by Trustpower and a generation register installed but no generation details were recorded by TLC. Further investigation confirmed that generation was installed and the ICP details were updated</p>

Discrepancy type	Existing controls in place
	during the audit. A comparison between profiles and the distributed generation details recorded would have identified this exception.
NSP allocation	<p>NSP allocation is checked on ICP creation.</p> <p>NSPs are updated in Basix and transferred to Orion. Discrepancies between Orion and Basix are identified and resolved by reconciling Basix and Orion records. Discrepancies between Orion and the registry are identified and resolved using the Network_discrepancy report.</p> <p>The controls in place mitigate the risk of incorrect NSPs being assigned to new ICPs. Accuracy was confirmed for the sample of NSPs details checked during the audit in section 4.2. One exception from the previous audit remains outstanding and is recorded as non-compliance below.</p>

I recommend that TLC validates trader and MEP information against their list of ICPs that distributed generation has been requested for and follows up any exceptions.

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 (https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home).</p> <p>Follow up with the trader and/or customer to determine whether generation is installed.</p>	<p>Found meters with EG registers in PR255 report, compared this with CD report. Found 19 ICPs which are not recorded as Generation. Will follow up with the recommendation.</p> <p>TLC has already started the process.</p>	Identified

Event dates

Event dates should reflect the date from which the attribute values for the event apply.

Orion's registry screen allows users to enter separate event dates for network, address, pricing, and status updates. When an update is sent to the registry, the appropriate event date for the record type is added to the file.

Review of the event detail report for 01/12/18 to 15/11/19 found that one of the 174 network events populating the initial electrical connection date for new connections did not have an effective date which matched the initial electrical connection date. I found that the incorrect event date for 0001113048WM297 was caused by a data entry error when the date was entered. An event date of 25/06/19 was applied instead of 24/06/19.

Three updates to decommissioned status had incorrect event dates applied, due to manual data entry errors:

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are rated as strong overall. Automation is in place for registry updates and acknowledgements, although data must be manually selected for update and exceptions are manually worked through. The discrepancy reporting process will detect and correct any instances where registry updates have not been triggered or have failed.</p> <p>The audit risk is rated as low as the inaccurate information does not have a direct impact on reconciliation.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Change to correct dates and NO for NSP		29/05/2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Contact Trader to ask if there is any issue with changing NSP setting to NO		29/05/2020	

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 file as at 13/11/19 was examined to confirm compliance.

Audit commentary

TLC have processes in place to identify and resolve registry discrepancies as described in **section 2.1**. I saw evidence of incorrect information being corrected during the audit and most corrections were conducted as soon as practicable.

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.

15 new connection applications of the 215 ICPs created since 01/12/18 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.

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.

TLC does not have an ICP for the eight streetlights associated with a set of flats in Kaka Street, one light on Rauparaha St and one light on Waitomo Village Road. This is discussed further in **section 7.1**.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.1 With: Clause 11.4 From: unknown To: 14-Jan-19	ICPs are not created for ten streetlights. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	I have rated the controls as strong as TLC have a robust ICP creation process and these lights are an historic issue and no other such instances have been identified. I have rated the audit risk rating as low as the kWh volume associated with these lights will be small.		
Actions taken to resolve the issue		Completion date	Remedial action status
Investigating. Found a 2006 decommissioned ICP for streetlights in Gentrack. 0008210850WM718 (Note had "unused ICP")		29/05/2020	Investigating

Preventative actions taken to ensure no further issues will occur	Completion date	
Once investigation is completed we'll know how to prevent this occurring again	29/05/2020	

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. 15 new connection applications of the 215 ICPs created since 01/12/18 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

TLC's new connections process remains largely unchanged from the previous audit and is as follows.

1. An application for new load (AFL) is provided to TLC by the customer or their agent.
2. The AFL is approved or declined.
3. If the AFL is approved, TLC sends a "Connection Agreement" to the customer, which is completed and returned.
4. The customer is required to "register" with their retailer.
5. The retailer issues a service request to live the ICP to TLC. This is treated as both the application for a new ICP and the trader's acceptance.
6. When the ICP is ready for electrical connection, the customer or their agent will contact TLC, and at this point the ICP is created at "ready".

TLC will not create an ICP until all the new connection steps are completed. All documents are scanned and stored for future reference. The Network Information team record the date the ICP is requested in a spreadsheet. A sample of 12 ICPs were checked, and I confirmed that they were all created on time.

Occasionally, an ICP cannot be created on request because not all the requested information is provided. When this occurs the trader and/or customer are advised via email of the reasons for the delay. No recent examples of this were available.

The 2017 audit found two ICPs that were not created on the registry until after they were electrically connected. Analysis of the event detail report found that all new ICPs which had been electrically connected were created by their initial electrical connection date.

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 15 new connection applications of the 215 ICPs created since 01/12/18 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 Orion, and data is automatically transferred from Orion to the registry. When a field that is recorded on the registry is updated in Orion, the user must specify that the updated information is to be sent to the registry by populating the event date, tick box, and status on the registry tab, and saving changes.

The material change audit recommended automating the population of the export network changes field in Orion to ensure that any changes are automatically sent to the registry. This recommendation has not been implemented, and users still need to complete a five-step process (including entering the data) to ensure the change is sent to the registry.

Controls are in place to ensure that information is accurate, including:

- An Orion address lookup to confirm the address is unique.
- Provision of transformer numbers by the asset management group. The operator selects the transformer and Orion brings through from Basix (TLC's asset management system) all the associated information for that transformer. This includes the NSP and loss category code associated with that NSP with the exception of large sites. In these instances, the asset management group will advise the correct loss factor to be applied.
- Independent reasonableness checks of the new connection information when pricing details are entered.

Information was provided as required by this clause for all ICPs created during the audit period.

Audit outcome

Compliant

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 13/11/19 and event detail report for 01/12/18 to 15/11/19 were examined to determine the timeliness of the provision of ICP information for new connections.

Audit commentary

The distributor must provide to the registry the information listed in clause 7(1) of schedule 11.1 as soon as practicable, and before electricity is traded at the ICP.

