

**ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT**

For

THE LINES COMPANY

Prepared by: Tara Gannon

Date audit commenced: 10 November 2020

Date audit report completed: 30 November 2020

Audit report due date: 21 December 2020

TABLE OF CONTENTS

Executive summary	4
Audit summary	5
Non-compliances	5
Recommendations	7
Issues	7
1. Administrative.....	8
1.1. Exemptions from Obligations to Comply with Code (Section 11)	8
1.2. Structure of Organisation	9
1.3. Persons involved in this audit.....	11
1.4. Use of contractors (Clause 11.2A)	11
1.5. Supplier list	11
1.6. Hardware and Software	12
1.7. Breaches or Breach Allegations.....	13
1.8. ICP and NSP Data	13
1.9. Authorisation Received	14
1.10. Scope of Audit	15
1.11. Summary of previous audit	16
2. Operational Infrastructure	19
2.1. Requirement to provide complete and accurate information (Clause 11.2(1) and 10.6(1)) ..	19
2.2. Requirement to correct errors (Clause 11.2(2) and 10.6(2))	22
3. Creation of ICPs	24
3.1. Distributors must create ICPs (Clause 11.4)	24
3.2. Participants may request distributors to create ICPs (Clause 11.5(3))	25
3.3. Provision of ICP Information to the registry manager (Clause 11.7)	26
3.4. Timeliness of Provision of ICP Information to the registry manager (Clause 7(2) of Schedule 11.1)	27
3.5. Timeliness of Provision of Initial Electrical Connection Date (Clause 7(2A) of Schedule 11.1)	28
3.6. Connection of ICP that is not an NSP (Clause 11.17).....	30
3.7. Connection of ICP that is not an NSP (Clause 10.31).....	31
3.8. Temporary electrical connection of ICP that is not an NSP (Clause 10.31A)	31
3.9. Connection of NSP that is not point of connection to grid (Clause 10.30)	32
3.10. Temporary electrical connection of NSP that is not point of connection to grid (Clause 10.30(A))	32
3.11. Definition of ICP identifier (Clause 1(1) Schedule 11.1)	33
3.12. Loss category (Clause 6 Schedule 11.1).....	33
3.13. Management of “new” status (Clause 13 Schedule 11.1).....	34
3.14. Monitoring of “new” & “ready” statuses (Clause 15 Schedule 11.1).....	34
3.15. Embedded generation loss category (Clause 7(6) Schedule 11.1).....	35
3.16. Electrical connection of a point of connection (Clause 10.33A)	35
4. Maintenance of registry information.....	37
4.1. Changes to registry information (Clause 8 Schedule 11.1)	37
4.2. Notice of NSP for each ICP (Clauses 7(1),(4) and (5) Schedule 11.1)	41
4.3. Customer queries about ICP (Clause 11.31).....	42

4.4.	ICP location address (Clause 2 Schedule 11.1).....	43
4.5.	Electrically disconnecting an ICP (Clause 3 Schedule 11.1).....	45
4.6.	Distributors to Provide ICP Information to the Registry manager (Clause 7(1) Schedule 11.1)	46
4.7.	Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1).....	52
4.8.	GPS coordinates (Clause 7(8) and (9) Schedule 11.1).....	53
4.9.	Management of “ready” status (Clause 14 Schedule 11.1).....	53
4.10.	Management of “distributor” status (Clause 16 Schedule 11.1).....	54
4.11.	Management of “decommissioned” status (Clause 20 Schedule 11.1).....	54
4.12.	Maintenance of price category codes (Clause 23 Schedule 11.1).....	56
5.	Creation and maintenance of loss factors	57
5.1.	Updating table of loss category codes (Clause 21 Schedule 11.1).....	57
5.2.	Updating loss factors (Clause 22 Schedule 11.1)	57
6.	Creation and maintenance of NSPs (including decommissioning of NSPs and transfer of ICPs).....	58
6.1.	Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1).....	58
6.2.	Provision of NSP information (Clause 26(1) and (2) Schedule 11.1)	58
6.3.	Notice of balancing areas (Clause 24(1) and Clause 26(3) Schedule 11.1)	59
6.4.	Notice of supporting embedded network NSP information (Clause 26(4) Schedule 11.1)	59
6.5.	Maintenance of balancing area information (Clause 24(2) and (3) Schedule 11.1)	60
6.6.	Notice when an ICP becomes an NSP (Clause 27 Schedule 11.1)	60
6.7.	Notification of transfer of ICPs (Clause 1 to 4 Schedule 11.2)	60
6.8.	Responsibility for metering information for NSP that is not a POC to the grid (Clause 10.25(1) and 10.25(3))	61
6.9.	Responsibility for metering information when creating an NSP that is not a POC to the grid (Clause 10.25(2))	62
6.10.	Obligations concerning change in network owner (Clause 29 Schedule 11.1)	62
6.11.	Change of MEP for embedded network gate meter (Clause 10.22(1)(b))	63
6.12.	Confirmation of consent for transfer of ICPs (Clauses 5 and 8 Schedule 11.2)	63
6.13.	Transfer of ICPs for embedded network (Clause 6 Schedule 11.2).....	64
7.	Maintenance of shared unmetered load	65
7.1.	Notification of shared unmetered load ICP list (Clause 11.14(2) and (4))	65
7.2.	Changes to shared unmetered load (Clause 11.14(5)).....	67
8.	Calculation of loss factors	68
8.1.	Creation of loss factors (Clause 11.2).....	68
	Conclusion	70
	Participant response	71

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 10 November 2020.

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

During the audit period and audit, TLC has put considerable effort into resolving compliance issues and I saw evidence that performance has improved during the audit period:

1. The process to transfer registry updates from Orion has been reviewed. Staff have been provided further training, and monitoring controls to identify missed updates have been strengthened.
2. The new connections process has been reviewed and improved to increase compliance, particularly for creation of new ICPs and monitoring of ICPs at new and ready status.
3. Issues with Orion being unable to record the correct number of digits and/or decimal places for GPS coordinates and generation capacities have been resolved, and data corrections have been processed.
4. Corrections have been processed for all instances of potentially incorrect data identified, except where TLC is still investigating to determine the correct values. This includes resolution of incorrect NSPs and duplicate and incomplete addresses.
5. Progress has been made with resolving issues relating to unrecorded unmetered load, identified through the DUML audits.

The two key areas requiring improvement are distributed generation processes, and completion of a loss factor review. Distributed generation processes are under review, and the loss factor review has commenced.

Some recommendations have been made to further improve data accuracy, including:

1. Validating initial electrical connection dates against active status dates, and meter certification dates.
2. Validating distributed generation details against trader profiles, and meter records.
3. Checking NSP and address information for consistency.

TLC intends to adopt these recommendations, and will use the registry audit compliance report to identify discrepancies which require investigation.

This audit found seven areas of non-compliance and makes four recommendations for improvement. The future risk rating is eight (a decrease from 22 last audit), indicating that the next audit should be due in 18 months. I agree that the next audit should be completed in a minimum of 18 months.

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
Requirement to provide complete and accurate information	2.1	11.2(1)	<p>One pricing event and one network event had incorrect event dates, and were corrected during the audit.</p> <p>Seven ICPs had incorrect initial electrical connection dates, and were corrected during the audit.</p> <p>ICP 0001113309WMF74 had its chargeable capacity for pricing recorded in the generation capacity field due to a data entry error, and was corrected during the audit.</p> <p>Distributed generation updates for ICPs 0004050770WM132, 0001120420WM0BE, 0001062900WM45A, and 000112481WM688 had their generation capacity rounded to the nearest kW. Backdated corrections to the capacities were processed during the audit.</p> <p>Alleged breach 2008LINE1 was recorded for incorrect dedicated NSP information. All affected ICPs have had their dedicated NSP status corrected.</p>	Strong	Low	1	Cleared
Distributors must create ICPs	3.1	11.4	ICPs are not created for ten unmetered streetlights.	Strong	Low	1	Identified
Participants may request distributors to create ICPs	3.2	11.5(3)	Four ICPs were not created within three business days of a request from a trader, and the reasons for the late update were not provided to the trader.	Strong	Low	1	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late population of the initial electrical connection dates for 27 ICPs.	Strong	Low	1	Identified
Changes to registry information	4.1	8 Schedule 11.1	97 late address updates.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			<p>812 late updates to dedicated NSP status.</p> <p>14 late updates to other network fields, excluding initial updates to initial electrical connection dates.</p> <p>44 late updates to decommissioned status.</p>				
ICP location address	4.4	2 Schedule 11.1	<p>88 ICPs had incomplete or duplicate address information; 85 were corrected during the audit, one relates to DUML load, and two are under investigation.</p> <p>Nine ICPs had some incorrect address information, which was 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 pricing update for ICP 0001113191WM880 had an incorrect event date; it was processed effective from the update date in error. The event date was corrected during the audit.</p> <p>ICP 0001113309WMF74 had its chargeable capacity for pricing recorded in the generation capacity field due to a data entry error, and was corrected during the audit.</p> <p>At least seven ICPs had incorrect initial electrical connection dates, which were corrected during the audit.</p> <p>Distributed generation updates for ICPs 0004050770WM132, 0001120420WM0BE, 0001062900WM45A, and 0001112481WM688 had their generation capacity rounded to the nearest kW. Backdated corrections to the capacities were processed during the audit.</p>	Strong	Low	1	Cleared
Future Risk Rating						8	

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
ICP location address	4.4	Review the accuracy of address and NSP information	<p>To identify ICPs with incorrect addresses and/or NSPs assigned:</p> <ol style="list-style-type: none"> 1. Regularly review the registry audit compliance report AC020Distributor10 to identify ICPs where the NSP assigned differs from the expected value for the street. 2. Use a registry snapshot report to identify ICPs connected to NSPs where less than 50% of the ICPs in that town are connected to that NSP. <p>Investigate any discrepancies to determine whether the address and NSP assigned are correct.</p>
Distributors to Provide ICP Information to the Registry man	4.6	Validation of initial electrical connection dates	<p>Validate initial electrical connection dates against the trader's earliest active date and the MEP's meter certification date, to identify discrepancies which may require investigation and correction.</p> <p>The registry audit compliance report could be used to identify discrepancies.</p>
Distributors to Provide ICP Information to the Registry man	4.6	Investigate ICPs where distributed generation is indicated, but an application has not been received.	<p>At least monthly, compare ICPs which have an EG1 or PV1 profile on the registry list to the list of ICPs which distributed generation applications have been received for.</p> <p>It may also be helpful to cross check to the MEP's meter channel records to determine whether injection registers are installed, and the high risk database may also contain information on generation installation (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>
Management of "decommissioned" status	4.11	ICPs at 1,6 (inactive ready for decommissioning) status where the customer has indicated the ICP should not be decommissioned	<p>Query the status of ICPs 0001017920WM496 and 0005820970WM048 with Trustpower.</p> <p>0001017920WM496 still has the trader listed as KING, and was potentially not switched to Trustpower because it was expected to be decommissioned.</p>

