

ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTOR AUDIT REPORT



For

WAIPA NETWORKS LIMITED

NZBN:9429038884085

Prepared by: Rebecca Elliot

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Audit report due date: 30-Jul-23

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## TABLE OF CONTENTS

Executive summary .....	4
Audit summary .....	5
Non-compliances .....	5
Recommendations .....	6
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 .....	10
1.4. Use of contractors (Clause 11.2A) .....	10
1.5. Supplier list .....	10
1.6. Hardware and Software .....	11
1.7. Breaches or Breach Allegations .....	11
1.8. ICP and NSP Data .....	11
1.9. Authorisation Received .....	12
1.10. Scope of Audit .....	13
1.11. Summary of previous audit .....	14
2. Operational Infrastructure .....	16
2.1. Requirement to provide complete and accurate information (Clause 11.2(1) and 10.6(1)) .....	16
2.2. Requirement to correct errors (Clause 11.2(2) and 10.6(2)) .....	19
2.3. Removal or breakage of seals (Clause 48(1A) and 48(1B) of Schedule 10.7) .....	20
2.4. Provision of information on dispute resolution scheme (Clause 11.30A) .....	21
3. Creation of ICPs .....	22
3.1. Distributors must create ICPs (Clause 11.4) .....	22
3.2. Participants may request distributors to create ICPs (Clause 11.5(3)) .....	22
3.3. Provision of ICP Information to the registry manager (Clause 11.7) .....	23
3.4. Timeliness of Provision of ICP Information to the registry manager (Clause 7(2) of Schedule 11.1) .....	24
3.5. Timeliness of Provision of Initial Electrical Connection Date (Clause 7(2A) of Schedule 11.1) .....	25
3.6. Connection of an ICP that is not an NSP (Clause 11.17) .....	27
3.7. Connection of ICP that is not an NSP (Clause 10.31) .....	28
3.8. Temporary electrical connection of ICP that is not an NSP (Clause 10.31A) .....	29
3.9. Connection of NSP that is not point of connection to grid (Clause 10.30) .....	30
3.10. Electrical connection of NSP that is not point of connection to grid (Clause 10.30A and 10.30B) .....	30
3.11. Definition of ICP identifier (Clause 1(1) Schedule 11.1) .....	31
3.12. Loss category (Clause 6 Schedule 11.1) .....	31
3.13. Management of “new” status (Clause 13 Schedule 11.1) .....	32
3.14. Monitoring of “new” & “ready” statuses (Clause 15 Schedule 11.1) .....	32
3.15. Embedded generation loss category (Clause 7(6) Schedule 11.1) .....	34
3.17. Electrical disconnection of a point of connection (Clause 10.30C and 10.31C) .....	35
3.18. Meter bridging (Clause 10.33C) .....	35
4. Maintenance of registry information .....	36

4.1.	Changes to registry information (Clause 8 Schedule 11.1) .....	36
4.2.	Notice of NSP for each ICP (Clauses 7(1),(4) and (5) Schedule 11.1) .....	39
4.3.	Customer queries about ICP (Clause 11.31).....	42
4.4.	ICP location address (Clause 2 Schedule 11.1).....	42
4.5.	Electrically disconnecting an ICP (Clause 3 Schedule 11.1).....	43
4.6.	Distributors to Provide ICP Information to the Registry manager (Clause 7(1) Schedule 11.1) .....	44
4.7.	Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1) .....	49
4.8.	GPS coordinates (Clause 7(8) and (9) Schedule 11.1) .....	50
4.9.	Management of “ready” status (Clause 14 Schedule 11.1) .....	50
4.10.	Management of “distributor” status (Clause 16 Schedule 11.1) .....	51
4.11.	Management of “decommissioned” status (Clause 20 Schedule 11.1) .....	52
4.12.	Maintenance of price category codes (Clause 23 Schedule 11.1).....	53
5.	Creation and maintenance of loss factors .....	54
5.1.	Updating table of loss category codes (Clause 21 Schedule 11.1).....	54
5.2.	Updating loss factors (Clause 22 Schedule 11.1) .....	54
6.	Creation and maintenance of NSPs (including decommissioning of NSPs and transfer of ICPs)55	
6.1.	Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1).....	55
6.2.	Provision of NSP information (Clause 26(1) and (2) Schedule 11.1) .....	56
6.3.	Notice of balancing areas (Clause 24(1) and Clause 26(3) Schedule 11.1) .....	56
6.4.	Notice of supporting embedded network NSP information (Clause 26(4) Schedule 11.1)57	
6.5.	Maintenance of balancing area information (Clause 24(2) and (3) Schedule 11.1) .....	57
6.6.	Notice when an ICP becomes an NSP (Clause 27 Schedule 11.1) .....	58
6.7.	Notification of transfer of ICPs (Clause 1 to 4 Schedule 11.2) .....	58
6.8.	Responsibility for metering information for NSP that is not a POC to the grid (Clause 10.25(1) and 10.25(3)) .....	59
6.9.	Responsibility for metering information when creating an NSP that is not a POC to the grid (Clause 10.25(2)).....	59
6.10.	Obligations concerning change in network owner (Clause 29 Schedule 11.1) .....	60
6.11.	Change of MEP for embedded network gate meter (Clause 10.22(1)(b)) .....	60
6.12.	Confirmation of consent for transfer of ICPs (Clauses 5 and 8 Schedule 11.2) .....	61
6.13.	Transfer of ICPs for embedded network (Clause 6 Schedule 11.2).....	61
7.	Maintenance of shared unmetered load .....	62
7.1.	Notification of shared unmetered load ICP list (Clause 11.14(2) and (4)) .....	62
7.2.	Changes to shared unmetered load (Clause 11.14(5)).....	62
8.	Calculation of loss factors .....	63
8.1.	Creation of loss factors (Clause 11.2).....	63
Conclusion	.....	65
Participant response	.....	66

## EXECUTIVE SUMMARY

This distributor audit was performed at the request of **Waipa Networks Ltd (Waipa)**, to encompass the Electricity Industry Participation Code requirement for an audit in accordance with clause 11.10 of part 11.

The audit was conducted in accordance with the Guideline for Distributor Audits version 7.2, which was produced by the Electricity Authority.

Waipa replaced magiQ with ARC in April 2023. A material change audit was completed prior to deployment. I have considered the findings in both this and the last audit for this audit.

ARC is being used for:

- **ICP information management:** the core module manages ICP information and validates against the registry,
- **Registry communications:** the ICP manager module creates and transmits all new and changed ICP information to the registry, and
- **Billing:** the billing module receives trader data and creates billing files; the billing process is outside of the scope of this audit.

The ARC system provides a much-improved visibility for ICP management and robust controls. The dashboard reporting is being improved as it currently does not include relevant dates to be easily able to prioritise management of ICPs. This is expected to be in production soon. I recommend that the audit compliance reporting is used in the interim.

Waipa is progressing the second phase to implement ARC's faults module which creates, dispatches, and manages faults. This module is outside of the scope of this audit.

A critical member of the team has had to take time out due to illness and this has caused some processes to be paused while resources are reallocated. This has had only a minor effect on the overall result.

This audit found nine non-compliances and makes five recommendations. The overall compliance level has improved, and this is reflected in the future risk rating score reducing from 21 to 13. The next audit frequency table indicates that the next audit be due in 12 months. I have considered this in conjunction with Waipa's comments and agree with this recommendation.