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.

178 of the 215 ICPs created between 01/12/18 and 13/11/19 were electrically connected. I reviewed these completed new connections on the event detail report and found all the ICPs had “ready” status, pricing information, address information, and a proposed trader populated prior to becoming electrically connected.

The 2018 audit recorded that ICP 0001112806WM204 was electrically connected on 10/09/18 but remained at “new status”. Following the 2018 audit, a correction was processed to change the ICP to “ready” status and the ICP was claimed and made “active” by the trader.

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

Audit outcome

Compliant

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 registry list for 13/11/19 and event detail report for 01/12/18 to 15/11/19 were examined to determine the timeliness of the provision of initial electrical connection dates for new connections.

A sample of 15 late updates over 30 business days after the initial electrical connection date were checked to determine why they were delayed.

Audit commentary

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.

Initial electrical connection dates are entered into Orion, and data is automatically transferred from Orion to the registry. The user must specify that the updated information is to be sent to the registry by populating the event date, tick box, and status on the registry tab, and saving changes.

178 of the 215 ICPs created between 01/12/18 and 13/11/19 were electrically connected.

- 117 ICPs (65.7%) had initial electrical connection dates populated within ten business days of initial electrical connection.
- 57 ICPs (32.0%) had initial electrical connection dates populated between one and 75 business days late.
- Four ICPs (2.2%) had “active status” and meter certification updates indicating that they were initially electrically connected in October or November 2019 and missing initial electrical connection dates. The Initial electrical connection dates were missing because connection paperwork was not received, or Orion was updated but the fields required to trigger the registry update had not been populated correctly. Three initial electrical connection dates were updated through TLC’s discrepancy processes prior to the audit, and ICP 0001113125WMB38 was updated during the audit. The missing information not updated prior to the audit is recorded as non-compliance in **section 4.6**.

A sample of 15 late updates over 30 business days after the initial electrical connection date were checked and found to be delayed primarily because paperwork confirming the initial electrical connection date was received late. The network services team have been reminded that paperwork must be provided promptly, and TLC have found that paperwork is provided more quickly in areas where it is provided directly by a technician, rather than an administration team for a group of technicians.

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: 04-Feb-19 To: 20-Sep-19	Late population of the initial electrical connection dates for 61 ICPs. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	I have rated the controls as moderate, in most cases the updates were delayed while TLC obtained confirmation of the correct date. Most initial electrical connection dates were populated on time. The impact on participants is minor because this field is used to validate other fields against.		
Actions taken to resolve the issue		Completion date	Remedial action status
Correct remaining dates		29/05/2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Training and review the new connection processes.		29/05/2020	

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 13/11/19 and event detail report for 01/12/18 to 15/11/19 were examined to determine compliance.

Audit commentary

ICPs will not be electrically connected without the agreement from the trader. Trader acceptance is confirmed during the application process, through the retailer's service request for livening.

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**, the 178 ICPs created between 01/12/18 and 13/11/19 which were electrically connected 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 registry list for 13/11/19 and event detail report for 01/12/18 to 15/11/19 were examined to determine compliance.

Audit commentary

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

A sample of 15 new connections were checked, and trader responsibility was consistently accepted prior to electrical connection.

As discussed in **section 3.4**, the 178 ICPs created between 01/12/18 and 13/11/19 which were electrically connected had a proposed trader recorded on the registry prior to initial electrical connection.

Audit outcome

Compliant

3.8. 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

One new NSP which was not a point of connection to the grid was created during the audit period:

POC code	Network participant	Embedded under POC code	Embedded under network participant	Reconciliation type	Start date
TLC0111	LINE	OKN0111	LINE	NP	1/07/2019

All information except metering certification was provided within five business days of electrical connection on 01/07/19 as required by this clause. The metering certification was provided by email on 18/07/19.

New NSP HTI1101 was a point of connection to the grid, and this clause does not apply.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.9 With: Clause 10.30 From: 01-Jul-19 To: 18-Jul-19	Metering certification details for TLC0111LINENP were provided more than five business days after electrical connection. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are moderate, because there is room for improvement. TLC requires FCLM to provide metering certification details to the reconciliation manager. The impact is low. The metering certification details were provided 13 business days after initial electrical connection.		
Actions taken to resolve the issue		Completion date	Remedial action status
			Disputed
Preventative actions taken to ensure no further issues will occur		Completion date	
Improve FCLM/TLC communication. FCLM Staff training to ensure delivery of paper work in a timely fashion. TLC can recommend FCLM to bring changes in their reporting process.		31/03/2020	

3.9. 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 13/11/19 and event detail report for 01/12/18 to 15/11/19 were examined to determine compliance.

Audit commentary

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.

No temporarily electrically connected ICPs were identified. There were two new connections where the meter certification date was prior to the initial electrical connection date. For both ICPs a proposed trader was recorded on the registry prior to the meter certification date.

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

One new NSP which was not a point of connection to the grid was created during the audit period:

POC code	Network participant	Embedded under POC code	Embedded under network participant	Reconciliation type	Start date
TLC0111	LINE	OKN0111	LINE	NP	1/07/2019

The NSP was not temporarily electrically connected.

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:

xxxxxxxxxxccc where:

- *yyyyyyyyyy 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 Orion in numerical order. All ICPs are created in the appropriate format.

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 at 13/11/19 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 new connections 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.

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 13/11/19 and event detail report for 01/12/18 to 15/11/19 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 applied via the registry when decommissioning an ICP set up in error.

A review of the event detail report identified eight updates to “new” status during the audit period.

- Seven ICPs had “new” status applied because not all information required to make the ICP “ready” was populated in Orion, including the installation type, reconciliation type and/or proposed trader. All had the missing information populated and were corrected to “ready” status prior to the initial electrical connection date.
- ICP 0001113082WM7E9 had “new” status applied because the ICP was created before the electrician was ready for the ICP to be connected.

In all cases, “new” status was applied because the process to only create ICPs once they were ready to be connected was not followed.