ISSUES

Subject	Section	Issue	Description
		Nil	

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit observation

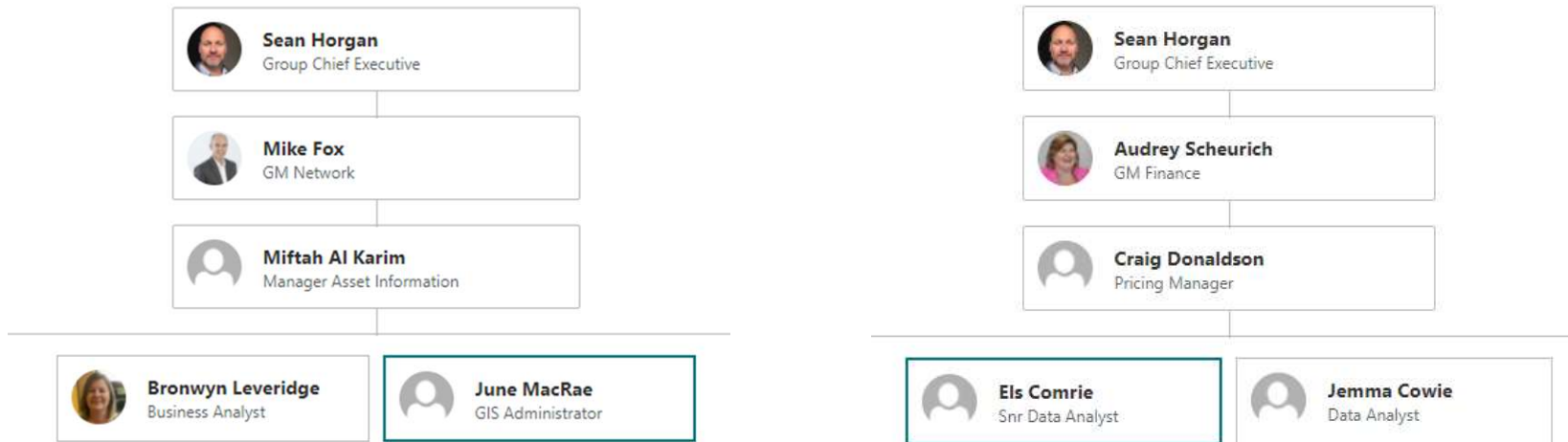
The Authority website was checked to determine whether there are code exemptions in place.

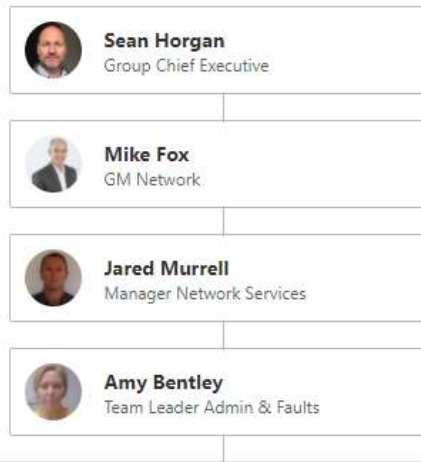
Audit commentary

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

1.2. Structure of Organisation

TLC provided an organisational structure:





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
Colin Shepherd	IT Manager	The Lines Company
Craig Donaldson	Pricing Manager	The Lines Company
Demi Macrae	Customer Services Representative	The Lines Company
Dr. Miftah Al Karim	Manager, Asset Information	The Lines Company
Els Comrie	Senior Data Analyst	The Lines Company
June MacRae	GIS Administrator	The Lines Company

1.4. Use of contractors (Clause 11.2A)

Code reference

Clause 11.2A

Code related audit information

A participant who uses a contractor

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

Audit observation

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

Audit commentary

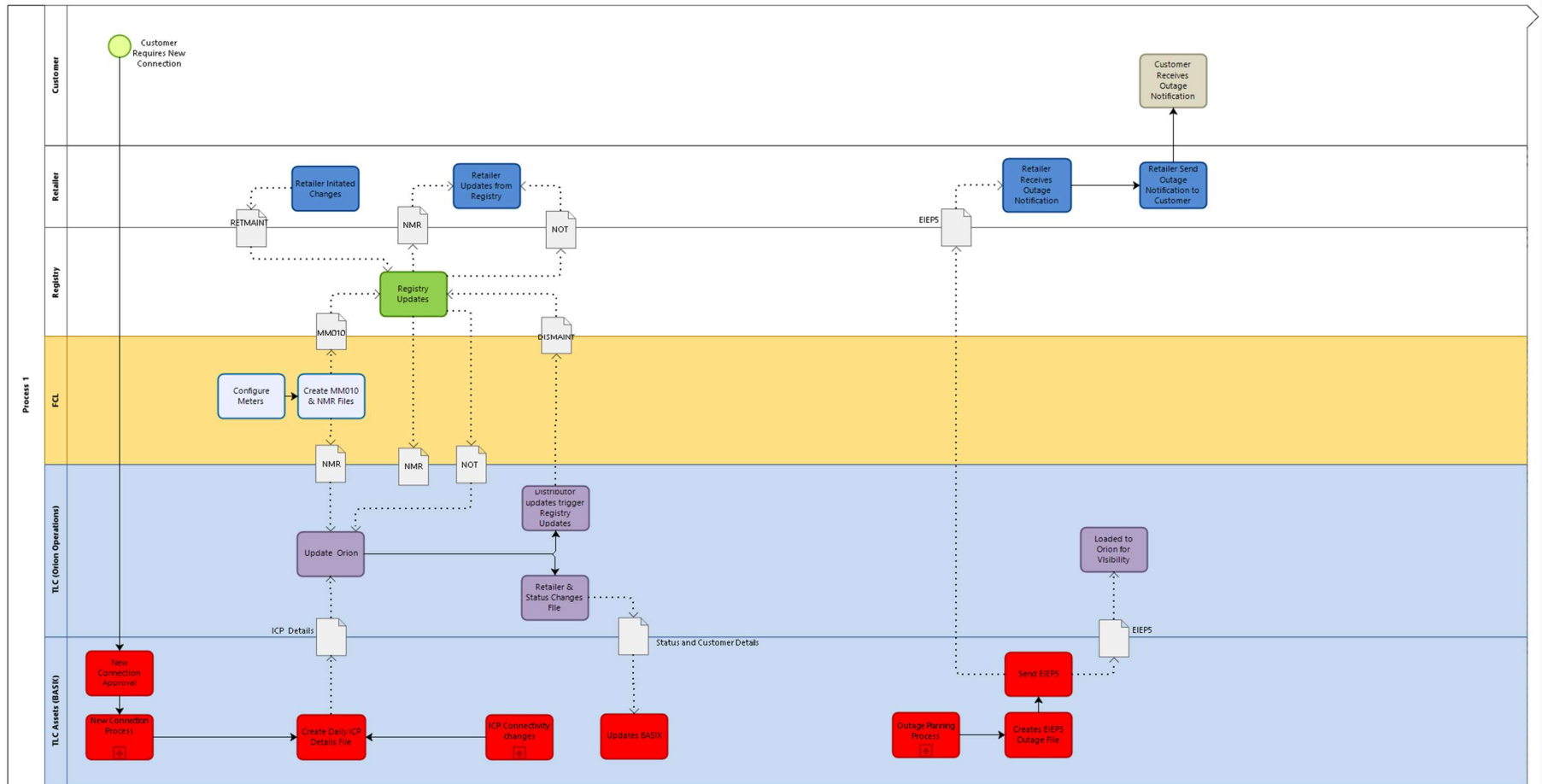
Not applicable

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:



Backups are taken daily to an onsite backup server then sent off site daily. In the event of a disaster, TLC would need to procure new equipment to restore to or negotiate with vGrid to provide disaster recovery infrastructure and services.

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

1.7. Breaches or Breach Allegations

The Authority recorded one alleged breach relevant to the scope of this audit during the audit period:

Ref	Breach Description	Clause	Target EGR Date	Outcome
2008LINE1	<p>Approximately 800 ICPs had an incorrect dedicated NSP flag recorded on the registry. All ICPs on the TLC network can be fed by more than one NSP and should all be recorded as not dedicated.</p> <p>Backdated corrections were processed prior to the audit, and no active or inactive ICPs had a dedicated NSP flag set to "no" on the registry list as at 02/09/20.</p>	Part 11 clause 11.2	02/12/20	<p>No result has been received; the investigator is fact finding.</p> <p>Training has been conducted to prevent recurrence of the issue.</p>

1.8. ICP and NSP Data

The table below lists the relevant NSPs, and their associated balancing areas. Active ICP numbers are as at 02/09/20.