The matters raised are shown in the tables 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) and 10.6(1)	Registry information not complete and accurate in all instances.	Moderate	Low	2	Identified
Requirement to correct errors	2.2	11.2(2) and 10.6(2)	Errors not corrected as soon as practicable.	Moderate	Low	2	Identified
Timeliness of ICP Information to the registry manager	3.4	7(2) of Schedule 11.1	Two ICPs not updated to "ready" prior to electricity being traded.	Strong	Low	1	Identified
Timeliness of initial electrical connection date	3.5	7(2A) of Schedule 11.1	80 initial electrical connection dates not updated within ten business days.	Moderate	Low	2	Identified
Monitoring of "new" & "ready" statuses	3.14	15 of Schedule 11.1	Four of the five ICPs at "new" or "ready" for more than 24 months not confirmed as required.	Moderate	Low	2	Identified
Timeliness of registry updates	4.1	8 of schedule 11.1	12 late address updates. One late price update of the sample of ten ICPs. 96 late decommissioning status updates. 87 late distributed generation updates. One late NSP change.	Strong	Low	1	Identified
Notice of NSP for each ICP	4.2	7(1),(4) & (5) Schedule 11.1	One ICP mapped to wrong NSP and balancing area.	Strong	Low	1	Cleared

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
ICP location address	4.4	2 & 7 (1)(a) of schedule 11.1	Approximately 620 ICPs with addresses that are not readily locatable.	Strong	Low	1	Identified
Distributor to provide ICP information	4.6	7(1) of Schedule 11.1	Chargeable capacity incorrectly recorded on the registry when it is being derived from the retailer billing files.  Two ICPs with the incorrect distributed generation details recorded of the sample of 28 ICPs checked.  Four ICPs with an incorrect initial electrical connection date populated.  One ICP with a "known" unmetered load not recorded on the registry.	Strong	Low	1	Identified
Future Risk Rating						13	
Indicative Next Audit Frequency						12 months	
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
Registry discrepancy	2.1	Use the audit compliance report (AC020) to assist with ICP management until relevant date fields are added to dashboard reporting.
Temporary electrical connection	3.8	Liaise with the relevant traders for ICPs 0077751051WAD89 and 0002625351WAF3C to confirm the initial electrical connection date.
NSP Changes	4.2	Confirm the process to pass transformer changes from GIS to ARC including: <ul style="list-style-type: none"> <li>how event dates for changes will be determined; this should be the physical date that the NSP changed,</li> <li>whether approval of the change is required before the NSP change is sent to the registry,</li> <li>how often transformer changes will be updated in ARC, and</li> </ul>

		<ul style="list-style-type: none"> <li>how changes to transformers, modules and/or feeders which do not result in a change of NSP will be handled, to avoid unnecessary changes being sent to the registry.</li> </ul>
Distributed generation	4.6	Review all generation capacities and confirm they have not doubled in the transition from magiQ to ARC.
DUML		Review process of notification of electrical connection of new streetlights.

## ISSUES

Subject	Section	Issue	Next Action
		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 any code exemptions in place.

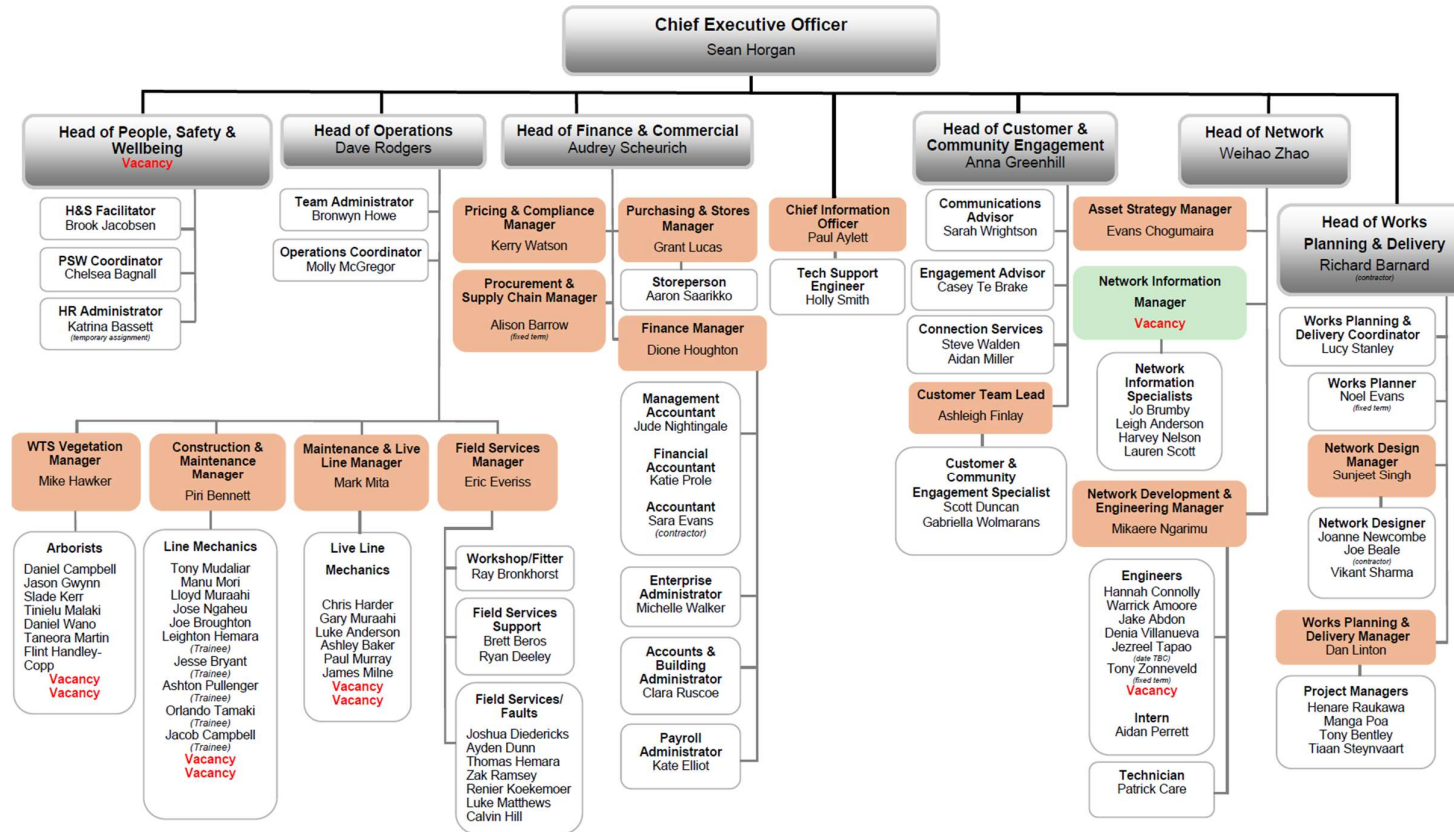
#### **Audit commentary**

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

Waipa provided a copy of their organisational structure:



New Role



### 1.3. Persons involved in this audit

Auditors:

Name	Company	Role
Rebecca Elliot	Veritek Limited	Auditor

Waipa personnel assisting in this audit were:

Name	Title
Anna Greenhill	Head of Customer & Community Engagement
Gabriella Wolmarans	Customer Services Administrator
Scott Duncan	Customer Services Administrator

### 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 fulfillment 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

Waipa was asked to provide the details of any sub-contractors authorised to perform electrical connection activities on their networks.

#### Audit commentary

Activities covered by the scope of this audit, including fieldwork and inspection are conducted by Waipa employees.

### 1.5. Supplier list

Waipa does not use any sub-contractors in relation to the activities covered in this audit.

## 1.6. Hardware and Software

### ARC

Waipa has replaced magiQ with ARC in April 2023. A material change audit was undertaken prior to deployment. ARC is used for:

- **ICP information management:** the core module will manage ICP information and allow it to be validated against the registry,
- **Registry communications:** the ICP manager module will create and transmit all new and changed ICP information to the registry and facilitate bulk updates where necessary, and
- **Billing:** the billing module will receive trader data and create billing files; the billing process is outside of the scope of this audit.