The 2018 audit recorded that ICP 0001112806WM204 was electrically connected on 10/09/18 but remained at “new status”. Following the 2018 audit, a correction was processed to change the ICP to “ready” status and the ICP was claimed and made “active” by the trader.

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: 18-Dec-18 To: 12-Aug-19	Eight ICPs temporarily had “new” status applied in error. All were corrected to “ready” and then “active” status prior to the initial electrical connection date. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate. No exceptions have occurred since August 2019, and all the exceptions were identified and resolved through TLC’s discrepancy management processes. The impact is assessed to be low, all of the ICPs were made “ready” before they were initially electrically connected.		
Actions taken to resolve the issue		Completion date	Remedial action status
			Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Training staffs and review the internal processes.		29/05/2020	

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 management of ICPs at the “new” and “ready” status was examined. The AC020 audit compliance report for 01/12/18 to 06/11/19 was reviewed to determine compliance.

Audit commentary

TLC maintains a spreadsheet of all new connections, and progress with completing the connection. TLC reviews the spreadsheet every six months and follows up ICPs which have not progressed to determine whether they are still required.

TLC normally follows up ICPs with the customer, and I recommend that TLC ensures that they also follow up with the trader to meet their code obligations.

Recommendation	Description	Audited party comment	Remedial action
Monitoring of “new” & “ready” statuses	Ensure that traders are contacted about ICPs at “new” or “ready” status before they have remained at that status for over 24 months.	Connections now use the recommendation and contact the retailer	Identified

ICP 0001112616WMEA2 was found to be at “new” status from 08/06/17. The customer was contacted in April 2019 and confirmed that the ICP was no longer required. TLC then liaised with Trustpower to arrange for the ICP to be decommissioned.

No ICPs were found to be at “ready” status for more than 24 months.

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:*

- *the unique loss category code assigned to the ICP*
- *the ICP identifier of the ICP*
- *the NSP identifier of the NSP to which the ICP is connected*
- *the plant name of the embedded generating station.*

Audit observation

The EMI wholesale data set as at 20/11/19 and registry list as at 13/11/19 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 10MW, 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

TLC are aware of their obligation to ensure that the trader has provided approval before streetlights are connected. Where a new ICP is created or an increase in load is required, TLC's new connection process described in **section 3.2** applies.

Audit outcome

Compliant

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 13th 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 was reviewed.

The AC020 audit compliance report for 01/12/18 to 06/11/19 was reviewed to determine compliance.

A diverse sample of 88 backdated events were reviewed to determine the reasons for the late updates, including address, network and status events. There were no late pricing events.

The management of NSP changes was examined.

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, initial population of data for new ICPs is assessed in **sections 3.4 and 3.5**.

When a field that is recorded on the registry is updated in Orion, the user must specify that the updated information is to be sent to the registry by:

1. entering the event date for the appropriate event type (network, address, pricing, or status) on the registry tab
2. ticking the box to update the registry for the appropriate event type (network, address, pricing, or status) on the registry tab
3. changing the status dropdown box to "NOTYETSENT" on the registry tab; and
4. saving changes.

Overnight, Orion will generate a file for the registry for ICPs where the status dropdown is "NOTYETSENT" for the event types which are ticked. The file will contain the current Orion values for each field for the event type, and the event date specified on the registry tab.

If any one of steps 2-4 are missed, the registry update will not be sent. I saw evidence that registry updates were sometimes not completed because steps of the registry update process were missed when checking late updates.

TLC has also found missing registry updates through their discrepancy reporting processes and is currently investigating to determine whether these missed updates are caused by update process steps being missed, or if there are other issues with the update process.

Where Orion had been updated, but the registry update was not completed, the discrepancy will be identified and resolved through the registry discrepancy reporting process.

Address events

The AC020 report recorded 34 ICPs where addresses were updated more than three business days after the event date. 89.88% of updates were on time, and the average business days between the event date and update date was 60.99.

All of the late updates were address corrections, and 21 replaced the previous address event with new values. I checked a sample of 15 late updates made over 40 business days after the event date and found all were address corrections, and the content of the updates was correct.

Prior to Orion being implemented address data was cleansed and updated in Gentrack but did not flow through to the registry. TLC has been working through re-processing these corrections in Orion.

Network events – distributed generation

The AC020 report recorded ten ICPs where distributed generation details were updated more than three business days after the event date. 52.38% of updates were on time, and the average business days between the event date and update date was 15.95.

All ten late updates were checked and were corrections to distributed generation or additions of distributed generation made as soon as information confirming generation was present was available. All of the updates were made within 59 business days of the event date.

The updates were made from the correct date, and the content was consistent with the inspection information.

Network events – other

The AC020 report recorded 149 ICPs where network fields other than distributed generation details were updated more than three business days after the event date. 112 of the 149 late updates included a change to the initial electrical connection date.

67.32% of updates were on time, and the average business days between the event date and update date was 30.92.

I checked all 36 updates which were made more than 90 business days after the event date, which included diverse update reasons. The late updates were caused by:

1. corrections, including instances where registry updates that had not been sent were identified and corrected through the registry discrepancy reporting process
2. updates to network records to allow ICPs to be decommissioned
3. updates to network records accompanying pricing updates; and
4. delays in receiving paperwork from network services to confirm the initial electrical connection date.

The updates contained the correct event dates and values apart from ICP 0001112680WMOCA, which had an initial electrical connection date of 14/10/17 recorded instead of 04/10/17. This is recorded as non-compliance in **section 4.6**.

Pricing events

The AC020 report did not record any ICPs where the price category code was updated more than three business days after the event date.

I checked a sample of ten updates and found they were made from the correct date, and the content was correct.

Status events

The management of decommissioned ICPs is discussed in **section 4.11**.

The AC020 report recorded 45 ICPs where status was 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. 29.69% of updates were on time, and the average business days between the event date and update date was 30.11.

I checked all 22 late updates made over 40 business days after the event.