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	11,466
LINE	HTI1101	HANGATIKI			NORTHLINEG	G	25/2/19	-
LINE	MEP0112	MOKAI	HTI0331	LINE	NORTHLINEG	I	16/02/12	-
LINE	MEP0113	MOKAI	HTI0331	LINE	NORTHLINEG	I	16/02/12	-
LINE	NPK0331	NATIONAL PARK			CENTRALLINEG	G	1/07/11	820
LINE	OKN0111	OHAKUNE			OKN0111LINEG	G	1/05/08	2,045
LINE	ONG0331	ONGARUE			CENTRALLINEG	G	1/05/08	4,460
LINE	TKU0331	TOKAANU			CENTRALLINEG	G	1/05/08	4,858

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

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

Status	Number of ICPs 2020	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	0
New (999)	1	3	1	0	0	0
Ready (000)	21	13	26	8	9	7
Active (2,0)	23,649	23,593	23,596	23,501	23,311	23,766
Inactive - new connection in progress (1,12)	45	44	37	34	28	25
Inactive – vacant (1,4)	308	298	295	435	752	909
Inactive - reconciled elsewhere (1,5)	0	0	0	1	0	0
Inactive – AMI remote disconnection (1,7)	4	3	0	1	0	1
Inactive – disconnected due to meter disconnected (1,8)	38	41	64	50	38	104
Inactive – at pole fuse (1,9)	4	2	2	1	1	0
Inactive – disconnected at meter box switch (1,10)	0	0	1	0	0	0
Inactive - at meter box switch (1,11)	2	3	5	9	57	415
Inactive – ready for decommissioning (1,6)	8	5	42	76	52	67
Decommissioned (3)	3,546	3,465	3,175	2,832	2,502	2,269

1.9. Authorisation Received

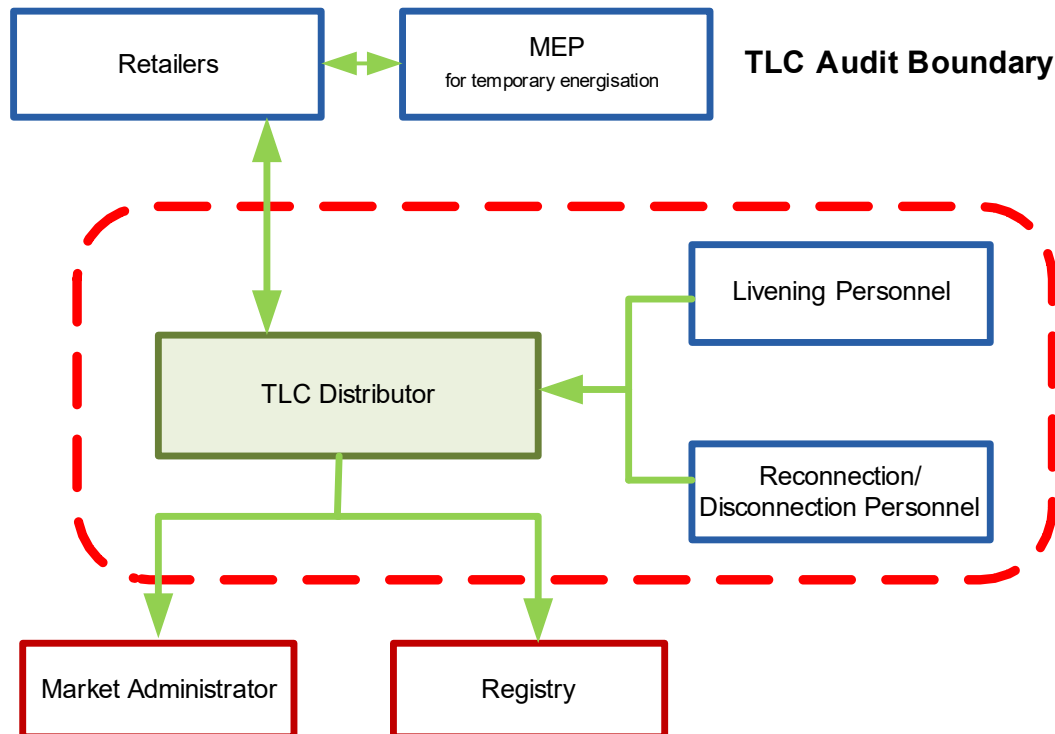
TLC provided a letter of authorisation to Veritek.

1.10. Scope of Audit

This Distributor audit was performed at the request of TLC to encompass the Electricity Industry Participation Code requirement for an audit as required by clause 11.10 of part 11. The audit was carried out at TLC's premises in Te Kuiti on 10 November 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 February 2020 by Tara Gannon of Veritek Limited. The audit recorded 12 non-compliances described in the table below and made four recommendations. The current status of the non-compliances and recommendations is listed below.

Subject	Section	Clause	Non-compliance	Status
Participants to give access	1.12	16A.4	Late provision of audit information.	Cleared
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>	<p>Previous audit issues are cleared.</p> <p>Some new non-compliances were identified during the audit and are also cleared.</p>
Distributors must create ICPs	3.1	11.4	ICPs are not created for ten streetlights.	Still existing but in the process of being resolved.
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.	Still existing.
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.	Cleared.
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.	Cleared.
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>	Still existing.
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.	Cleared.

Subject	Section	Clause	Non-compliance	Status
ICP location address	4.4	2 Schedule 11.1	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.	Previous audit issues are cleared. Some new non-compliances were identified during the audit and are also cleared.
Distributors to Provide ICP Information to the Registry man	4.6	7(1) Schedule 11.1	The dedicated NSP flag is incorrectly set to "Y" for 787 ICPs which are not connected to a dedicated NSP. Some initial electrical connection date discrepancies were not identified and corrected prior to the audit, including: <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) • 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). 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. ICP 0001112718WM43D had missing unmetered load information on the registry and was updated during the audit.	Previous audit issues are cleared. Some new non-compliances were identified during the audit and are also cleared.
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.	Cleared.
Responsibility for metering information for NSP that is not a POC to the grid	6.8	10.25(1) and 10.25(3)	Meter certification details for WKM0331 were not provided to the reconciliation manager within 20 business days of recertification. Certification for WKM0331 is expired on the NSP table.	Cleared.

Subject	Section	Recommendation	Description	Status
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.	Not adopted.
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>	Under consideration.
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.	Adopted.
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.	Adopted.

2. OPERATIONAL INFRASTRUCTURE

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

Code reference

Clause 11.2(1) and 10.6(1)

Code related audit information

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

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

Audit observation

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

The registry list for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 and event detail report for 01/12/19 to 02/09/20 were examined to determine compliance.

Audit commentary

Registry synchronisation

Network maintained information is automatically transferred from Orion to the registry if:

- the tickbox for the appropriate event type (network, address, pricing, or status) on the registry tab is ticked,
- the event status dropdown box is changed to “NOTYETSENT” on the registry tab, and
- changes are saved.

If any of these steps are not completed, the registry update will not be generated. Failure to complete all these steps has continued to be a source of late updates during the audit period. TLC investigated sending status updates automatically, but decided to rely on training and regular validation of Orion data against the registry to prevent late updates. I found that the majority of late updates this audit period related to corrections.

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.

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.

Registry and data validation

Responsibility for validation of Orion data against the registry shifted from the connections and faults team to the Senior Data Analyst in August 2020. Initially the validation was completed monthly, then increased to fortnightly, and is now completed weekly. The discrepancy reports are worked through and Orion and/or the registry are corrected as necessary. The reports help to identify instances where Orion has been updated, but the registry update has not been sent.

I reviewed the reports run on 09/11/20:

Exception type	Exception description	Number of exceptions
Network_discrepancy	The connection type, installation type, distributor unmetered load details, generation capacity, generation fuel type or initial electrical connection date are different.	1
Address_discrepancy	One or more address fields are different.	-
Pricing_discrepancy	The price code, loss code, or chargeable capacity is different.	-
Retailer_discrepancy	The retailer is different. All ICPs at new or ready status appear on this report, because the trader is not populated on the registry until the ICP moves to 1,12 (inactive new connection in progress) or 2,0 (active) status.	22 (17 at new or ready status, and five status mismatches)
Status_discrepancy	The status is different.	5

During the previous audit, I found that some ICPs where Orion and registry data matched were included in the discrepancy reports, particularly the Address_discrepancy report and the Retailer_discrepancy report. The duplication issues have not been resolved, but now that historic discrepancies have been cleared, the volume of exceptions is more manageable and any invalid exceptions can easily be identified.

The previous audit noted that TLC intended to develop some new reports to identify:

1. Discrepancies between initial electrical connection dates, active status dates, and meter certification dates.
2. ICPs with distributed generation profiles and no generation recorded by TLC.
3. ICPs with incorrect NSPs assigned. NSP allocation is checked on ICP creation, and NSPs are updated in Basix (TLC's asset management system) and transferred to Orion. Discrepancies between Orion and Basix are identified and resolved by reconciling Basix and Orion records every two days. Discrepancies between Orion and the registry are identified and resolved using the Network_discrepancy report, but there is no separate check to make sure the NSP appears reasonable for the address.

These reports have not been developed. TLC intends to regularly run and review the AC020 registry audit compliance reports to identify and resolve discrepancies in the future.

Event dates

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

Event dates are entered alongside the affected data fields for network, address, and pricing updates. The date is automatically transferred to the registry tab to accompany the registry update. For status updates, the date must be separately entered on the registry tab, otherwise the previous status event date will automatically be applied.

Review of the event detail report for 01/12/19 to 02/09/20 found that all 146 network events populating the initial electrical connection date for new connections had an effective date which matched the initial electrical connection date.

Two records entered during the audit period had incorrect event dates:

- the pricing update for ICP 0001113191WM880 had an incorrect event date; it was processed effective from the update date in error, and was corrected during the audit, and

- ICP 0001113275WM033's initial electrical connection date is 06/07/20 however it was initially loaded with an initial electrical connection date of 03/07/20 and a new event on 06/07/20 was loaded, without the original event being reversed; the 03/07/20 record was reversed during the audit and the correct event date and initial electrical connection date is applied.

Data accuracy issues

A small number of data accuracy issues were identified in **section 4.6**:

- seven ICPs had incorrect initial electrical connection dates, and were corrected during the audit,
- ICP 0001113309WMF74 had its chargeable capacity for pricing recorded in the generation capacity field due to a data entry error, and was corrected during the audit, and
- distributed generation updates for ICPs 0004050770WM132, 0001120420WM0BE, 0001062900WM45A, and 0001112481WM688 had their generation capacity rounded to the nearest kW; backdated corrections to the capacities were processed during the audit.

Unresolved exceptions from the 2018 and January 2020 audits

Discrepancies identified during the previous two audits were re-checked to determine whether they had been corrected, and were found to be resolved. Incorrect event dates identified during the previous audit were corrected from the correct event date, or as close to the correct event date as possible where TLC was constrained by other participants' events.