Waipa is progressing the second phase to implement ARC's faults module which creates, dispatches, and manages faults. This is outside of the scope of this audit.

Access to ARC is restricted using logins and passwords, and access to functionality within ARC is assigned by role. ARC is a cloud-based platform with local and geo-redundancy through Azure. System events are logged and auditable.

## 1.7. Breaches or Breach Allegations

The Electricity Authority confirmed that there have been no breaches recorded during the audit period.

## 1.8. ICP and NSP Data

The table below lists the relevant NSPs, and their associated balancing areas.

Dist	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of active ICPs
WAIP	CBG0111	Cambridge			CBG0111WAIPG	G	1 May 2008	13,689
WAIP	TMU0111	Te Awamutu			TMU0111WAIPG	G	1 July 2016	15,117
WAIP	TPH0111	Te Pahu	TMU0111	WAIP	TMU0111WAIPG	I	2 November 2019	-

There are two embedded networks connected to the Cambridge NSP.

Dist	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date
TENC	TCO0011	95 SWAYNE ROAD CAMBRIDGE	CBG0111	WAIP	TCO0011TENCE	E	16 April 2018
WAIK	OAK0111	OAKLANDS	CBG0111	WAIP	OAK0111WAIKE	E	1 May 2008

There have been no NSPs created during the audit period.

Waipa's ICPs are summarised by status below:

Status	Number of ICPs May 2023	Number of ICPs May 2022	Number of ICPs May 2021	Number of ICPs May 2020	Number of ICPs May 2019
New (999,0)	109	94	56	40	34
Ready (0,0)	31	13	13	19	7
Active (2,0)	28,806	28,394	27,807	27,312	26,923
Distributor (888,0)	2	2	3	4	5
Inactive – new connection in progress (1,12)	46	62	53	23	26
Inactive – electrically disconnected vacant property (1,4)	427	415	397	384	374
Inactive – electrically disconnected remotely by AMI meter (1,7)	53	57	50	27	32
Inactive – electrically disconnected at pole fuse (1,8)	8	8	7	6	5
Inactive – electrically disconnected due to meter disconnected (1,9)	21	18	18	16	12
Inactive – electrically disconnected at meter box fuse (1,10)	1	-	-	1	1
Inactive – electrically disconnected at meter box switch (1,11)	0	-	-	-	-
Inactive – electrically disconnected ready for decommissioning (1,6)	0	80	42	56	42
Inactive – reconciled elsewhere (1,5)	0	-	-	-	-
Decommissioned (3)	3,073	2,889	2,838	2,744	2,671

### 1.9. Authorisation Received

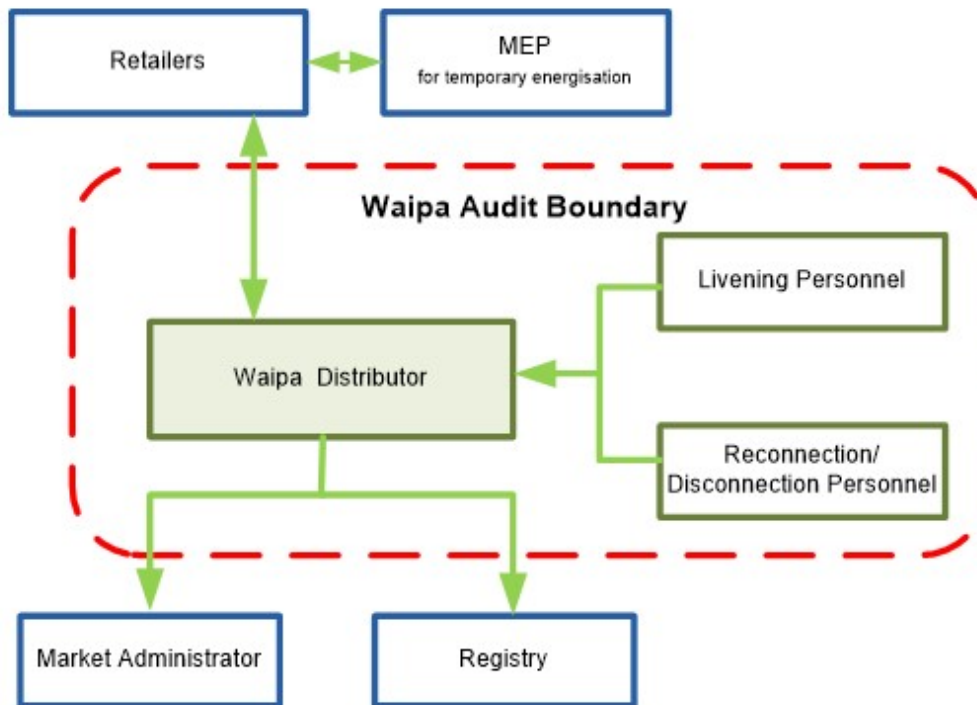
Waipa provided a letter of authorisation to Veritek, permitting the collection of data from other parties for matters directly related to the audit.

### 1.10. Scope of Audit

This distributor audit was performed at the request of Waipa Ltd, to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 11.10 of part 11. The audit was carried out on site on 6<sup>th</sup> July 2023.

The audit was conducted in accordance with the Guideline for Distributor Audits version 7.2, which was produced by the Electricity Authority.

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



### 1.11. Summary of previous audit

I reviewed the previous audit report, completed in July 2022 by Brett Piskulic of Veritek Limited. The statuses of the clause non-compliances are detailed in the table below:

#### Table of Non-Compliance

Subject	Section	Non-Compliance	Status
Requirement to provide complete and accurate information	2.1	Registry information not complete and accurate in all instances.	Still existing
Requirement to correct errors	2.2	Errors not corrected as soon as practicable.	Still existing
Provision of ICP Information to the registry manager	3.3	One ICP electrically connected but the initial electrical connection date had not been populated.	Cleared
Timeliness of ICP Information to the registry manager	3.4	Two ICPs not updated to "ready" prior to electricity being traded.	Still existing
Timeliness of initial electrical connection date	3.5	157 initial electrical connection dates not updated within ten business days.	Still existing
Timeliness of registry updates	4.1	Six address events, one network event, 79 pricing updates, 20 decommission status updates and 95 distributed generation updates were updated more than three business days after the event date.	Still existing
ICP location address	4.4	668 ICPs with addresses that are not readily locatable.	Still existing
Distributor to provide ICP information	4.6	Chargeable capacity incorrectly recorded on the registry when it is being derived from the retailer billing files. 16 ICPs with distributed generation details incorrect or missing. One ICP with the initial electrical connection date missing. Eight ICPs with an incorrect initial electrical connection date populated. Two ICPs with unmetered load discrepancies.	Still existing
Provision of information to registry after the trading of electricity at the ICP commences	4.7	Four late price code updates.	Cleared

#### Recommendations

Subject	Section	Recommendation	Status
Distributed generation	4.6	Monitor the high-risk database and the EG records in EIEP files to identify ICPs with generation recorded.	Adopted

The material change audit completed in November 2022 by Tara Gannon of Veritek Limited was also examined and no non-compliances were identified. Four recommendations were made. The current status of these is detailed below:

#### Recommendations

Subject	Section	Recommendation	Next Action
Ready ICPs with no electrically connected date	2.1	Add ICPs at 1,12 "inactive - new connection in progress" status with no initial electrical connection date to the "Ready ICPs with no electrically connected date" dashboard quick report to	Cleared

		ensure that all new ICPs which have not yet been moved to active are monitored.	
NSP changes	4.2	<p>Confirm the process to pass transformer changes from GIS to ARC including:</p> <ul style="list-style-type: none"> <li>• how event dates for changes will be determined; this should be the physical date that the NSP changed,</li> <li>• whether approval of the change is required before the NSP change is sent to the registry,</li> <li>• how often transformer changes will be updated in ARC,</li> <li>• how changes to transformers, modules and/or feeders which do not result in a change of NSP will be handled, to avoid unnecessary changes being sent to the registry.</li> </ul>	Repeated
Test decommissioning of ICPs at new (999) status	4.11	Test the process to decommission ICPs which are at “new” status. These ICPs should be able to move directly to decommissioned status.	Cleared
Test decommissioning of ICPs at distributor (888) status	4.11	Test the process to decommission ICPs which are at “distributor” status. These ICPs should be able to move directly to decommissioned status.	Cleared

## 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

Waipa's data management processes were examined. The list file as of 19 May 2023 and the audit compliance report for the period 1 June 2022 to 15 May 2023 was examined to confirm compliance.