- Seven updates were delayed because confirmation of the correct decommissioning date was received late.
- 15 updates were processed as part of the "questionable ICP project". TLC has identified ICPs which may have been decommissioned without their knowledge or may need to be decommissioned. Site visits are being conducted to determine the correct status of each ICP and decommissioning is arranged as necessary. Orion and the registry are updated once confirmation of decommissioning is received.

18 of the status updates were correct, and three had incorrect status event dates applied. This incorrect event dates are recorded as non-compliance in **section 2.1**.

NSP changes

NSPs are managed in Basix. Whenever a transformer is changed in Basix a file is generated and imported into Orion. Within Basix, information from Orion is compared to Basix records and discrepancies are reported and resolved.

Once the information is transferred to Orion a registry update must be triggered to create a network event update. If this step is missed, Orion's monthly discrepancy reporting process will identify that the NSP recorded in Orion differs from the registry and create an exception which will be resolved.

The AC020 report did not record any ICPs where the NSP was updated more than eight business days after the event date, and review of the registry list for 01/12/18 to 13/11/19 did not identify any ICPs which had NSP changes.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: Clause 8 of Schedule 11.1 From: 17-Dec-18 To: 04-Dec-19	34 late address updates. Ten late network updates to distributed generation details. 149 late network updates to fields other than distributed generation details. 45 late updates to decommissioned status. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate. Most of the late updates were corrections or were delayed while TLC confirmed that the updates were required. Some updates were delayed because not all steps to complete the registry update were completed in Orion and the missed update was identified through the registry discrepancy reporting process. There may be a minor impact on other participants. Processing corrections improves compliance with the completeness and accuracy requirements.		
Actions taken to resolve the issue		Completion date	Remedial action status
			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Training staffs and review the internal processes.		29/05/2020	

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 AC020 audit compliance report for 01/12/18 to 06/11/19 was reviewed to determine compliance.

Audit commentary

For new connections, transformer numbers are provided by the asset management group and loaded into Orion. The operator selects the transformer and Orion brings through from Basix (TLC's asset management system) all the associated information for that transformer. This includes the NSP and loss category code associated with that NSP with the exception of large sites. In these instances, the asset management group will advise the correct loss factor to be applied.

NSP changes are recorded in Basix and transferred automatically to Orion. When a field that is recorded on the registry is updated in Orion, the user must specify that the updated information is to be sent to the registry by populating the event date, tick box, and status on the registry tab, and saving changes. Any NSPs which have been updated in Orion but not updated in the registry will be identified and corrected through the registry discrepancy reporting process.

The AC020 report identified 11 ICPs on streets where 10% or fewer ICPs on a street have a different NSP to the other ICPs, and where the number of ICPs with a different NSP is less than three. All 11 ICPs were checked and confirmed to be assigned to the correct NSP. Ten ICPs had an incorrect address region recorded and were corrected during the audit. The incorrect addresses are recorded as non-compliance in **section 4.4**.

The 2018 audit found two potentially mis-mapped ICPs, which were re-checked:

ICP	Findings
0003330318WM71B Hydro Road	2018: Believed to be connected to ONG0331 but recorded as connected to TKU0331. 2019: TLC's control team confirmed this ICP should be connected to ONG0331, but the registry and Orion have not yet been updated. This is recorded as non-compliance in this section and section 2.1 .
0003301532WME55 Tokaanu Road	2018: Believed to be connected to TKU0331 but recorded as connected to NPK0331. 2019: TLC's control team confirmed this ICP is connected to NPK0331 and the registry and Orion are correct.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.2 With: Clauses 7(1),(4) and (5) Schedule 11.1 From: 01-Sep-13 To: 14-Jan-20	0003330318WM71B is connected to ONG0331 but recorded as connected to TKU0331. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	Rationale for audit risk rating
Low	Controls are rated as moderate, because the correction has not been processed yet. There is no impact on reconciliation because both NSPs are in the same balancing area.

Actions taken to resolve the issue	Completion date	Remedial action status
After investigation we have resolved the issue. The registry has been updated.	03/02/2020	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
TLC to be more vigilant. Ongoing process.		

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 bills its customers directly for line charges and provides ICP numbers to customers on request.

Audit commentary

TLC does receive requests for ICP identifiers from customers, and the information is provided immediately. TLC invoices 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 as at 13/11/19 was reviewed to determine compliance.

Audit commentary

When new ICPs are created in Orion, a "lookup" of the proposed address entry determines whether it already exists in Orion. If an address already exists, further information will be obtained and added to make the address unique.

Review of the registry list identified some duplicate and incomplete addresses. All of the affected ICPs were created in 2008 or earlier. Some ICPs had duplicate and incomplete addresses, and there were 110 exceptions in total.

Prior to Orion being implemented address data was cleansed and updated in Gentrack but did not flow through to the registry. TLC has been working through re-processing these corrections in Orion.

Issue	2019	2018	2017	2016	2015	2014
Total duplicate addresses	56	96	255	366	1,642	1,670
Addresses with no Street number or Property name	100	58	260	318	636	636

All exceptions were provided to TLC, and reviewed prior to the on-site audit:

- nine ICPs had their addresses corrected; and
- the other 101 ICPs require site visits and/or additional addressing information before they can be corrected (TLC's predominantly rural network can make it difficult to determine unique ICP addresses, and TLC intends to schedule these site visits so that the affected addresses can be updated).

Comparison of NSP and address data identified ten ICPs where the address region was incorrectly recorded as Waikato instead of Manawatu. The affected addresses were all updated during the audit.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: Clause 2 Schedule 11.1 From: 13-Nov-19 To: 14-Jan-19	110 ICPs have incomplete or duplicate address information; nine of the affected ICPs had their addresses corrected during the audit. Ten ICPs had incorrect address regions recorded and were 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 as ICPs created during the audit period have addresses that are readily locatable and unique. TLC intends to undertake reviews and site visits to determine the correct addresses. The audit risk rating is low based on the volume of ICPs affected, and that TLC is working to resolve the issues.		
Actions taken to resolve the issue		Completion date	Remedial action status
Ongoing correction of historic data. Those able to be corrected without a site visit will be completed by completion date.		29/12/2020	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
New ICPs are all created with locatable addresses		

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 as at 13/11/19 and AC020 audit compliance report for 01/12/18 to 06/11/19 were reviewed to determine compliance. A typical sample of data discrepancies were checked, as described in the commentary.