Alleged breach relating to incorrect dedicated NSP data identified during the previous audit

The Authority recorded one alleged breach relevant to the scope of this audit, relating to incorrect information found in the previous audit. The issue has now been resolved by processing backdated corrections as agreed with the Authority, and staff training has been provided to prevent recurrence.

Ref	Breach Description	Clause	Target EGR Date	Outcome
2008LINE1	<p>Approximately 800 ICPs had an incorrect dedicated NSP flag recorded on the registry. All ICPs on the TLC network can be fed by more than one NSP and should all be recorded as not dedicated.</p> <p>Backdated corrections were processed prior to the audit, and no active or inactive ICPs had a dedicated NSP flag set to "no" on the registry list as at 02/09/20.</p>	Part 11 clause 11.2	02/12/20	<p>No result has been received; the investigator is fact finding.</p> <p>Training has been conducted to prevent recurrence of the issue.</p>

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 2.1</p> <p>With: Clause 11.2(1)</p> <p>From: 01-Dec-19</p> <p>To: 10-Nov-20</p>	<p>One pricing event and one network event had incorrect event dates, and were corrected during the audit.</p> <p>Seven ICPs had incorrect initial electrical connection dates, and were corrected during the audit.</p> <p>ICP 0001113309WMF74 had its chargeable capacity for pricing recorded in the generation capacity field due to a data entry error, and was corrected during the audit.</p> <p>Distributed generation updates for ICPs 0004050770WM132, 0001120420WM0BE, 0001062900WM45A, and 0001112481WM688 had their generation capacity rounded to the nearest kW. Backdated corrections to the capacities were processed during the audit.</p> <p>Alleged breach 2008LINE1 was recorded for incorrect dedicated NSP information. All affected ICPs have had their dedicated NSP status corrected.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
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
All issues corrected during the audit		Complete	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Training and regular validation of Orion data against the registry		Ongoing	

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

Code reference

Clause 11.2(2) and 10.6(2)

Code related audit information

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

Audit observation

TLC's data management processes were examined. The registry list for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 were examined to determine 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 146 ICPs created since 01/12/19 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.

A small number of unmetered streetlights are not associated with a DUML ICP, and do not have an unmetered load ICP created.

- Eight LED22 lights at Paearuhe in Kaka Street, Piopio are confirmed to be unmetered and are not recorded against an ICP in the Waitomo District Council DUML database. TLC intends to either meter the lights, or create shared unmetered load ICPs. TLC is trying to confirm the owner/manager of the land in order to make the arrangements necessary to resolve the issue.
- Two 70W sodium unmetered streetlights located at TLC's depot are not recorded against an ICP in the Ruapehu District Council DUML database. TLC intends to create new ICPs for this unmetered load.

DUML and shared unmetered load 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: 10-Nov-20	ICPs are not created for ten unmetered 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	<p>I have rated the controls as strong as TLC have a robust ICP creation process and these lights are an historic issue. Progress with resolving the issues has been made during the audit period, and no other such instances have been identified.</p> <p>I have rated the audit risk rating as low. The volume associated with these lights is 342 W or an estimated 1,461 kWh per annum.</p>	
Actions taken to resolve the issue		Completion date
Complete investigation into the streetlights and create ICPs		28/02/2021
Preventative actions taken to ensure no further issues will occur		Completion date
Historic issues, processes are robust, training and regular validation of Orion data against the registry		Ongoing
		Remedial action status
		Identified

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 146 ICPs created since 01/12/19 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 is as follows:

1. An application for new load (AFL) is provided to TLC by the customer, the customer's agent, or the trader.
2. The AFL is approved or declined.
3. If the AFL is approved, TLC sends a "Connection Agreement" to the customer, which is completed and returned. The customer is advised to register with a trader if they have not done so already.
4. The ICP is created on the registry, and a request for approval is sent to the proposed trader indicated by the customer.
5. Once the proposed trader has confirmed acceptance and requested livening, TLC schedules the connection to be completed.

Previously TLC waited for trader acceptance before creating the ICP, which sometimes caused late ICP creation. The new process ensures that ICPs are created on time, but will not be livened without the trader's approval.

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 network connections team logs all new connections in a spreadsheet, and copies of all documents are scanned and linked to the new ICP in Orion.

I checked a sample of new 15 ICPs. Two were requested by the customer, and compliance with clause 11.5(3) is not required because customers are not industry participants. 13 were requested by traders. Four were created four or five business days after the request, because TLC waited for trader approval under their old process before creating the ICP and/or because trader acceptance was received between Christmas and New Year when staffing levels were lower than usual. The trader was not advised of the reasons for the delay in creating the ICPs. The other nine ICPs were created on time.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.2 With: Clause 11.5(3) From: 07-Jan-20 To: 06-May-20	Four ICPs were not created within three business days of a request from a trader, and the reasons for the late update were not provided to the trader. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong. The process has been changed to ensure that ICPs are created within three business days of a request being received, instead of waiting for trader acceptance. The impact is assessed to be low. The four late updates were one to two business days late.		
Actions taken to resolve the issue		Completion date	Remedial action status
Training and regular validation of Orion data against the registry		Complete	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Training and regular validation of Orion data against the registry		Ongoing	

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 146 ICPs created since 01/12/19 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.

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

- checking the address in Orion before creating the ICP, to determine whether any other existing ICPs have the same address,
- provision of transformer numbers by the asset management group where the operator selects the transformer and Orion brings through from Basix all the associated information for that transformer including 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), and
- independent reasonableness checks of the new connection information when pricing details are entered by the Senior Data Analyst.

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

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 02/09/20, event detail report for 01/12/19 to 02/09/20, and AC020 report for 01/12/19 to 02/09/20 for were examined to determine the timeliness of the provision of ICP information for new connections. All updates were checked, to determine whether they were on time.

Audit commentary

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.

110 of the 146 ICPs created after 01/12/19 had an initial electrical connection date recorded, indicating that they were electrically connected during the period. I assessed the timeliness of pricing and ready status updates using the AC020 report, and the timeliness of address, proposed trader, and network updates using the registry list and event detail reports.

All 110 ICPs had network data (including a proposed trader), pricing data, address data and ready status populated prior to the initial electrical connection date.

The AC020 report identified that ICP 0001113275WM033 had active status recorded from 17/06/20 and an initial electrical connection date of 06/07/20. All data required was provided prior to the initial electrical connection date, but after the active date. I confirmed that the initial electrical connection date was correct and the updates were on time; the trader had updated the ICP to active effective from their 1,12 (inactive new connection in progress) date in error.

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 AC020 report for 01/12/19 to 02/09/20 was examined to determine the timeliness of initial electrical connection dates. A sample of late updates were checked.

Audit commentary

Initial electrical connection date process

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

Initial electrical connection dates are entered into 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.

Late initial electrical connection date updates

The AC020 report recorded 26 initial electrical connection dates which were populated more than ten business days after initial electrical connection. 11 were populated within 30 business days of initial

electrical connection, 18 were populated within 90 business days, and all were populated within 628 business days.

I checked 15 late updates made over 30 business days after the initial electrical connection date:

- six updates were corrections processed after the previous audit,
- six updates did not have the tickbox for the event type ticked on the registry tab at the time the update was made in Orion, and the update was not sent to the registry; the missed updates were identified as discrepancies and resent through the registry validation process described in **section 2.1**,
- late connection paperwork was received for one ICP, and
- two updates did not result in initial electrical connection date changes as they were backdated updates to other network details which replaced the record which first populated the initial electrical connection date.

All ICPs checked had the correct initial electrical connection date, apart from 0001113258WM23D which was recorded as 08/07/2020 instead of 07/08/2020 due to a typing error. The date was corrected during the audit.

The AC020 report identified four ICPs commissioned after 29/08/13 with no initial electrical connection date populated. Three were checked and updated to the correct date during the audit, and ICP 0003271548WM74C was confirmed to have been connected prior to 29/08/13 and no initial electrical connection date was required.

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

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 3.5</p> <p>With: Clause 7(2A) of Schedule 11.1</p> <p>From: 03-Dec-19</p> <p>To: 31-Aug-20</p>	<p>Late population of the initial electrical connection dates for 27 ICPs.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>
Audit risk rating	Rationale for audit risk rating
Low	<p>I have rated the controls as strong overall because controls over the registry update process have improved over the audit period. Further training has been carried out, and the registry validation process to identify missed updates is now consistently completed weekly. The number of late updates declined later in the audit period, and a large proportion of late updates checked were backdated corrections.</p> <p>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.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
Training and regular validation of Orion data against the registry	Complete	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Training and regular validation of Orion data against the registry	Ongoing	

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 02/09/20 and event detail report for 01/12/19 to 02/09/20 were examined to determine compliance.

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

Audit commentary

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

Review of the registry list confirmed that:

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

As discussed in **section 3.4**, 110 of the 146 ICPs created after 01/12/19 had an initial electrical connection date recorded, indicating that they were electrically connected during the period. All ICPs with an initial electrical connection date had a proposed trader recorded on the registry prior to initial electrical connection.

Audit outcome

Compliant

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

Code reference

Clause 10.31

Code related audit information

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

Audit observation

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

15 new connection applications of the 146 ICPs created since 01/12/19 were checked to determine whether ICPs were connected at the request of the trader.

The registry list as at 02/09/20 was reviewed to confirm that all active ICPs had a trader recorded.

Audit commentary

ICPs will not be electrically connected without the agreement from the trader, who in turn has 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**, 110 of the 146 ICPs created after 01/12/19 had an initial electrical connection date recorded, indicating that they were electrically connected during the period. All ICPs with an initial electrical connection date had a proposed trader recorded on the registry prior to initial electrical connection.

Audit outcome

Compliant

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

Code reference

Clause 10.31A

Code related audit information

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

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

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

advising all traders would impose a material cost on the distributor, and

in the distributor's reasonable opinion, the advice would not result in any material benefit to any of the traders.

Audit observation

The new connection process was examined in **sections 3.1** and **3.2**. The registry list for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 were examined to determine compliance.

Audit commentary

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

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

Any ICPs that are temporarily electrically connected follow the same process as all other new connections. No temporarily connected ICPs were identified.