#### Audit commentary

Waipa has replaced magiQ with ARC in April 2023. The processes in place are detailed below:

#### Data entry and registry synchronisation

All the required registry fields are stored within ARC. Preventative controls are in place to help to ensure data is complete and accurate including:

- mandatory fields, field content requirements and character limits, which are consistent with the Registry Functional Specification,
- use of pick/drop down lists displaying valid options for the field where appropriate,
- automatic population of valid data in dependent fields, for instance updating the installation type when distributed generation information is entered,
- suggested values where users begin entering address information,
- validation of new ICP numbers and addresses against existing ICP numbers and addresses to prevent duplicates from being created, and
- validation against other related information stored in ARC for distributed generation, and NSP information.

ARC's ICP records contain panes displaying status, address, network, and pricing information. Each of these panes has its own event date. Event dates can be manually entered and edited for address, network, pricing, and decommissioned status events. If the event date is more than the maximum allowable business days before the entry date a text "audit note" is required to explain why the update is late. Status updates to "new", "ready", "active", "inactive" and "distributor" status are created on import of the registry notification files at midnight each night, and the registry status event date is applied.

When address, network, pricing, and/or decommissioned status data is entered or changed, the user enters an event date (which is mandatory) and saves the change to that pane. This triggers an automatic registry update for the event type. The event status changes to "awaiting response" until a registry acknowledgement file is received indicating whether the update was a success or failure:

- if successful, the event status will change to "success", and the registry event number is populated, and



- if a failure, the event status changes to “failure” and the reason for the failure is displayed on the ICP’s record; the number of failures is also displayed on the ARC Dashboard, and the affected ICP records can be reviewed and resolved by clicking on the failure type.

Status updates to “new” (999), “ready” (000), “active” (002) and “inactive” (001) status are imported from registry notification files with the registry event date. Updates to “new” and “ready” are triggered by ARC sending events to the registry which cause the registry to automatically update the status as certain information is populated. Updates to “active” and “inactive” statuses are triggered by trader registry updates.

Full event history for each ICP can be viewed in ARC. Users can modify a record to create an update effective from the record’s event date or later. A warning is displayed if the user attempts to enter an event date earlier than the current record’s original event date, alerting the user that they must adjust a historic record. Any record can be reversed or replaced by selecting the record and applying the reverse or replacement option. Applying a change to attributes with the same event date as an existing record will result in a replacement update.

Because all registry updates are expected to originate from ARC and be processed immediately, registry and ARC records are expected to be the same except where a registry acknowledgement indicates an update has failed, or a registry notification has not yet been imported for statuses updated by the registry or traders. The reconcile ICPs process synchronises ARC with the registry and is scheduled overnight each night. The process requests an event detail (EDA) file from the registry for events in the last three years. The records in the EDA are matched to ARC based on the registry event ID, which is populated when an acknowledgement file is received for each registry update.

- ARC events with event IDs which match the EDA will be updated to match the registry attributes for the event.
- Registry event IDs not found in ARC will be added.
- ARC events that have not been updated in the registry (and therefore do not have an event ID) will remain unchanged and continue to appear as registry synchronisation errors for resolution.

#### Data validation

Waipa use ARC’s Dashboard for validation, including:

- **New ICPs requiring EDB approval** to identify ICPs where Waipa needs to enter further information and approve the ICP before it can be created with new status on the registry.
- **New ICP, requiring trader approval** to identify ICPs where trader approval is pending before the ICP can move to “ready” status on the registry.
- **ICPs with a pricing change requiring approval** to identify ICPs where pricing approval is pending.
- **Active ICPs with no electrically connected date** to identify ICPs which have moved to “active” status but do not have an initial electrical connection date populated.
- **Ready ICPs with no electrically connected date** to identify ICPs which are at “ready” status which have not yet been electrically connected.
- **ICP that are inactive and ready for decommissioning** to identify ICPs where traders have assigned 1,6 “inactive - ready for decommissioning” status which have not been decommissioned.
- **ICPs with new, ready or new connection in progress status** to identify all new ICPs which have not yet been claimed and moved to 1,12 “inactive - new connection in progress” or 2,0 “active” status.
- **ICPs with any current components failing to synch with registry** to identify any ICP events where event status is “failure” indicating that the registry was unable to be updated.

Selecting any of the dashboard items will display the affected ICPs, and the user can access the data causing the exception and take action as necessary. Waipa monitors the dashboard throughout the day.

The dashboard reports do not have the relevant event date included which makes it difficult to prioritise for those items that are date dependant. This has been requested and is expected to be in available for UAT testing shortly. I recommend that the audit compliance reporting be used in assist with working the ICPs according to priority.

Description	Recommendation	Audited party comment	Remedial action
Registry discrepancy	Use the audit compliance report (AC020) to assist with ICP management until relevant date fields are added to dashboard reporting.	Further training has confirmed the event date is available but not currently sortable. This is underdevelopment. We will run this report until relevant date sorting is added to the dashboard reporting	Identified

As detailed above, Waipa have adopted the material change audit recommendation that identifies ICPs that have been at 1,12 “inactive - new connection in progress” status with no initial electrical connection date for more than 24 months, so these can be followed up with the trader to confirm if they are still required.

Analysis of the list file and audit compliance reports during the audit period found some information that was not complete and accurate due to the lack of visibility in the magiQ system. These were not able to be identified and corrected as soon as practicable. These are recorded in **sections 4.1, 4.2, 4.4 and 4.6.**

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clauses 11.2(1) and 10.6(1)  From: 01-Jun-22 To: 15-May-23	Registry information not complete and accurate in all instances.  Potential impact: Low Actual impact: Low  Audit history: Multiple times  Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate and will move to strong once the dashboard reporting includes dates.  The risk rating is assessed to be low as the number of ICPS affected is small in relation to the number of ICPs overall.		
Actions taken to resolve the issue		Completion date	Remedial action status
The team will run AC020 report weekly until reporting update is made in ARC		Current-already actioned	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
ARC Dashboard reporting update will provide visibility of data inaccuracies		31/08 /23	

## 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

Waipa's data management processes were examined. The list file as of 19 May 2023 and the audit compliance report for the period 1 June 2022 to 15 May 2023 were examined to confirm compliance.

### Audit commentary

Waipa has moved to ARC from April 2023. They use the ARC dashboard, but the relevant event dates are not included for those items that are date dependant. This is in development and is expected to be in production soon. I have recommended in **section 2.1**, that the audit compliance reporting available from the registry is used. This lack of visibility and the lack of visibility in the magiQ system used for the majority of the audit period has resulted in some corrections not being carried out as soon as practicable.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.2 With: Clauses 11.2(2) and 10.6(2) From: 01-Jun-22 To: 15-May-23	Errors not corrected as soon as practicable. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate and will move to strong once the dashboard reporting includes dates. The risk rating is assessed to be low as the number of ICPS affected is small in relation to the number of ICPS overall.		
Actions taken to resolve the issue		Completion date	Remedial action status
The team will run AC020 report weekly until reporting update is made in ARC		Current-already actioned	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
ARC Dashboard reporting update will provide visibility of data inaccuracies		31/08/23	

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

#### Code reference

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

#### Code related audit information

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

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

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

### **Audit observation**

I checked Waipa's process in relation to removal or breakage of seals to ensure compliance.