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

Audit commentary

Review of the registry list as at 13/11/19 and AC020 audit compliance report for 01/12/18 to 06/11/19 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.

NSP information

One ICP was found to have an incorrect NSP assigned, which is recorded as non-compliance in **section 2.1**.

Assignment of dedicated NSP status was checked. The registry list as at 13/11/19 recorded 787 active ICPs with dedicated NSP set to "yes". All ICPs on the TLC network can be fed by more than one NSP and should all be recorded as not dedicated. TLC intends to notify the affected retailers and correct dedicated NSP information in Orion and on the registry. A decision on how this change will be implemented is expected in the new few months.

No active ICPs created after September 2018 have the dedicated NSP flag set to "yes".

Initial Electrical Connection Date

TLC's network services team complete the initial electrical connection, and provide paperwork confirming the 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.

Initial electrical connection dates are entered into Orion, and the registry update is triggered by populating the event date, tick box, and status on the registry tab, and saving changes. Any initial electrical connection dates which have been updated in Orion but not updated in the registry will be identified and corrected through the registry discrepancy reporting process.

Initial electrical connection dates for ICPs created during the audit period

178 of the 215 ICPs created between 01/12/18 and 13/11/19 were electrically connected on the registry. I compared the initial electrical connection date, meter certification date, and earliest active date to identify potential inaccurate information, and found 16 exceptions.

Scenario	Count	Incorrect count	Commentary
ICP has "active" status and no IECD	4	1	Initial electrical connection dates were missing for four active ICPs because connection paperwork was not received, or Orion was updated but the fields required to trigger the registry update had not been populated correctly. Three missing dates were updated through TLC's discrepancy processes prior to the audit. ICP 0001113125WMB38 was updated during the audit, and non-compliance is recorded below.
ICP has "ready" or "new connection in progress" status with an IECD	2	-	Both were timing differences, and the retailer later made the ICPs active from the initial electrical connection date.
The ICP's "active" date and IECD match, and there is no meter certification	2	-	Both were timing differences, and the MEP later provided meter certification details which matched the initial electrical connection date.
The ICP's "active" date and IECD do not match	8	1	For seven ICPs TLC's initial electrical connection date was confirmed to be correct. For ICP 0001113145WM4C8 the initial electrical connection date was entered as 24/10/19 but should have been 23/10/19. The record was not corrected at the time of the audit, and non-compliance is recorded below.
Total	16	2	

Initial electrical connection dates for ICPs created prior to the audit period

Examination of the AC020 report found:

- 23 active ICPs which were electrically connected after 29/08/13¹ and created before 01/12/18 which did not have an initial electrical connection date populated. Most of these ICPs were created before the implementation of Orion, and in general they had not been updated because paperwork confirming the connection date was not received, or the change was processed in Gentrack but not the registry. 21 of the affected ICPs have had backdated corrections processed but two remain missing:

ICP Identifier	Initial Electrically Connected Date	Comment
0001112841WMD6B	31/05/2018	Not recorded in Orion or the registry.
0001112706WMD0B	26/01/2018	Orion has been updated but the change has not been sent to the registry.

- 160 active ICPs which were electrically connected after 29/08/13¹ and created before 01/12/18 which had an earliest active status date prior to the initial electrical connection date. I checked

¹ When recording initial electrical connection dates became required.

a sample of 20 of these ICPs and confirmed that TLC's initial electrical connection date matched the connection paperwork.

Review of the registry list identified two ICPs with initial electrical connection dates prior to 29/08/13¹ populated, both were consistent with the earliest active date.

Other initial electrical connection date discrepancies

Review of a sample of network updates in **section 4.1** found ICP 0001112680WM0CA had an initial electrical connection date of 14/10/17 recorded instead of 04/10/17.

The 2018 audit recorded that ICP 0001112847WMCE4 was initially electrically connected on 07/08/18 but was recorded as connected on 09/08/18. The initial electrical connection date remains incorrect, and this is recorded as non-compliance in **section 2.1**.

Distributed Generation

TLC requires an application before any distributed generation is connected to their network. This process has been reviewed during the audit period and TLC closely monitors this area due to the health and safety risks associated. All applications are tracked via a spreadsheet. Distributed generation is only recorded once it is confirmed that it is installed compliantly through the inspection process.

Network services previously recorded the generation details in Basix and sent information to the connections team for loading into Orion, and transfer from Orion to the registry. The connections team found that this information was not consistently provided on time, so now checks the distributed generation spreadsheet weekly, and updates Orion for any ICPs which are confirmed to be generating.

Review of the registry list found 76 ICPs have generation capacity recorded by TLC. All ICPs with generation capacity had an installation type of B or G recorded. For nine of these ICPs, the trader's profile did not indicate distributed generation, but I confirmed that TLC's generation details were correctly recorded. For all other ICP's the profile was consistent with the fuel type.

Examination of the AC020 report found seven ICPs where no distributed generation details were recorded, but the trader's profile indicated generation and an EG register was installed. No evidence of generation was found for six of the ICPs. ICP 0001062900WM45A was confirmed to have distributed generation and inspection had been completed, but there was a delay in the information being provided. The registry was updated with the correct details during the audit.

In **section 2.1** I have recommended that TLC compares 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, and follow up any exceptions with the trader to confirm whether distributed generation is installed. This check would have detected that ICP 0001062900WM45A potentially had generation installed.

Examination of the accuracy of distributed generation information for 20 ICPs found that capacity for three ICPs had been rounded to zero decimal places, but did not need to be rounded as the registry applies numeric 6.2 format to the capacity field:

ICP	Capacity	Capacity recorded on the registry
0001051450WMA96	3.54 kW	4 kWh
0001112481WM688	9.9 kW	10 kW
0001062900WM45A	1.82 kW	2 kW

I recommend that rounding to 2 decimal places rather than 0 decimal places should be applied in future.