Audit outcome

Compliant

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

Code reference

Clause 10.30

Code related audit information

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

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10.30(A)

Code related audit information

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

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

Audit observation

The NSP table was reviewed.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 1(1) Schedule 11.1

Code related audit information

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

xxxxxxxxxxccc where:

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

Audit observation

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

Audit commentary

ICP numbers are created in 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 02/09/20 was examined to confirm all active ICPs have a single loss category code.

Audit commentary

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

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

Audit outcome

Compliant

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

Code reference

Clause 13 Schedule 11.1

Code related audit information

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

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

Audit observation

The ICP creation process was reviewed. The registry list for 02/09/20, event detail report for 01/12/19 to 02/09/20, and AC020 report for 01/12/19 to 02/09/20 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, or where an ICP is not ready for activation.

A review of the event detail report identified two updates to “new” status during the audit period. One was updated to “new” status temporarily as part of the decommissioning process for an ICP set up in error. The other was 0001112732WMBF9, a new connection for a cell site which was confirmed to have the correct status.

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

Audit outcome

Compliant

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

Code reference

Clause 15 Schedule 11.1

Code related audit information

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

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

Audit observation

The process to monitor ICPs at “new” and “ready” status was reviewed. The registry list for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 were examined 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 have implemented the previous audit's recommendation to follow up ICPs which have been at "new" or "ready" for more than 24 months with the trader, rather than the customer.

ICP 0001112732WMBF9 was at "ready" status for more than 24 months, and was followed up with the trader. No ICPs have been at "new" 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:*
 - o *the unique loss category code assigned to the ICP*
 - o *the ICP identifier of the ICP*
 - o *the NSP identifier of the NSP to which the ICP is connected*
 - o *the plant name of the embedded generating station.*

Audit observation

The EMI wholesale data set as at 15/09/20 and registry list as at 02/09/20 were reviewed to identify any generation stations with capacity of 10 MW or more and determine compliance.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10.33A(4)

Code related audit information

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

Audit observation

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

Audit commentary

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. Additions to unmetered load for existing ICPs are treated as load changes.

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 and NSP changes was reviewed. The AC020 audit compliance report for AC020 report for 01/12/19 to 02/09/20 was reviewed to determine compliance.

All backdated events were reviewed, and a diverse sample of 111 late updates were checked to determine the reasons for the late address, network, pricing, and status events.

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**.

Network maintained information is automatically transferred from Orion to the registry if:

1. the tickbox for the appropriate event type (network, address, pricing, or status) on the registry tab is ticked,
2. the event status dropdown box is changed to “NOTYETSENT” on the registry tab, and
3. changes are saved.

If any of these steps are not completed, the registry update will not be generated. Failure to complete all these steps has continued to be a source of late updates during the audit period. TLC investigated sending status updates automatically, but decided to rely on training and regular validation of Orion data against the registry to prevent late updates.

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.

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.

Responsibility for validation of Orion data against the registry shifted from the connections and faults team to the Senior Data Analyst in August. Initially the validation was completed monthly, then increased to fortnightly, and is now completed weekly. 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.

Address events

The AC020 report recorded 97 ICPs where addresses were updated more than three business days after the event date. 88.21% of updates were on time, and the average business days between the event date and update date was 136. 15 of the late updates were within 30 business days of the event date, and the latest update was 2,976 business days after the event date.

62 of the late updates occurred on 27/03/20 or 24/04/20 as part of address data cleansing. I checked the five latest updates from 27/03/20 or 24/04/20, and the five latest updates not relating to those dates. All of the updates were backdated address corrections, and had the correct event dates and address details recorded.

Network events – distributed generation

TLC have found there are sometimes delays in the connections team receiving information on new distributed generation from the network services team, which has resulted in late updates. The process is being reviewed, and is discussed in **section 4.6**.

The AC020 report recorded 15 ICPs where distributed generation details were updated more than three business days after the event date. 11.76% of updates were on time, and the average business days between the event date and update date was 123.35.

Seven of the late updates were not genuine changes to distributed generation details. The dedicated NSP status had been updated from “yes” to “no” replacing the previous record, and the distributed generation details were the same in the new and replaced records.

The eight genuinely late distributed generation updates occurred 21-213 business days after the event date. One late update was a correction following the last audit, and the other seven late updates were completed as part of bulk updates when distributed generation information was received by the connections team.

The updates were made from the correct date, and the content was consistent with the inspection information apart from three which had the capacity rounded to the nearest kW. Backdated corrections to the capacities were processed during the audit.

Network events – other

The AC020 report recorded 896 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.

17.87% of updates were on time, and the average business days between the event date and update date was 222.43. 52 late updates were within ten business days of the event date, 68 were within 30 business days, 77 were within 100 business days, 882 within 300 business days and all within 765 business days.

All late updates were checked:

Update type	Count	Commentary
Dedicated NSP	812	90.6% of the late updates included a change from dedicated NSP “yes” to “no”. All ICPs on the TLC network can be fed by more than one NSP and should all

Update type	Count	Commentary
		<p>be recorded as not dedicated, and the updates were corrections backdated as agreed with the Electricity Authority.</p> <p>I checked a sample of ten late updates, and confirmed they were corrections and accurately processed. All active ICPs on the registry list as at 02/09/20 had the correct dedicated NSP status recorded.</p>
Initial electrical connection date	70	The AC020 report identified any updates which were more than three business days after the event date, but initial electrical connection dates may be populated up to ten business days after initial electrical connection. All of the late updates related to initial population of the initial electrical connection date, and the timeliness of updates is assessed in section 3.5 .
Distributed generation	8	<p>The eight genuinely late distributed generation updates occurred 21-213 business days after the event date. One late update was a correction following the last audit, and the other seven late updates were completed as part of bulk updates when distributed generation information was received by the connections team.</p> <p>The updates were made from the correct date, and the content was consistent with the inspection information apart from three updates which had the capacity rounded to the nearest kW. Backdated corrections to the capacities were processed during the audit.</p>
Proposed trader change	4	<p>One late update was removal of a proposed trader for a connected ICP.</p> <p>One late update was made as part of the decommissioning process.</p> <p>Two late updates were caused by confusion over who the correct trader was, and corrections were processed.</p> <p>All of the updates were accurate.</p>
NSP correction replacing previous record	1	The update was a correction because the incorrect transformer had been recorded against the ICP, and that transformer was linked to a different NSP. The correction was accurately processed.
Unmetered load change	1	ICP 0001112718WM43D had missing unmetered load information on the registry and was updated following the previous audit. The correction was accurately processed.

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.

150 pricing updates were identified on the event detail report. 146 related to initial updates for new connections which are assessed in **section 3.4**.

Four related to pricing changes for existing ICPs. Three updates were processed accurately. ICP 0001113191WM880 had an incorrect event date; it was processed effective from the update date in error. The event date was corrected during the audit.

Status events

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

The AC020 report recorded that 44 ICPs had their status updated to decommissioned more than three business days after the event date, and more than three business days after the trader's update to "ready for decommissioning" status. 46.34% of updates to decommissioned status were on time, and the average business days between the event date and update date was 18.43.

I checked all 14 late updates made over eight business days after the trader updated the ICP to "ready for decommissioning" status:

- eight were delayed by workloads, and two of these updates occurred in early January 2020,
- three late updates were backdated corrections to the decommissioning date,
- two were delayed by late receipt of paperwork, and
- one update failed to be transferred from Orion to the registry and was resolved with IT support.

I checked a sample of 14 decommissioned ICPs for accuracy and confirmed the correct statuses and event dates were applied.

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 every two days.

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 recorded two ICPs and three updates where the NSP was updated more than eight business days after the event date. Two of the late updates for one ICP were not genuine changes to the NSP. The dedicated NSP status had been updated from "yes" to "no" replacing the previous record, and the NSP was the same in the new and replaced records. The other late update was a correction following the previous audit.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 4.1</p> <p>With: Clause 8 of Schedule 11.1</p> <p>From: 01-Dec-19</p> <p>To: 02-Sep-20</p>	<p>97 late address updates.</p> <p>812 late updates to dedicated NSP status.</p> <p>14 late updates to other network fields, excluding initial updates to initial electrical connection dates.</p> <p>44 late updates to decommissioned status.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>

Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls over the registry update process have improved over the audit period. Further training has been carried out, and the registry validation process to identify missed updates is now consistently completed weekly. The number of late updates declined later in the audit period, and a large proportion of late updates checked were backdated corrections. The weaker controls over distributed generation updates result in an overall rating of moderate across all update types.</p> <p>There may be a minor impact on other participants. Processing corrections improves compliance with the completeness and accuracy requirements.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Training and regular validation of Orion data against the registry		Complete	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Training and regular validation of Orion data against the registry		Complete	

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

Code reference

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

Code related audit information

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

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

Audit observation

The process to determine the correct NSP was examined. The registry list for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 were examined 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 all the associated information for that transformer. This includes the NSP and loss category code associated with that NSP. For large sites, the asset management group will advise the correct loss factor to be applied.

NSP changes are recorded in Basix and transferred automatically to Orion. Discrepancies between Orion and Basix records are identified and resolved every two days by reconciling Orion and Basix records.

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, update status, and saving changes. Failed updates are identified by review of acknowledgement information and the registry validation process described in **section 2.1**.

The AC020 report identified one ICP (0008809295WM05A) on a street where 10% or fewer ICPs on the street have a different NSP to the other ICPs, and where the number of ICPs with a different NSP is less than three. TLC confirmed that the ICP was fed from NPK0331 and the NSP was assigned correctly.

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

Address town	HTI0331	NPK0331	OKN0111	ONG0331	TKU0331	Grand Total
Turangi	2	1			161	164
Ohakune		1	159			160
Owhango		6		11		17
Waimiha	1			3		4

I checked NSP assignment where less than 50% of the ICPs in a town were assigned to that NSP. All the ICPs had the correct NSP assigned, but nine ICPs had some incorrect address information which was updated during the audit. This is recorded as non-compliance in **section 4.4**.

Address town	Findings
Turangi	ICPs 0003402773WMD59 and 0034027851WM669 (HTI0331) had the town incorrectly recorded as Turangi, Manawatu but should have been Tihoi, Waikato. The addresses have been corrected. ICP 0008809295WM05A (NPK0331) was correctly addressed, and had the correct NSP assigned as described above.
Ohakune	DUML ICP 0001111172WMDBA (NPK0331) had an incorrect address recorded, and has been updated.
Owhango	ICPs 0001112575WME91, 0001403810WMD4, 0001406570WM06C, 0001408982WM432, 0003140362WM2B6, 0014070550WMD26 (NPK0331) had an incorrect town assigned, and have been corrected to Retaruke or Raurimu.
Waimiha	0005720813WM406 (HTI0331) was correctly addressed, and had the correct NSP assigned.