### **Audit commentary**

Waipa staff engaged in bridging or un-bridging control devices are approved by the Metering Equipment Provider and are working under the relevant Approved Test House. The management of seals is also conducted under the Approved Test House.

### **Audit outcome**

Compliant

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

### **Code reference**

*Clause 11.30A*

### **Code related audit information**

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

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

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

### **Audit observation**

I checked all relevant communication methods to ensure compliance is achieved.

### **Audit commentary**

The website contains a page with the Utilities Disputes contact details. This page is accessed from a link on the home page.

Outbound communications to consumers contain appropriate details. I checked three different types of communication to confirm this.

The IVR messages contains reference to Utilities Disputes as expected.

### **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 process to create ICPS using ARC was checked.

A sample of 20 new connection applications using the typical case methodology, of the 563 created were checked from the point of application through to when the ICP was created.

##### Audit commentary

The process is robust and has good controls in place.

##### Audit outcome

Compliant

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

##### Code reference

Clause 11.5(3)

##### Code related audit information

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

##### Audit observation

The new connection process was examined and is described in detail in **section 3.3**. 20 new connection applications of the 563 ICPS created during the audit period were checked from the point of application through to when the ICP was created. The sample was selected using the diverse characteristics methodology covering nine different participants and across the audit period to confirm the process and controls worked in practice.

##### Audit commentary

The sample of new connections checked were all requested by electricians, builders or customers; therefore, the three business days timeframe is not applicable, but I note that the majority were provided to the applicant within three business days.

##### Audit outcome

Compliant

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

#### Code reference

Clause 11.7

#### Code related audit information

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

#### Audit observation

The new connection process for populating all required registry fields was examined. The list file was examined for all ICPs created during the audit period, and the audit compliance reports for the period 1 June 2022 to 15 May 2023 were evaluated. 563 ICPs were created during that period.

A diverse sample of 20 new connections were chosen covering nine different participants and across the audit period to confirm the process and controls worked in practice.

#### Audit commentary

ARC's ICP creation process ensures that ICP information is provided in accordance with Schedule 11.1.

All the required registry fields are stored within ARC. Preventative controls are in place to help to ensure data is complete and accurate including mandatory fields, field content requirements and character limits which are consistent with the Registry Functional Specification.

The process to create new ICPs within ARC is as follows:

1. Initial address, network and pricing information is populated in ARC awaiting approval.
2. The entered data is reviewed and approved by an appropriately qualified user by selecting EDB approval. ICPs requiring approval are accessible from the new ICPs requiring EDB approval on the dashboard.
3. Following EDB approval, ARC sends:
  - a. an email to the trader requesting their approval, and
  - b. the ICP, address and network updates to the registry, which will create the ICP on the registry with "new" status. The registry acknowledgement and notification files are received by ARC and update the ICP status from blank to "new", and the event statuses to successful. If the registry updates fail, the event status shows as failed and the discrepancy is identified on the dashboard for resolution.
4. Once trader approval is received, a trader approval update is completed in ARC which either:
  - a. confirms trader acceptance if they accept, or
  - b. reverts the ICP to requiring EDB approval so that a new trader can be determined if the trader declines.
5. Following trader approval ARC releases the pricing record to the registry, which updates the registry status from "new" to "ready". The registry acknowledgement file and notification files are received by ARC and update the ICP status from "new" to "ready", and the event statuses to successful. If the registry updates fail the event status shows as failed and the discrepancy is identified on the dashboard for resolution.
6. Once the ICP is "ready", the initial electrical connection date may be populated once the ICP is confirmed to be connected.

Updates to the registry occur on an iterative basis during the day apart from pricing updates that occur overnight. The sample checked confirmed all other information was provided in accordance with Schedule 11.1.

Timeliness of provision of information is discussed in **sections 3.4** and **3.5** below.

### 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 new connection process was examined. The audit compliance report for the period from 1 June 2022 to 15 May 2023 was checked to determine the timeliness of the provision of ICP information for Waipa's new connections.

### Audit commentary

Waipa's process is designed to update ICPs to "ready" prior to electrical connection. Waipa field staff use an app which enables quicker workflows and allows updates from the field to be delivered directly to Waipa office staff upon completion in the field.

Registry updates occur immediately on changes being saved (and approved if necessary) in ARC (excluding pricing updates). ARC's dashboard will be used to identify any unsuccessful updates and monitor new connections to help to ensure that information is entered on time.

All but three ICPs were updated to the "ready" status prior to electrical connection. These three were examined and found:

- ICP 0003201361WA88F was delayed due to human error during the transition to the new system,
- ICP 0053800367WA3AE is a large site with CT metering; Waipa was not advised by the trader that the site had been electrically connected until after the event, and
- ICP 0019440175WA852 appeared to be backdated but was made "ready" prior to electrical connection; the trader incorrectly requested they reverse the "ready" event which then had to be re-entered causing it to appear to be backdated.

### Audit outcome

Non-compliant



Non-compliance	Description		
Audit Ref: 3.4 With: Clauses 7(2) of Schedule 11.1  From: 25-Oct-22 To: 01-May-23	Two ICPs not updated to “ready” prior to electricity being traded.  Potential impact: Low Actual impact: Low Audit history: Three times previously Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as strong as ARC has robust controls to mitigate risk to an acceptable level.  The risk rating is low as the number of ICPs affected is small.		
Actions taken to resolve the issue		Completion date	Remedial action status
ARC ICP Management system was newly implemented at time of audit sample submission. Staff have received further training on its use to ensure they understand the process in the new system.		Current-already actioned	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
ARC ICP Management system recently implemented will identify system-related issues and report these in dashboard reporting		Current-already actioned	

### 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 of the initial electrical connection date was examined. The audit compliance report for the period from 1 June 2022 to 15 May 2023 was checked to determine the timeliness of the provision of ICP information for Waipa’s new connections.

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

#### Audit commentary

Waipa often acts as the metering agent as well as the livening agent, and the majority of ICPs electrically connected are known and updated accordingly. Initial electrical connection dates are entered into ARC and transferred to the registry.

Users can't populate the initial electrical connection date until the ICP has moved to "ready" status. The initial electrical connection date is added to the network record, and the event date is updated to match the initial electrical connection date. Registry updates occur immediately on changes being saved in ARC. ARC's dashboard is used to identify any unsuccessful updates.

563 new ICPs have been created during the audit period. Of those, 396 have been electrically connected. The audit compliance report identified 80 ICPs (20%) where the initial electrical connection date was updated later than 10 business days. This is an improvement on the 157 populated late found in the last audit. A diverse characteristic sample of 20 of these were checked and found:

- ten were identified by ARC after transition as having a missing initial electrical connection date; the initial electrical connection date is correctly recorded but the event date is incorrectly recorded due to a misunderstanding of how event dates were to be recorded provided during training on the ARC system, but this requirement is now well understood by the team,
- three were electrically connected before the requirement to populate the initial electrical connection date came into effect; distributed generation had been added and the user incorrectly also added an initial electrical connection date - two of the dates matched the trader and one was the incorrect date, but this requirement is now well understood by the team,
- three were ICPs where the initial electrical connection date was populated but was stripped out when the distributed generation was added; the event date doesn't match the initial electrical connection due to same misunderstanding detailed above, and
- four were late due to late notification being received from the field.

The accuracy of initial electrical connection date is discussed further in **section 4.6**.