Recommendation	Description	Audited party comment	Remedial action
Rounding of kW capacity information for distributed generation	Round kW capacity for distributed generation to one instead of zero decimal places.	May need training for those setting the capacity. Internally capacity in kVA is rounded to 0 decimal places.	Identified

Exceptions identified in the 2018 audit were re-checked:

- ICP 0001112270WMCDC's fuel type was corrected.
- ICP 0001112461WMC32 had distributed generation connected on 10/2/17 but the registry event date is still 30/8/17. This is recorded as non-compliance in **section 2.1**.

Unmetered Load

New unmetered load

There has been one new connection with unmetered load created during the audit period, and I confirmed that the unmetered load information provided to the registry was accurate.

Trader unmetered load is recorded without distributor unmetered load

Of the 84 active ICPs with unmetered load recorded by the trader, 56 ICPs have no unmetered load recorded by TLC. These are all historic ICPs and were created before 2018. I checked the seven ICPs where DUML was indicated or the ICP had been created after 2008 and found that for six ICPs TLC was not aware of the unmetered load and was not required to update their distributor unmetered load details. For ICP 0001112718WM43D, the unmetered load had been updated in Orion but had not been transferred to the registry. This was corrected during the audit and should have been identified and corrected through the registry discrepancy process.

Distributor unmetered load is recorded without trader unmetered load

No ICPs had distributor unmetered load recorded without trader unmetered load.

Distributor unmetered load details differ from the trader unmetered load details

For the 15 ICPs where distributor unmetered load was in a format which enabled recalculation, I compared the figures to the trader unmetered load. In all cases the calculation matched the trader's unmetered load figure within ± 0.01 kWh.

Unmetered load details format

Two ICPs which were not DUML did not have their load populated in the recommended format and were amended to the correct format during the audit.

Audit outcome

Non-compliant

Actions taken to resolve the issue	Completion date	Remedial action status
TLC agrees with the auditor		Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Ongoing refinement of the processes		

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 new connection process was examined in detail. The registry list for 13/11/19 and event detail report for 01/12/18 to 15/11/19 were examined to determine to identify any new connections that have either no price category code assigned, or changes to price category codes greater than ten days from the first active date.

Audit commentary

TLC bill their customers directly, and the price category is the same for all ICPs.

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 at 13/11/19 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.

GPS coordinates were populated for 11 active ICPs. All were in WGS84 format instead of NZTM2000 format, and two of the ICPs had their coordinates transposed:

ICP	GPS_Easting	GPS_Northing	Format
0001113024WME79	-39.18	175.402	WGS84 (latitude, longitude)
0001113026WMEFC	-39.177	175.404	WGS84 (latitude, longitude)
0001308240WM55D	-39.013	175.379	WGS84 (latitude, longitude)
0001113025WM23C	-39.006	175.805	WGS84 (latitude, longitude)
0013019790WM716	-38.993	175.379	WGS84 (latitude, longitude)
0013019763WMBC1	-38.992	175.379	WGS84 (latitude, longitude)
0001113023WM3B3	-38.98	175.826	WGS84 (latitude, longitude)
0002105950WM5CD	-38.819	175.321	WGS84 (latitude, longitude)
0001112843WMDEE	-38.69	175.212	WGS84 (latitude, longitude)
0001113151WMF6F	174.749	-38.619	WGS84 (transposed - longitude, latitude)
0001112821WM29B	175.21	-38.194	WGS84 (transposed - longitude, latitude)

Once notified of these exceptions during the audit, TLC removed the affected GPS coordinates from Orion and the registry. Sufficient property name, unit and street number remained to ensure that the ICPs could be located.

Orion does not allow NZTM GPS format, because the fields to store GPS information do not allow a sufficient number of digits. NZTM northing and easting coordinates are in numeric 7.3 format. Pioneer is investigating an Orion modification to allow additional digits to be stored.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 4.8</p> <p>With: Clause 7(8) and (9) Schedule 11.1</p> <p>From: 25-Jun-19</p> <p>To: 05-Aug-19</p>	<p>11 ICPs had GPS coordinates populated in the WGS84 format instead of NZTM2000 format.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>

Audit risk rating	Rationale for audit risk rating	
Low	<p>Controls are rated as weak, because no GPS coordinates were populated in the correct format.</p> <p>The potential impact is low, because other address information will assist in the location of the ICP and the coordinates have been removed.</p>	
Actions taken to resolve the issue		Completion date
WGS84 has been converted to NZTM. Orion fields need updating to accept this format		29/05/2020
Preventative actions taken to ensure no further issues will occur		Completion date
We are now aware of the correct formatting and use conversion table if required.		29/05/2020
		Cleared

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 13/11/19 and event detail report for 01/12/18 to 15/11/19 were examined in relation to the use of the “ready” status.

Audit commentary

TLC’s new connections process includes a “trader responsibility” step. Each ICP has a single price category, as TLC only has one price category.

Monitoring of ICPs at “ready” status is discussed in **section 3.14**, and no ICPs have been at “ready” status for more than 24 months.

All ICPs electrically connected during the audit period were updated to “ready” by the time they were electrically connected, as discussed in **section 3.4**.

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 13/11/19 and event detail report for 01/12/18 to 15/11/19 were examined in relation to the use of the “distributor” status.

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. TLC does not intend to allow any new shared unmetered load ICPs.

The potential shared unmetered load that was identified as a result of streetlight audits, has been investigated and in the process of being resolved. It is intended that the private lights will either be recorded in the DUMML database against a Waitomo District Council ICP or standard unmetered load will be created.

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 13/11/19 and event detail report for 01/12/18 to 15/11/19 were examined were reviewed to identify ICPs at “decommissioned” or “ready for decommissioning” status and check compliance.

A sample of 22 “decommissioned” ICPs was examined. I also examined all five 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 only upon receipt of the appropriate paperwork. This includes confirmation that metering has been removed.

Once the decommissioning is processed in Orion, the user sets the event date, tick box and status on the registry tab to enable the change to be sent to the registry. Any statuses which have been updated in Orion but not updated in the registry will be identified and corrected through the registry discrepancy reporting process.