I rechecked ICPs found to have incorrect NSPs during the previous audit and confirmed they were corrected.

Audit outcome

Compliant

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 for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 were examined 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 AC020 report identified some duplicate and incomplete addresses. All of the affected ICPs were created prior to the current audit period. Some ICPs had duplicate and incomplete addresses, and there were 88 exceptions in total.

Issue	2020	2019	2018	2017	2016	2015	2014
Total duplicate addresses	41 ¹	56	96	255	366	1,642	1,670
Addresses with no Street number or Property name	72 ²	100	58	260	318	636	636

All exceptions were provided to TLC, and reviewed prior to the on-site audit. TLC uses GIS maps, Google maps, LINZ street addresses, and transformer information to verify addresses.

All of the duplicate addresses were resolved by adding street numbers and/or property names and/or GPS coordinates to make them unique during the audit.

69 of the incomplete addresses were updated to be complete during the audit, and ICP 0088055801WMB6F relates to DUMML load. The other two ICP addresses are still under investigation

¹ 25 of these also had incomplete addresses.

² 25 of these also had duplicate addresses, and four of these had a unit number but no street number.

with the customer to confirm the correct address, and will be updated as soon as possible once the address is confirmed:

ICP	Address
0007206300WMDC9	Unit number but no street number or property name. TLC is trying to contact the customer to determine the correct address. 3,,MIRIAMA STREET,TAUMARUNUI,,0,Manawatu,,0,0
0007206320WM09C	Unit number but no street number or property name. TLC is trying to contact the customer to determine the correct address. 4,,MIRIAMA STREET,TAUMARUNUI,,0,Manawatu,,0,0

I checked NSP assignment where less than 50% of the ICPs in a town were assigned to that NSP. All the ICPs had the correct NSP assigned, but nine ICPs had some incorrect address information which was updated during the audit. The ICPs were all created in 2017 or earlier, and the addresses were corrected during the audit. The ICPs are listed in **section 4.2**.

Recommendation	Description	Audited party comment	Remedial action
Review the accuracy of address and NSP information	<p>To identify ICPs with incorrect addresses and/or NSPs assigned:</p> <ol style="list-style-type: none"> 1. Regularly review the registry audit compliance report AC020Distributor10 to identify ICPs where the NSP assigned differs from the expected value for the street. 2. Use a registry snapshot report to identify ICPs connected to NSPs where less than 50% of the ICPs in that town are connected to that NSP. <p>Investigate any discrepancies to determine whether the address and NSP assigned are correct.</p>	The address information for new connections is validated against LINZ street address. This validation will avoid any further discrepancies occurring.	Identified

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.4</p> <p>With: Clause 2 Schedule 11.1</p> <p>From: 02-Sep-20</p> <p>To: 10-Nov-20</p>	<p>88 ICPs had incomplete or duplicate address information; 85 were corrected during the audit, one relates to DUMML load, and two are under investigation.</p> <p>Nine ICPs had some incorrect address information, which was corrected during the audit.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are rated as strong as ICPs created during the audit period have addresses that are readily locatable and unique.</p> <p>The audit risk rating is low based on the volume of ICPs affected. Two exceptions remain, and are currently being investigated to determine the correct address.</p> <p>Incorrect addresses can have a direct impact on the retailer's ability to read, disconnect, and reconnect these ICPs.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Have contacted customer and working with them agreed to correct details for the ICPs		28/02/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
The address information is validated against LINZ street address, and training and regular validation of Orion data against the registry		Ongoing	

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

Code reference

Clause 3 Schedule 11.1

Code related audit information

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

Audit observation

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

Audit commentary

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

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

Audit outcome

Compliant

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

Code reference

Clause 7(1) Schedule 11.1

Code related audit information

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

- *the location address of the ICP identifier (Clause 7(1)(a) of Schedule 11.1)*
- *the NSP identifier of the NSP to which the ICP is usually connected (Clause 7(1)(b) of Schedule 11.1)*
- *the installation type code assigned to the ICP (Clause 7(1)(c) of Schedule 11.1)*
- *the reconciliation type code assigned to the ICP (Clause 7(1)(d) of Schedule 11.1)*
- *the loss category code and loss factors for each loss category code assigned to the ICP (Clause 7(1)(e) of Schedule 11.1)*
- *if the ICP connects the distributor's network to an embedded generating station that has a capacity of 10MW or more (Clause 7(1)(f) of Schedule 11.1):*
 - a) *the unique loss category code assigned to the ICP*
 - b) *the ICP identifier of the ICP*
 - c) *the NSP identifier of the NSP to which the ICP is connected*
 - d) *the plant name of the embedded generating station*
- *the price category code assigned to the ICP, which may be a placeholder price category code only if the distributor is unable to assign the actual price category code because the capacity or volume information required to assign the actual price category code cannot be determined before electricity is traded at the ICP (Clause 7(1)(g) of Schedule 11.1)*
- *if the price category code requires a value for the capacity of the ICP, the chargeable capacity of the ICP as follows (Clause 7(1)(h) of Schedule 11.1):*
 - a) *a placeholder chargeable capacity if the distributor is unable to determine the actual chargeable capacity*
 - b) *a blank chargeable capacity if the capacity value can be determined for a billing period from metering information collected for that billing period*
 - c) *if there is more than one capacity value at the ICP, and at least one, but not all, of those capacity values can be determined for a billing period from the metering information collected for that billing period-*
 - (i) *no capacity value recorded in the registry field for the chargeable capacity; and*

- (ii) either the term “POA” or all other capacity values, recorded in the registry field in which the distributor installation details are also recorded
- d) if there is more than one capacity value at the ICP, and none of those capacity values can be determined for a billing period from the metering information collected for that billing period-
 - (i) the annual capacity value recorded in the registry field for the chargeable capacity; and
 - (ii) either the term “POA” or all other capacity values, recorded in the registry field in which the distributor installation details are also recorded
- e) the actual chargeable capacity of the ICP in any other case
- the distributor installation details for the ICP determined by the price category code assigned to the ICP (if any), which may be placeholder distributor installation details only if the distributor is unable to assign the actual distributor installation details because the capacity or volume information required to assign the actual distributor installation details cannot be determined before electricity is traded at the ICP (Clause 7(1)(i) of Schedule 11.1)
- the participant identifier of the first trader who has entered into an arrangement to sell or purchase electricity at the ICP (only if the information is provided by the first trader) (Clause 7(1)(j) of Schedule 11.1)
- the status of the ICP (Clause 7(1)(k) of Schedule 11.1)
- designation of the ICP as "Dedicated" if the ICP is located in a balancing area that has more than 1 NSP located within it, and the ICP will be supplied only from the NSP advised under Clause 7(1)(b) of Schedule 11.1, or the ICP is a point of connection between a network and an embedded network (Clause 7(1)(l) of Schedule 11.1)
- if unmetered load, other than distributed unmetered load, is associated with the ICP, the type and capacity in kW of unmetered load (Clause 7(1)(m) of Schedule 11.1)
- if shared unmetered load is associated with the ICP, a list of the ICP identifiers of the ICPs that are associated with the unmetered load (Clause 7(1)(n) of Schedule 11.1)
- if the ICP is capable of generating into the distributors network (Clause 7(1)(o) of Schedule 11.1):
 - a) the nameplate capacity of the generator; and
 - b) the fuel type
- the initial electrical connection date of the ICP (Clause 7(1)(p) of Schedule 11.1).

Audit observation

The management of registry information was reviewed. The registry list for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 were examined to determine compliance. A typical sample of data discrepancies were checked.

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

Audit commentary

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

NSP information

Assignment of dedicated NSP status was checked. All ICPs on the TLC network can be fed by more than one NSP and should all be recorded as not dedicated, and all active and inactive ICPs on the registry list as at 02/09/20 have the dedicated NSP status set to “no”.

All ICPs found to incorrectly have their dedicated NSP status set to “yes” had backdated corrections applied prior to the audit, as agreed with the Electricity Authority. The late updates are recorded as non-compliance in **section 4.1**.

Pricing information

Two incorrect pricing records were identified and corrected during the audit:

- the pricing update for ICP 0001113191WM880 had an incorrect event date; it was processed effective from the update date in error, and
- ICP 0001113309WMF74 had its chargeable capacity for pricing recorded in the generation capacity field due to a data entry error.

Initial Electrical Connection Date

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

Initial electrical connection dates 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 are not currently validated against the trader’s earliest active date and the MEP’s meter certification date, and I recommend this is completed.

Recommendation	Description	Audited party comment	Remedial action
Validation of initial electrical connection dates	<p>Validate initial electrical connection dates against the trader’s earliest active date and the MEP’s meter certification date, to identify discrepancies which may require investigation and correction.</p> <p>The registry audit compliance report could be used to identify discrepancies.</p>	TLC has included the recommendation in our processes	Identified

Initial electrical connection date accuracy

The initial electrical connection dates were checked for a sample of 15 new connections. All ICPs checked had the correct initial electrical connection date, apart from 0001113258WM23D which was recorded as 08/07/2020 instead of 07/08/2020 due to a typing error. The date was corrected during the audit.

The AC020 report identified four ICPs commissioned after 29/08/13 with no initial electrical connection date populated. Three were checked and updated to the correct date during the audit, and ICP 0003271548WM74C was confirmed to have been connected prior to 29/08/13 and no initial electrical connection date was required.

The AC020 report identified 166 ICPs which became active after 29/08/13 which had an initial electrical connection date populated which was different to the first active status date. I checked all six ICPs with

initial electrical connection dates in 2019 or later. Correct dates were recorded for five of the six ICPs, and the initial electrical connection date for the other ICP was corrected during the audit.

The AC020 report identified five ICPs with potentially inaccurate initial electrical connection dates which did not match the meter certification date or the trader's earliest update to active status. One was a timing difference and the initial electrical connection date was updated after the report was run. Three of the four ICPs had incorrect initial electrical connection dates, which were corrected during the audit.