#### **Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: Clause 7(2A) of schedule 11.1 From: 01-Jun-22 To: 15-May-23	80 initial electrical connection dates not updated within ten business days. Potential impact: Low Actual impact: Low Audit history: Multiple times previously Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate and will move to strong once the dashboard reporting includes dates. The risk rating is low this has no direct impact on reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have provided further training to staff in the new ICP Management system to ensure the use of 'event date' is understood by the team.		Current-already actioned	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
ARC ICP Management system recently implemented will identify system-related issues and report these in dashboard reporting. Prioritising on dates is under development in ARC.		Current-already actioned	

### 3.6. Connection of an 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 **section 3.2**.

The registry list as of 19 May 2023 and audit compliance report for 1 June 2022 to 15 May 2023 were examined to determine compliance.

### Audit commentary

As detailed in **section 3.2**, ARC sends an email to the trader requesting their approval, and once trader approval is received, a trader approval update is completed in ARC which either confirms trader acceptance if they accept or reverts the ICP to requiring EDB approval so that a new trader can be determined if the trader declines. Review of the registry list confirmed that a trader is recorded for all “active” and “inactive” ICPs, and a proposed trader is recorded for all “ready” ICPs.

This clause requires that a distributor must not connect an ICP across which unmetered load is shared unless a trader is recorded in the registry as accepting responsibility for the shared unmetered load. Waipa does not allow or intend to allow any new shared unmetered load connections. Review of the registry list confirmed there is no shared unmetered load connected to any Waipa ICP.

### 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 relation to ICPs that are not also NSPs on Waipa’s network. The event detail report for the period from 1 June 2022 to 15 May 2023 was examined.

### Audit commentary

As detailed in **section 3.2**, ARC sends an email to the trader requesting their approval, and once trader approval is received, a trader approval update is completed in ARC which either confirms trader acceptance if they accept or reverts the ICP to requiring EDB approval so that a new trader can be determined if the trader declines. Review of the registry list confirmed that a trader is recorded for all “active” and “inactive” ICPs, and a proposed trader is recorded for all “ready” ICPs.

Analysis of the registry list with history for 1 June 2022 to 15 May 2023 confirmed that all ICPs with “ready” status had a proposed retailer recorded.

### 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 **section 3.2**. The audit compliance report and registry list were examined to determine compliance.

#### Audit commentary

The Waipa processes are robust in relation to this clause as an ICP will not be electrically connected without the agreement from the trader, who in turn has agreement with an MEP for the ICP.

Two ICPs were identified as temporarily electrically connected. These were examined and found the metering and liveness agent are the same person. Waipa's paperwork aligned with the initial electrical connection date recorded on the registry. I have recorded compliance as Waipa's paperwork supported the date recorded but I recommend that Waipa liaise with the trader to confirm when the ICPs were electrically connected.

Description	Recommendation	Audited party comment	Remedial action
Temporary electrical connections	Liaise with the relevant traders for ICPs 0077751051WAD89 and 0002625351WAF3C to confirm the initial electrical connection date.	Initial energy dates are correct	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 trader responsible for ensuring there is a metering installation for the point of connection.*

*The distributor that initiates the connection under Part 11 and connects the NSP must, within 5 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 was examined.

#### Audit commentary

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

#### Audit outcome

Compliant

### 3.10. Electrical connection of NSP that is not point of connection to grid (Clause 10.30A and 10.30B)

#### Code reference

Clause 10.30A and 10.30B

#### 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.*

*A distributor may only electrically connect an NSP if:*

- *each distributor connected to the NSP agrees,*
- *the trader responsible for delivery of submission information has requested the electrical connection,*
- *the metering installations for the NSP are certified and operational metering.*

#### Audit observation

The NSP table was examined.

#### Audit commentary

Waipa has not created any new NSPs 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:*

*yyyyyyyyyyxxccc where:*

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

### Audit observation

The process for the creation of ICPs was examined.

### Audit commentary

ARC creates the ICP creation process using the same methodology as magiQ. It will not allow duplicate ICP numbers to be created. ICPs are created using the following components:

- a four-digit number derived from the street component of the address,
- a unique location number based on the ICP’s location on the street,
- leading zeros added to the street and location number to make ten digits; validation is in place to ensure that the street + location code is unique to prevent duplicate ICP numbers,
- the network short code, and
- a check sum automatically generated by ARC.

Once compliant data is entered the user selects create to create the ICP, and a link to the ICP appears so that initial address and network information can be populated and sent to the registry.

A sample of 20 new ICPs were checked. All were 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 was examined to confirm all “active” and “inactive” ICPs have a single loss category code.

### Audit commentary

Loss factors are determined from the information provided on applications for a new connection.

The registry list was examined and all “active” and “inactive” ICPs have a single loss category code. Each loss category code clearly identifies the relevant loss factor.

### Audit outcome

Compliant

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

### Code reference

Clause 13 Schedule 11.1

### Code related audit information

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

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

### Audit observation

The new connection process was examined. The registry list was examined to determine compliance.

### Audit commentary

The new connection process is described in **section 3.3**.

Examination of the list file confirmed the use of the “new” status is compliant. The timeliness of updates to the registry are discussed in **section 3.4**.

### 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 calendar months or more:*

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

### Audit observation

The management of ICPs at the “new” and “ready” statuses was examined. The list file as of 19 May 2023 and the audit compliance report for 1 June 2022 to 15 May 2023 were examined.



### Audit commentary

A quick report function will return all ICPs at selected statuses contained within the database, and “new” and “ready” ICPs can also be viewed in the dashboard. As detailed in **section 2.1**, the dashboard report does not include the ICP creation date. This is in development and is expected to be in production soon. I recommend in **section 2.1**, that the audit compliance reporting is used in the interim to identify these.

The audit compliance report identified three ICPs at “new” and two ICPs at the “ready” status for more than 24 months. One of the five ICPs has been confirmed as still required but the other four ICPs have not been followed up.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.14 With: Clauses 15 of Schedule 11.1  From: 01-Jun-22 To: 15-May-23	Four of the five ICPs at “new” or “ready” for more than 24 months not confirmed as required.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate as the quick reports do not contain dates to be able to identify those ICPs needing to be confirmed.  The risk rating is low as the number of ICPs affected is small.		
Actions taken to resolve the issue		Completion date	Remedial action status
The Audit Compliance report AC020 will be used as an interim tool to identify ICP creation statuses until ARC dashboard reporting is updated.		Current-already actioned	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Updates to the dashboard reporting to include ICP creation date, and date prioritisation are in development and will immediately allow us identify anomalies in with ICP compliance dates.		31/08/23	

### 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

This requirement was discussed, and the list file was examined.

#### Audit commentary

Waipa has no embedded generation of greater than 10MW connected to its network. There is one embedded generator connected to its network that has its own loss category code of "FT". This is for Fonterra Te Awamutu (0000400202WA9B7) and has a generation capacity of 8MW. Waipa's embedded generation application form has a field to record the capacity to ensure any new generation connections greater than 10MW are identified.

#### Audit outcome

Compliant

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

#### Code reference

10.30C and 10.31C

#### 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

No participant may electrically connect a point of connection without the permission of the reconciliation participant. The electrical connection of streetlight circuits, which are a point of connection, was examined.

#### Audit commentary

The connection of streetlight circuits was discussed. The process for connection of new streetlights follows a similar process to other new connections. A trader acceptance step is included whereby the form is sent to the trader for approval and new circuits are not connected until approved by the trader. The notification of electrical connection of new streetlights is discussed in **section 4.6**.

#### Audit outcome

Compliant

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

#### Code reference

Clause 10.30C and 10.31C

#### Code related audit information

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

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

#### Audit observation

The disconnection process was examined.