TLC has identified ICPs which may have been decommissioned without their knowledge or may need to be decommissioned through its “questionable ICP project”. Site visits are being conducted to determine the correct status of each ICP and decommissioning is arranged as necessary. Orion and the registry are updated once confirmation of decommissioning is received.

22 decommissioned ICPs were checked for accuracy. 18 of the status updates were correct. Three updates had incorrect status dates applied and are recorded as non-compliance in **section 2.1**.

ICP Identifier	Status Event Date	Correct status and date
0007301240WM664	17/10/2013	19/08/2013
0004040132WMD5	01/10/2018	24/4/2015
0048060010WMDFD	20/11/2018	29/10/2018

The registry list recorded five ICPs with a status of “ready for decommissioning”. All are being appropriately managed through TLC’s processes:

- ICP 0001407951WMCD0 has now been decommissioned
- ICPs 0002303631WM46F and 0003070400WM781 have not physically been decommissioned yet, and TLC is following up with the network services team
- the decommissioning of ICP 0001017920WM496 was cancelled by the customer, and TLC has asked the retailer to reverse the ready for decommissioning status record; and
- the decommissioning of ICP 0005820970WM048 has been put on hold at the customer’s request, due to a potential change of ownership.

Audit outcome

Compliant

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

TLC invoices customers directly and only has one price category code, which is “CDB” or “customer direct billed”. There have been no new price category codes created during the audit period.

Audit outcome

Compliant

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 Network Supply Points table was examined. Notifications to the reconciliation manager were checked.

Audit commentary

No NSPs were decommissioned, and two NSPs were created during the audit period:

Dist	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date
LINE	HTI1101	Hangatiki			NORTHLINEG	G	25/2/19
LINE	TLC0111	Tangiwai Ohakune Interconnect	OKN0111	LINE	OKN0111LINEG	I	01/07/19

TLC0111 is an interconnection point between two local networks, and information was provided to the reconciliation manager required by this clause.

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 Network Supply Points table was examined. Notifications to the reconciliation manager were checked.

Audit commentary

Two NSPs were created during the audit period:

Dist	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date
LINE	HTI1101	Hangatiki			NORTHLINEG	G	25/2/19
LINE	TLC0111	Tangiwai Ohakune Interconnect	OKN0111	LINE	OKN0111LINEG	I	01/07/19

The requests to create NSPs were provided to the reconciliation manager required by this clause.

There were no NSP changes lasting for more than 10 business days.

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 Network Supply Points table was examined.

Audit commentary

No new balancing areas were created during the audit period. New NSPs HTI1101 and TLC0111 were assigned to existing balancing areas.

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 Network Supply Points table was examined.

Audit commentary

No new embedded network NSPs were created 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 Network Supply Points table was examined.

Audit commentary

No balancing areas were changed 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 Network Supply Points table was examined.

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 table was examined to determine compliance.

Audit commentary

The NSP supply point table was reviewed:

Distributor	NSP POC	Description	MEP	Certification Expiry
LINE	ATI0111	ATIAMURI	MRPL	07/02/2021
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	17/10/2019

Entry of certification details for new NSP TLC0111 is discussed in **section 6.9**.

The meter certification for WKM0331 expired on 17/10/19. The meter was recertified until 10/09/22 on 10/10/19 but the updated meter certification details were not provided to the reconciliation manager. There were no changes to other certification details during the audit period.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 6.8</p> <p>With: 10.25(1) and 10.25(3)</p> <p>From: 17-Oct-19</p> <p>To: 14-Jan-20</p>	<p>Meter certification details for WKM0331 were not provided to the reconciliation manager within 20 business days of recertification.</p> <p>Certification for WKM0331 is expired on the NSP table.</p> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: Once</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>
Audit risk rating	Rationale for audit risk rating
Low	<p>The controls are moderate, because there is room for improvement. TLC requires FCLM to provide metering certification details to the reconciliation manager.</p> <p>The impact is low, because the meter was certified at all times.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
TLC recommends that the MEP to be responsible for recertification.	27/02/2020	Disputed
Preventative actions taken to ensure no further issues will occur	Completion date	
TLC recommends that the MEP to be responsible for recertification.	27/02/2020	

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 on the registry was examined.

Audit commentary

One new NSP which was not a point of connection to the grid was created during the audit period.

Distributor	NSP POC	Description	MEP	Certification Expiry
LINE	TLC0111	TANGIWAI OHAKUNE INTERCONNECT	FCLM	18/08/2023

Information was provided to the reconciliation manager required by this clause.

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 supply point 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 supply point 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 13/11/19 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.

TLC has continued to progress resolution of streetlight audit discrepancies. At the time of the most recent Waitomo DC DUML audit ten private lights remained in the database:

Slim Pole ID	Road Name	Lamp Model	Total Wattage
1839	KAKA ST	LED22NW	22
1842	KAKA ST	LED22NW	22
1843	KAKA ST	LED22NW	22
1844	KAKA ST	LED22NW	22
1845	KAKA ST	LED22NW	22
1847	KAKA ST	LED22NW	22
1849	KAKA ST	LED22NW	22
1850	KAKA ST	LED22NW	22
2190	RAUPARAHA ST	ltron Zero 0c6 STA 4.5-2M/D/NZ	19.5
1088	WAITOMO VILLAGE RD	150w HPS	168

TLC has been working with Waitomo District Council to determine the ownership of all known private streetlights.

TLC contacted each of the affected owners, to arrange for standard unmetered load to be created. Most of the owners have responded that they believe the Waitomo District Council should be responsible for the street lighting. The Council accepts responsibility for one light on Ruaparaha St and is investigating taking responsibility for the lights at Kaka St, but believes the other light is genuinely privately owned.

TLC is awaiting further information from the Waitomo District Council, before resolving the issues.

I confirmed that there were no other points of connection without an ICP or shared unmetered ICP recorded. Non-compliance is recorded in **section 3.1** for not having an ICP created for all points of connection.