ICP 0001113275WM033's initial electrical connection date was 06/07/20. It was initially loaded with an initial electrical connection date of 03/07/20 and a new event on 06/07/20 was entered, without the original event being reversed. The 03/07/20 record was reversed during the audit and the correct event date and initial electrical connection date is now applied.

I rechecked initial electrical connection date discrepancies identified during the previous audit, and found they had been corrected. Where the date differed from the expected date, I verified that the date applied was correct.

Distributed Generation

I walked through the process for distributed generation:

1. TLC requires an application before any distributed generation is connected to their network. TLC closely monitors this area due to the health and safety risks associated, and applications are tracked via a spreadsheet maintained by the network services team.
2. Once it is confirmed that distributed generation is recorded through the inspection process, the spreadsheet is updated with an effective date and the installed generation details.
3. The connections team checks the spreadsheet weekly, and populates generation details in Orion for any ICPs which have all the required details and the effective date populated. If a record is partially completed, the connections team queries the ICP with the network team to confirm whether it is ready to be inputted and obtain any missing details.
4. The registry update is triggered by populating the event date, distributed generation details and ticking the appropriate tick box and update status on registry tab, and saving changes. Failed updates are identified by review of acknowledgement information and the registry validation process described in **section 2.1**.

TLC have found there are sometimes delays in distributed generation spreadsheet being updated, which has resulted in some bulk updates to distributed generation details when the next weekly check is completed. The late updates are recorded as non-compliance in **section 4.1**.

The distributed generation process is currently being reviewed. As part of this review, TLC will consider the recommendation to validate generation information against trader and meter owner records.

Recommendation	Description	Audited party comment	Remedial action
Investigate ICPs where distributed generation is indicated, but an application has not been received.	At least monthly, compare ICPs which have an EG1 or PV1 profile on the registry list to the list of ICPs which distributed generation applications have been received for. It may also be helpful to cross check to the MEP's meter channel records to determine whether injection registers are installed, and the high risk database may also contain information on generation installation (https://www.energysafety.govt.nz/energysafety/app/highrisk-db/home).	TLC has included the recommendation in our processes	Identified

	Follow up with the trader and/or customer to determine whether generation is installed.		
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Generation information completeness

Review of the registry list found 89 ICPs have generation capacity recorded by TLC.

All ICPs with generation capacity had an installation type of B or G recorded and a fuel type recorded except 0001113309WMF74. ICP 0001113309WMF74 had its chargeable capacity for pricing recorded in the generation capacity field due to a data entry error, and was corrected during the audit. No generation was present.

The AC020 report recorded seven ICPs where the trader's profile indicated generation was present but no distributed generation details were recorded by TLC. No evidence of generation was found for six of the ICPs. ICP 0004060841WM4AC was a timing difference, and correct distributed generation details were updated between the report being run and the audit.

A sample of eight updates were checked for accuracy. They were made from the correct date, and the content was consistent with the inspection information apart from updates for ICPs 0004050770WM132, 0001120420WM0BE, and 0001062900WM45A which had the capacity rounded to the nearest kW. Backdated corrections to the capacities were processed during the audit.

Generation information accuracy

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

Ten ICPs with generation recorded by TLC did not have a generation compatible profile recorded by the trader. The updates were made from the correct date, and the content was consistent with the inspection information apart from ICP 0001112481WM688 which had the capacity rounded to the nearest kW. A backdated correction was processed during the audit.

I rechecked the three ICPs which were found to have rounded capacity information during the previous audit, and found they had been corrected.

Unmetered Load

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

New connections

No new connections with unmetered load were created during the audit period.

Unmetered load information accuracy

The accuracy of unmetered load information was assessed.

- No ICPs had distributor unmetered load recorded without trader unmetered load.
- 55 ICPs had trader unmetered load recorded without distributor unmetered load. All were created in 2008 or earlier, and TLC had not populated unmetered load details for these ICPs because they were not aware of the unmetered load and were therefore not required to update their distributor unmetered load details. TLC updated the distributor unmetered load details for the six DUML ICPs during the audit.
- For the 19 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. All ICPs which were not DUML had their load populated in the recommended format.

DUML and shared unmetered load

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

Database	Comment
Waitomo District Council	<p>The January 2020 audit identified ten private lights which were excluded from submission information and did not have standard or shared unmetered load created.</p> <p><u>Kaka Street</u></p> <p>A technician has visited the eight lights at Paearuhe in Kaka Street, Piopio which are confirmed to be unmetered. TLC intends to either meter the lights, or create shared unmetered load ICPs. TLC is trying to confirm the owner/manager of the land in order to make the arrangements necessary to resolve the issue. Non-compliance is recorded in section 3.1 for not having an ICP created for all points of connection.</p> <p><u>Rauparaha St</u></p> <p>WDC have advised TLC that they are responsible for this streetlight, which should be recorded against an ICP in the WDC DUML database. TLC is not required to undertake any further action.</p> <p><u>Waitomo Village Rd</u></p> <p>TLC is working with WDC to determine who is responsible for this unmetered streetlight, so that it can either be recorded against an ICP in the WDC DUML database or TLC will create a new ICP.</p>
Ruapehu District Council	<p>The September 2020 audit recorded 20 private lights which were excluded from submission information. Two were confirmed to be metered, and 16 are Department of Conservation lights near the Chateau which are being investigated by Ruapehu District Council to determine whether they are unmetered and if so, which distributed unmetered load database they should be included within.</p> <p>The other two lights are located TLC's depot and are confirmed to be unmetered. TLC intends to create new ICPs for this unmetered load. Non-compliance is recorded in section 3.1 for not having an ICP created for all points of connection.</p>
Taupo District Council	The April 2020 audit did not identify any missing shared unmetered load.
Otorohanga District Council	The June 2019 audit did not identify any missing shared unmetered load.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.6 With: 7(1) of Schedule 11.1	The pricing update for ICP 0001113191WM880 had an incorrect event date; it was processed effective from the update date in error. The event date was corrected during the audit.

<div>From: 01-Dec-19</div> <div>To: 10-Nov-20</div>	<div>ICP 0001113309WMF74 had its chargeable capacity for pricing recorded in the generation capacity field due to a data entry error, and was corrected during the audit.</div> <div>At least seven ICPs had incorrect initial electrical connection dates, which were corrected during the audit.</div> <div>Distributed generation updates for ICPs 0004050770WM132, 0001120420WM0BE, 0001062900WM45A, and 0001112481WM688 had their generation capacity rounded to the nearest kW. Backdated corrections to the capacities were processed during the audit.</div> <div>Potential impact: Low</div> <div>Actual impact: Low</div> <div>Audit history: Multiple</div> <div>Controls: Strong</div> <div>Breach risk rating: 1</div>		
Audit risk rating	Rationale for audit risk rating		
Low	<div>I have rated the controls as strong, because there were generally small numbers of discrepancies and most were identified and corrected through TLC’s discrepancy reporting processes prior to the audit.</div> <div>The audit risk rating is low because all of the data accuracy issues have been resolved.</div>		
Actions taken to resolve the issue		Completion date	Remedial action status
All issues corrected during the audit		Corrected	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Historic issues, processes are robust, training and regular validation of Orion data against the registry		Ongoing	

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

Code reference

Clause 7(3) Schedule 11.1

Code related audit information

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

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

Audit observation

The management of registry information was reviewed. The registry list for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 were reviewed to determine compliance.

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 02/09/20 was reviewed to determine compliance. ICPs with GPS coordinates were checked to determine whether they were accurate and in the correct format.

Audit commentary

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

GPS coordinates were recorded for one active and one inactive ICP on the registry list. In both cases the coordinates were in NZTM2000 format and consistent with the other addressing information.

As discussed in **section 4.4**, GPS coordinates were added for some ICPs during the audit period to make their addresses readily locatable and unique. The coordinates populated were in NZTM2000 format.

Audit outcome

Compliant

4.9. Management of "ready" status (Clause 14 Schedule 11.1)

Code reference

Clause 14 Schedule 11.1

Code related audit information

The ICP status of "Ready" must be managed by the distributor and indicates that:

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

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

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

Audit observation

The management of ICPs in relation to the use of the "ready" status was examined. The registry list for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 were examined to determine compliance.

Audit commentary

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

All 21 ICPs at "ready" status had a single price category assigned and proposed trader identified. 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**.

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

Audit outcome

Compliant

4.10. Management of "distributor" status (Clause 16 Schedule 11.1)

Code reference

Clause 16 Schedule 11.1

Code related audit information

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

Audit observation

Processes to manage the distributor status were reviewed. The registry list for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 were examined to determine compliance.

Audit commentary

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

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

Audit outcome

Compliant

4.11. Management of "decommissioned" status (Clause 20 Schedule 11.1)

Code reference

Clause 20 Schedule 11.1

Code related audit information

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

Decommissioning only occurs when:

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

Audit observation

The decommissioning process was discussed.

The registry list for 02/09/20 and AC020 report for 01/12/19 to 02/09/20 were reviewed to identify ICPs at “decommissioned” or “ready for decommissioning” status and check compliance.

A sample of 14 “decommissioned” ICPs was examined. I also examined all eight ICPs at “ready for decommissioning” status.

Audit commentary

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

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. Failed updates are identified by review of acknowledgement information and the registry validation process described in **section 2.1**.

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. Orion and the registry are updated once confirmation of decommissioning is received.

I checked a sample of 14 decommissioned ICPs for accuracy and confirmed the correct statuses and event dates were applied. I rechecked ICPs with incorrect status updates identified during the previous audit, and confirmed that they were corrected from the correct event date, or as close to the correct event date as possible where TLC was constrained by other participants’ events.

Examination of the list file found eight ICPs are at “ready for decommissioning” status.

Number of ICPs 2020	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017	Number of ICPs 2016	Number of ICPs 2015
8	5	42	76	52	67

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

- three were timing differences and the ICPs were decommissioned prior to the audit,
- three were not completed because TLC had not received confirmation that the ICP was to be decommissioned, including signed paperwork, and

- proposed decommissions for ICPs 0001017920WM496 and 0005820970WM048 were not completed because they were cancelled by the customer.