#### Audit commentary

Waipa understands their responsibilities in relation to this clause. They only conduct electrical disconnection for safety, and they only conduct disconnection where ICPs are to be decommissioned.

#### Audit outcome

Compliant

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

#### Code reference

Clause 10.33C

#### Code related audit information

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

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

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

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

#### Audit observation

I checked whether Waipa has processes in place for meter bridging and notification.

#### Audit commentary

Bridging of meters is conducted by Waipa at the request of traders. In emergency situations Waipa will restore supply to consumers by bridging meters. In these situations, authorisation is obtained from the trader before proceeding.

#### 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 13<sup>th</sup> business day and be backdated to the date the change took effect.*

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

#### Audit observation

The process to manage ICP and NSP changes were examined. The audit compliance report and event detail report for the period from 1 June 2022 to 15 May 2023 were examined.

#### Audit commentary

ARC's ICP records contain panes displaying status, address, network, and pricing information. Each of these panes has its own event date. Event dates can be manually entered and edited for address, network, pricing, and decommissioned status events. If the event date is more than the maximum allowable business days before the entry date a text "audit note" is required to explain why the update is late. Status updates to "new", "ready", "active", "inactive" and "distributor" status are created on import of the registry notification files at midnight each night, and the registry status event date is applied.

When address, network, pricing, and/or decommissioned status data is entered or changed, the user enters an event date (which is mandatory) and saves the change to that pane. This triggers an automatic registry update for the event type. The event status changes to "awaiting response" until a registry acknowledgement file is received indicating whether the update was a success or failure:

- if successful, the event status changes to "success", and the registry event number is populated, and
- if a failure, the event status changes to "failure" and the reason for the failure is displayed on the ICP's record. The number of failures is also displayed on the ARC Dashboard, and the affected ICP records are reviewed and resolved by clicking on the failure type.

As detailed in **section 2.1**, there are some incorrect event dates for registry updates. This was due to a misunderstanding of how event dates are to be applied during training on the ARC system. This is now well understood by the team.

Analysis of the audit compliance reports found:

Update	Audit period	Late	% Compliance	Average Days
Address	2020	7	98.18	42.37
	2021	5	98.89	9.70
	2022	6	97.71	65.44
	<b>2023</b>	<b>12</b>	<b>94.85</b>	<b>88.05</b>
Price Code	2020	27	89.93	N/A
	2021	386	28.39	N/A
	2022	79	99.57	N/A
	<b>2023</b>	<b>45</b>	<b>N/A</b>	<b>N/A</b>
Status	2020	34	33.33	43.35
	2021	51	35.44	130.62
	2022	20	52.38	37.93
	<b>2023</b>	<b>96</b>	<b>41.10</b>	<b>126.44</b>
Network (excl. new connection & Distributed Generation)	2020	1	N/A	N/A
	2021	3	N/A	N/A
	2022	1	N/A	N/A
	<b>2023</b>	<b>0</b>	<b>100</b>	<b>N/A</b>
Distributed Generation	2020	47	35.62	119.29
	2021	167	21.23	420.39
	2022	95	33.57	65.75
	<b>2023</b>	<b>87</b>	<b>51.40</b>	<b>60.36</b>
NSP Changes	2020	1	N/A	N/A
	2021	0	N/A	N/A
	2022	0	N/A	N/A
	<b>2023</b>	<b>1</b>	<b>0</b>	<b>N/A</b>

#### Address events

The audit compliance report identified 12 late address updates. A typical sample of five of these were examined and found to have been incorrectly backdated. Address changes prior to ARC were made directly on the registry and the event date was often missed causing these to be recorded using the previous event date. Such updates are now made in ARC and ARC writes these to the registry immediately.

#### Pricing Events

There were 587 pricing events during the audit period and 45 ICPs were updated more than three days after the event date. As of 31 December 2021, the code allows distributors to backdate price category codes more than three business days if agreed with the trader. A sample of ten ICPs were examined and found:

- nine were updated within three days of agreement with the trader, and
- one was updated four days after the agreement with the trader; this is recorded as non-compliance below.

### **Decommissioning Status Events**

The audit compliance report identified 96 late decommissioning updates. A sample of 20 most recent late updates using the typical case methodology were examined and found all had missed being updated prior to ARC and were identified during the transition to ARC. This area is expected to improve with ARC.

### **Network Events**

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

The audit compliance report was examined and found no late network updates.

### **Addition of distributed generation**

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

The audit compliance report identified 87 ICPs for WAIP where the distributed generation information was updated later than three business days. A sample made up of the 20 most recent updates using typical characteristics were examined and found:

- ten were due to late notification,
- six were due to being identified via discrepancy checks from which Waipa then chased paperwork, and
- four were missed due to human error.

### **Change of NSP**

The process of NSP assignment is detailed in **section 4.2**. This is a rare occurrence as the Waipa network has two distinct NSPs. The NSP is determined by the transformer it connects to.

One late NSP change was recorded in the audit compliance report. This was examined and found the NSP was incorrectly changed when the solar details were added. This has been corrected and is recorded as non-compliance in **section 4.2**.

### **Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: Clause 8 Schedule 11.1  From: 01-Jun-22 To: 15-May-23	12 late address updates. One late price update of the sample of ten ICPs. 96 late decommissioning status updates. 87 late distributed generation updates. One late NSP change. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong as the controls in ARC will mitigate risk to an acceptable level.  The risk rating is low as the volume of ICPs affected are small.		
Actions taken to resolve the issue		Completion date	Remedial action status
Team have been reminded of the timeliness of registry updates and trained to ensure data input into ARC is accurate. ARC will resolve this issue going forward, as it flags these on our dashboard.		Current – already actioned	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
ARC ICP management system provides additional checks and reporting to help minimise any late notifications within our control		Current – already actioned	

#### 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 accuracy of NSP information was checked using the audit compliance report for the period 1 June 2022 to 15 May 2023.

### Audit commentary

NSPs are derived from the Transformer site, which is based on a network model structure from the GIS system. Transformers have a module, modules have a feeder, and the feeder has an NSP.

Transformer changes may or may not result in a NSP change. Where a transformer changes in the GIS, it is updated in ARC. The material change audit noted that this process was being refined prior to ARC going live and detailed the areas that needed to be addressed. I reviewed this and found that process to update ARC with transformer changes is not yet implemented and there is no notification of such an event needing to be created. This piece of work is scheduled to be developed. As Waipa has two distinct network areas this is not expected to occur however, I have repeated the recommendation to maintain visibility.

Description	Recommendation	Audited party comment	Remedial action
NSP changes	<p>Confirm the process to pass transformer changes from GIS to ARC including:</p> <ul style="list-style-type: none"> <li>• how event dates for changes will be determined; this should be the physical date that the NSP changed,</li> <li>• whether approval of the change is required before the NSP change is sent to the registry,</li> <li>• how often transformer changes will be updated in ARC, and</li> <li>• how changes to transformers, modules and/or feeders which do not result in a change of NSP will be handled, to avoid unnecessary changes being sent to the registry.</li> </ul>	<p>Our new ICP Management System ARC contains validation to ensure that submitted event dates are within regulatory bounds, and requires users to submit an audit note if they submit a non-compliant date. It does not automatically assign or otherwise suggest event dates.</p> <p>In practice, this means that the user inputs the desired event date when they are manually actioning a registry network event.</p> <p>In the event that ARC is updated to automatically send these registry events, we would either accept an event date value from GIS, or set the event date as the date that the data was received.</p> <p>As this event must be manually actioned in ARC, and as only authorised ICP management users can action the event, there is no additional approval stage beyond creating the event itself.</p> <p>If we moved to an approach where these events were automatically created, we would get our system provider to implement a requirement for manual approval.</p> <p>Currently, our ARC installation syncs with GIS every 24 hours to receive any network model changes. This is a configurable scheduled task however, so can be set up to run as frequently/infrequently as required.</p> <p>At present, no changes to transformers, modules, and/or feeders will action a registry event. If these updates were automatically actioned, ARC has the capability to distinguish whether or not a registry an event is required and send only those.</p> <p>Additionally, ARC tracks and displays registry errors. So if a redundant event was sent, users would have visibility that the event failed due to identical data.]</p>	Investigating

As detailed in **section 4.1**, the NSP was incorrectly updated from CBG0111 to TMU0111 when the solar generation was added. These NSPs are in two different balancing areas and have a direct impact on



reconciliation. This was corrected during the audit. This occurred prior to ARC at a time when such updates were manually entered directly on the registry. I recommend that the audit compliance reporting is monitored to identify any such discrepancies.