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 01/12/18 to 13/11/19 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:

- a) complete and accurate*
- b) not misleading or deceptive*
- c) 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.

TLC’s Network Performance Engineer provided a summary outlining the loss factor review process.

Audit commentary

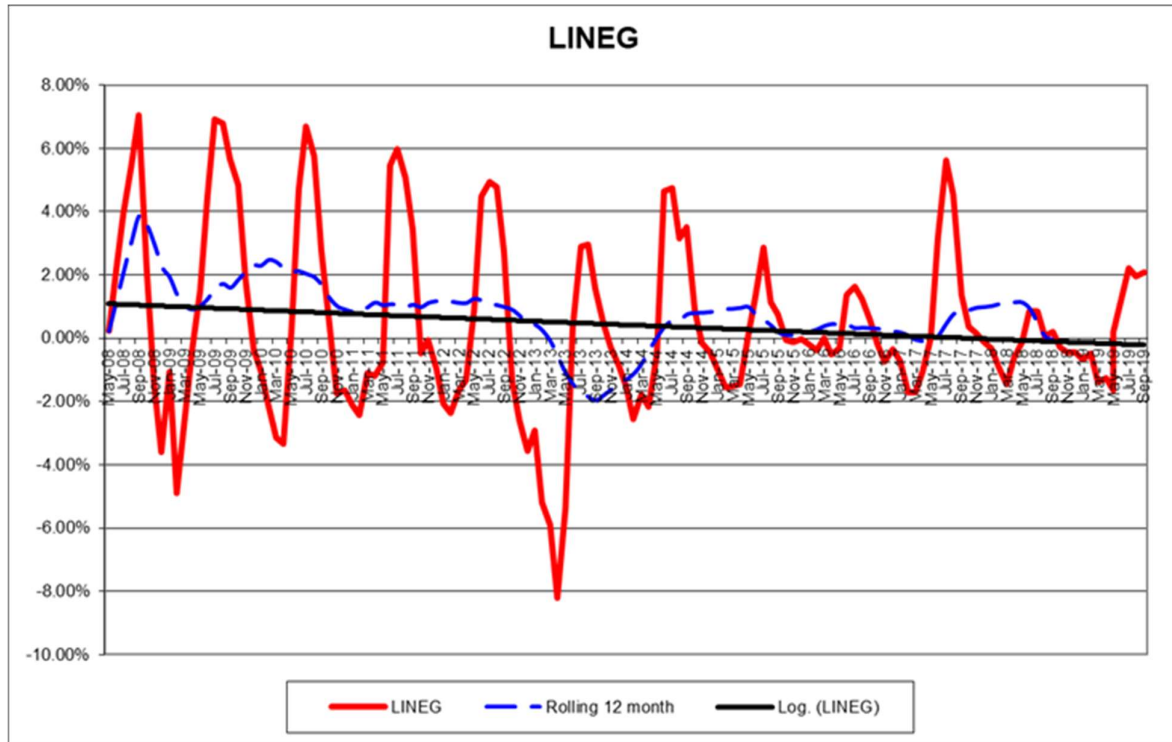
Loss factor reviews were historically conducted every ten years, or if a major change to the network occurs which is likely to have a material impact on loss factors. TLC’s loss factors were last updated in April 2008.

TLC’s Network Performance Engineer reviewed the Authority’s loss factor guidelines, and subsequently reviewed TLC’s loss factors. He found there was a variance between the measured losses and current loss factors. In November 2019, a loss factor review memo was issued to management, recommending:

1. loss factors be reviewed and recalculated in accordance with the Authority’s “Guidelines on the calculation and the use of loss factors for reconciliation purposes” and updated by October 2020
2. introduction of new loss factors for 11kV connections in each region
3. introduction of separate loss factors for the Ohakune GXP
4. introduction of a specific loss factor for Kuratau generation, or arrange for Kuratau generation to be primarily connected to Kuratau; and
5. consideration of a specific loss factor for Mangapehei generation.

The Network Performance Engineer has since left TLC and has not yet been replaced. A decision has not been made on the memo’s recommendations.

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 indicated in the guideline, and compliance is recorded.



Audit outcome

Compliant

CONCLUSION

TLC moved from Gentrack to Orion on 01/10/18, and a material change audit was completed in September 2018. During the audit period, processes (including data validation) have been handed over from the project team to operations staff. Coupled with this, there have been some key staff changes during the audit period. New and existing staff needed to learn the new processes, which caused some late updates and data exceptions.

I found that TLC were already aware of the key issues found during the audit and have been working to resolve them. TLC is focussed on improving data accuracy and timeliness, and I saw evidence of a projects underway to resolve historic issues relating to addresses, ICPs which should be decommissioned, and private streetlights. Improvements have been made to distributed generation processes, and the asset team has been working with the network services team to improve the timeliness of paperwork returns.

TLC put considerable effort into investigating and correcting the discrepancies found during the pre-audit analysis and delayed the on-site audit to complete this.

The key areas where improvement is required are:

- corrections of inaccurate data identified during the audit (which has not been corrected yet)
- improving the timeliness of registry updates, particularly for network updates including population of initial electrical connection dates
- updating NSP metering details on the NSP table; and
- completion of the loss factor review.

This audit found 11 areas of non-compliance and makes four recommendations for improvement. The future risk rating is 22, indicating that the next audit should be due in 6 months. Taking into account that:

- most data accuracy issues identified during the audit were cleared immediately
- there was only one issue with a risk rating above two, and this non-compliance has now been cleared
- excluding the cleared non-compliances reduce the future risk rating to 17, which indicates a next audit period of 12 months
- TLC intends to implement internal audit processes to detect and correct compliance issues; and
- there are plans to clear the remaining issues with the exception of late provision of metering certification details for NSP meters, which TLC have disputed.

To allow time for the issues to be resolved and improved compliance to be demonstrated, and given that this audit was completed two months late, I recommend that the next audit is completed 12 months from the audit due date on 21 December 2020.

PARTICIPANT RESPONSE

TLC have reviewed this report and their comments are contained within its body.