Recommendation	Description	Audited party comment	Remedial action
ICPs at 1,6 (inactive ready for decommissioning) status where the customer has indicated the ICP should not be decommissioned	Query the status of ICPs 0001017920WM496 and 0005820970WM048 with Trustpower. 0001017920WM496 still has the trader listed as KING, and was potentially not switched to Trustpower because it was expected to be decommissioned.	Status remains at 1,6. Follow up with the retailer will be completed by 28/02/2021.	Identified

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 NSP table was examined.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 26(1) and (2) Schedule 11.1

Code related audit information

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

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

Audit observation

The NSP table was examined.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

The NSP table was reviewed.

Audit commentary

No balancing area changes occurred during the audit period.

Audit outcome

Audit outcome

Compliant

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

Code reference

Clause 26(4) Schedule 11.1

Code related audit information

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

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

Audit observation

The NSP table was reviewed.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 24(2) and (3) Schedule 11.1

Code related audit information

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

Audit observation

The NSP table was reviewed.

Audit commentary

No balancing area changes have occurred during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 27 Schedule 11.1

Code related audit information

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

Audit observation

The NSP table was reviewed.

Audit commentary

No existing ICPs became NSPs during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 1 to 4 Schedule 11.2

Code related audit information

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

Audit observation

The NSP table was reviewed.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10.25(1) and 10.25(3)

Code related audit information

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

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

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

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

Audit observation

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

Audit commentary

The NSP table was reviewed:

Distributor	NSP POC	Description	MEP	Certification Expiry
LINE	ATI0111	ATIAMURI	MRPL	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	23/09/2021

The previous audit found that WKM0331's meter was recertified on 10/10/19, but the updated meter certification details were not provided to the reconciliation manager, and the NSP table showed that certification expired on 17/10/19.

TLC created a procedure to update the NSP table, and the certification details were provided via the reconciliation manager portal.

Audit outcome

Compliant

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

Code reference

Clause 10.25(2)

Code related audit information

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

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

Audit observation

The NSP table was reviewed.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 29 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

The NSP table on the registry was examined.

Audit commentary

TLC have not initiated any changes of network owner.

Audit outcome

Compliant

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

Code reference

Clause 10.22(1)(b)

Code related audit information

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

Audit observation

The NSP supply point table was examined.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clauses 5 and 8 Schedule 11.2

Code related audit information

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

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

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

Audit observation

The NSP table was reviewed.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 6 Schedule 11.2

Code related audit information

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

Audit observation

The NSP table was reviewed.

Audit commentary

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

Audit outcome

Compliant

7. MAINTENANCE OF SHARED UNMETERED LOAD

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

Code reference

Clause 11.14(2) and (4)

Code related audit information

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

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

Audit observation

The registry list for 01/12/19 to 02/09/20 was reviewed to identify all ICPs with shared unmetered load. Findings of streetlight audits on the network were considered.

Audit commentary

TLC has no existing shared unmetered load.

Waitomo District Council (WDC)

The January 2020 audit identified ten private lights which were excluded from submission information and did not have standard or shared unmetered load created:

Kaka Street

A technician has visited the lights at Paearuhe in Kaka Street, Piopio which are confirmed to be unmetered. TLC intends to either meter the lights, or create shared unmetered load ICPs. TLC is trying to confirm the owner/manager of the land in order to make the arrangements necessary to resolve the issue. Non-compliance is recorded in **section 3.1** for not having an ICP created for all points of connection.

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

Rauparaha St

WDC have advised TLC that they are responsible for this streetlight, which should be recorded against an ICP in the WDC DUML database. TLC is not required to undertake any further action.

Slim Pole ID	Road Name	Lamp Model	Total Wattage
2190	RAUPARAH A ST	Itron Zero 0c6 STA 4.5-2M/D/NZ	19.5

Waitomo Village Rd

TLC is working with WDC to determine who is responsible for this unmetered streetlight, so that it can either be recorded against an ICP in the WDC DUML database or TLC will create a new ICP.

Slim Pole ID	Road Name	Lamp Model	Total Wattage
1088	WAITOMO VILLAGE RD	150w HPS	168

Ruapehu District Council

The September 2020 audit recorded 20 private lights which were excluded from submission information. Two were confirmed to be metered, and 16 are Department of Conservation lights near the Chateau which are being investigated by Ruapehu District Council to determine whether they are unmetered and if so, which distributed unmetered load database they should be included within.

The other two lights are located TLC's depot and are confirmed to be unmetered. TLC intends to create new ICPs for this unmetered load. Non-compliance is recorded in **section 3.1** for not having an ICP created for all points of connection.

Slim Pole ID	Road Name	Lamp Model	Total Wattage
1687	HOUSE AVENUE	70watt SON-E	83
539	HOUSE AVENUE	70watt SON-T	83

Taupo District Council

The April 2020 audit did not identify any missing shared unmetered load.

Otorohanga District Council

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

Audit outcome

Compliant

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

Code reference

Clause 11.14(5)

Code related audit information

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

Audit observation

The registry list 01/12/19 to 02/09/20 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.

A summary outlining the loss factor review process was provided.

Audit commentary

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

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:

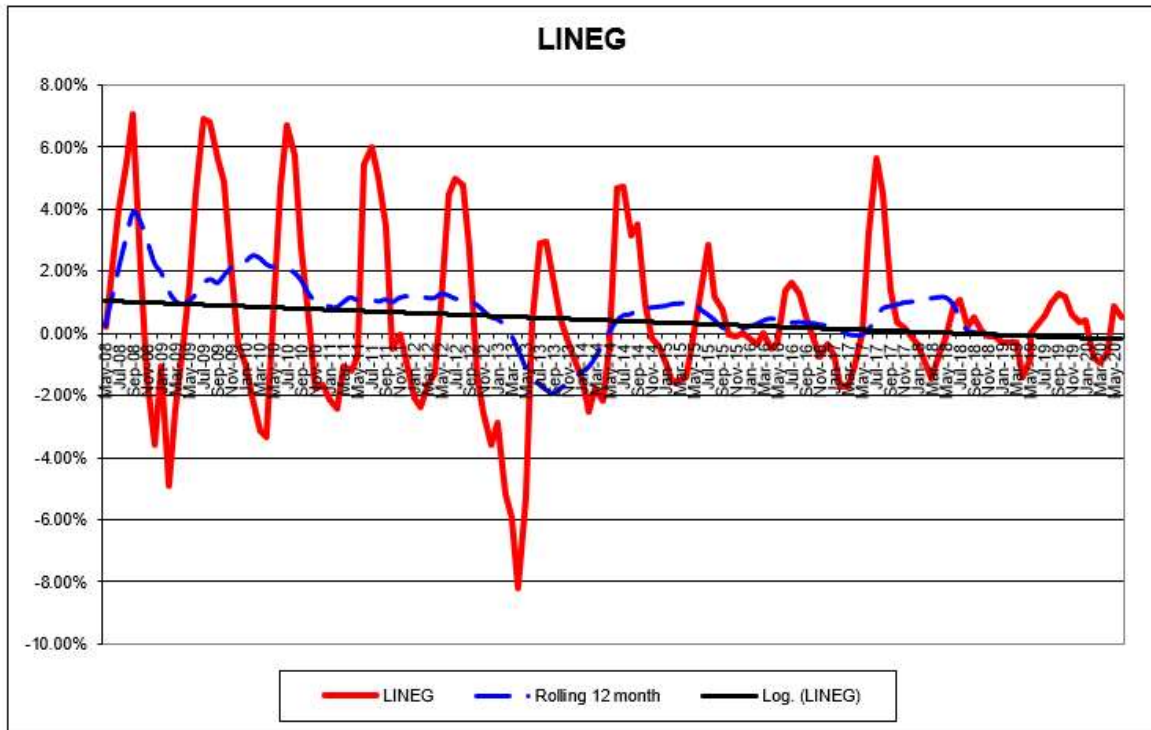
1. loss factors be reviewed and recalculated in accordance with the Authority’s “Guidelines on the calculation and the use of loss factors for reconciliation purposes” and updated by October 2020,
2. introduction of new loss factors for 11kV connections in each region,
3. introduction of separate loss 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.

Following this review the Network Performance Engineer left TLC, and the review process was put on hold. A new review has commenced and the data required is currently being compiled. The review is expected to be well underway by the end of 2020.

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 for 2020, and compliance is recorded.

UFE% by Network calculator

LINE ▼ G ▼



Audit outcome

Compliant

CONCLUSION

During the audit period and audit, TLC has put considerable effort into resolving compliance issues and I saw evidence that performance has improved during the audit period:

1. The process to transfer registry updates from Orion has been reviewed. Staff have been provided further training, and monitoring controls to identify missed updates have been strengthened.
2. The new connections process has been reviewed and improved to increase compliance, particularly for creation of new ICPs and monitoring of ICPs at new and ready status.
3. Issues with Orion being unable to record the correct number of digits and/or decimal places for GPS coordinates and generation capacities have been resolved, and data corrections have been processed.
4. Corrections have been processed for all instances of potentially incorrect data identified, except where TLC is still investigating to determine the correct values. This includes resolution of incorrect NSPs and duplicate and incomplete addresses.
5. Progress has been made with resolving issues relating to unrecorded unmetered load, identified through the DUMML audits.

The two key areas requiring improvement are distributed generation processes, and completion of a loss factor review. Distributed generation processes are under review, and the loss factor review has commenced.

Some recommendations have been made to further improve data accuracy, including:

1. Validating initial electrical connection dates against active status dates, and meter certification dates.
2. Validating distributed generation details against trader profiles, and meter records.
3. Checking NSP and address information for consistency.

TLC intends to adopt these recommendations, and will use the registry audit compliance report to identify discrepancies which require investigation.

This audit found seven areas of non-compliance and makes four recommendations for improvement. The future risk rating is eight (a decrease from 22 last audit), indicating that the next audit should be due in 18 months. I agree that the next audit should be completed in a minimum of 18 months.

PARTICIPANT RESPONSE

TLC has reviewed this report and comments are contained within its body. TLC will continue to provide training to our team and improve and further document processes. In addition to this, weekly exception reporting is being completed which allows for prompt correction of any issues as well as reviewing the audit report monthly.

TLC has assigned a dedicated team member to oversee these processes.