Description	Recommendation	Audited party comment	Remedial action
NSP discrepancies	Monitor AC020 to identify any discrepancies	Report AC020 will be used to monitor NSP changes and discrepancies	Identified

Late NSP changes are detailed in **section 4.1**.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: Clause 7(1),(4) & (5) Schedule 11.1 From: 29-Jun-22 To: 19-Jun-23	One ICP mapped to wrong NSP and balancing area. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate as development is still required to manage NSP changes effectively. The risk rating is assessed to be low as Waipa operate two distinct network areas and the ICP affected was due to human error and has been corrected.		
Actions taken to resolve the issue		Completion date	Remedial action status
Report AC020 will be used to monitor NSP changes and discrepancies. ICP in question has been corrected.		Current – already actioned	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
[Digital Stock to implement one of two possible solutions based on data available from GIS. Each solution will require manual approval before events are sent.]		31/08/23	

#### 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

The management of customer queries was examined.

##### Audit commentary

Waipa does receive direct requests for ICP identifiers, and these are provided immediately, by looking up the ICP based on information that the customer provides.

##### 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 manage address accuracy was examined and the audit compliance report was analysed to identify ICPs with duplicate addresses or insufficient address information.

##### Audit commentary

ICP addresses are confirmed through Quick Maps and site visits.

ARC suggests values when users begin typing in an address, but address information can be entered into each field separately or overtyped. Field requirements are consistent with the registry.

ARC prevents users saving addresses which have the same property name, unit, number, street, suburb, and town combination as other ICPs. Lot numbers will often be recorded in the first instance for new connections. These are now being checked regularly to identify when street numbers have been assigned and are updated.

The audit compliance report found no ICPs with duplicated address information.

The move from magiQ to ARC has confirmed the findings from the last audit with approximately 620 ICPs with an address that is not readily locatable. Waipa have begun a programme to review these and update these to be readily locatable. A sample of ten were checked and found that some had address details that were recorded in the job notes, but these were not updated at the time. This is an historical issue.

##### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: Clause 2 Schedule 11.1 From: 01-Jun-22 To: 15-May-23	Approximately 620 ICPs with addresses that are not readily locatable. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as strong going forward as the controls in ARC will mitigate risk to an acceptable level. The audit risk rating is low as this has no direct impact on reconciliation.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have done desk-based work to identify addresses and duplicates, however many of the ICPs identified require site visits which we intend to work through as resourcing allows. We will also work to identify ICPs where address information has been recorded correctly but in a different field of the record to improve accuracy of location.		Current – already actioned	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
[ARC ICP Management won't allow duplicate addresses and makes all the required registry address fields compulsory so incomplete addresses will be minimised. ]		Current – already actioned	

#### 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 20 new connections examined.

### Audit commentary

This requirement is well understood by personnel involved in livening and is included in Waipa's Network Connection Standards. The new connections form requires contractors to identify the 'individual service line and connection point to the Network pole/pillar' for all new ICPs and document it on the application for new connection form.

### 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 one 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. I checked all registry fields for obvious discrepancies using the audit compliance report for the period from 1 June 2022 to 15 May 2023.

#### **Audit commentary**

All ICP information was checked and confirmed compliant unless discussed below:

#### **Chargeable Capacity**

As recorded in previous audits, 73 ICPs have chargeable capacity recorded. The chargeable capacity is calculated from the retailer billing received on the 4<sup>th</sup> of the following month and therefore the chargeable capacity should not be recorded on the registry. Waipa is working to record this information elsewhere and will then remove this from the registry. This is recorded as non-compliance.

## Distributed Generation

Waipa requires customers or their agent to submit an application from their website or via their service provider for any distributed generation. The application is reviewed by the planning team and once cleared the connection cost is invoiced. Once payment has been received the installation can go ahead. This includes a check that export/import metering is installed on their application form and confirmation from the retailer that they will accept the generation. The applicant is asked to provide paperwork on completion of installation and Certificate of Compliance (COC) and Record of Inspection (ROI). As noted in **section 4.1**, these details can be slow in being provided.

Distributed generation details for each application are entered into ARC. Once all records are entered and the distributed generation is connected, the “send registry update” box is checked and the connection date for the distributed generation is entered. This creates a registry event with the total capacity for the applications, the main generation fuel and installation type B (both). If any of the details are incorrect, they can be overtyped within the main network record screen. It appears that some of the distributed generation values have doubled in the transition from magiQ to ARC as identified from the sample checked below. I recommend that this is investigated and any affected ICPs are corrected.

Description	Recommendation	Audited party comment	Remedial action
Distributed generation	Review all generation capacities and confirm they have not doubled in the transition from magiQ to ARC.	Have corrected discrepancies that were raised in the audit as well as others found in the report. Further investigation will be completed to identify other discrepancies. Noting that the Registry only allows for one source of DG to be recorded per ICP. If an ICP has multiple sources (more than 1), ARC will combine the capacity values and submit one DG record with combined capacity and fuel type of greatest capacity.	Identified

The previous audit recommended that two additional checks are conducted for all distributed generation discrepancies.

1. The high-risk database at <https://portal.worksafe.govt.nz/search-highrisk/> should be checked to see if there is a record of generation being installed.
2. The EIEP 1 and 3 files should be checked to identify ICPs where the trader has generation recorded but Waipa does not.

Both of these have been implemented but due to staff sickness the EIEP1 and 3 files haven't been run since March 2023, but this is expected to be restarted ASAP.

The audit compliance report identified 30 active ICPs where the trader's profile indicates distributed generation, but distributed generation details were not recorded by Waipa. A sample of ten ICPs using the typical characteristics were checked and found:

- four ICPs installations are in progress,
- no application has been received for three ICPs and there was distributed generation indicated in the last check of the EIEP1 and 3 files; these will continue to be checked, and
- three have since had installation confirmed and have been updated on the registry,

The list file was analysed and identified 75 ICPs where Waipa has distributed generation recorded, but the trader's profile does not indicate that distributed generation is present. 57 of these ICPs are with Mercury. It was identified in the Mercury Energy reconciliation participant audit for those with the MEEN participant code that the profile is incorrectly recorded as RPS. The remaining 18 ICPs are with other trader codes were examined and found:

- 14 were confirmed to have generation installed and two were found to have the incorrect generation capacity recorded:
  - ICP 0007692010WACE4 - capacity was doubled in the move from magiQ to ARC, and
  - ICP 0007705366WACFD - capacity was recorded as 110.5kW due to a typo and has been corrected to 11.5kW.
- distributed generation has been confirmed as removed for two ICPs and the registry has been updated accordingly, and
- two ICPs (0001132003WA6F3 and 0000315301WA6B9) are still being investigated as it is unclear if the generation is recorded against the correct ICPs.

### Initial Electrical Connection Date

The audit compliance report identified eight ICPs with discrepancies between the initial electrical connection date and trader active date or metering certification. These were examined and found:

Exception	Qty	Qty incorrect	Comment
IECD = active date and IECD ≠ MCD	2		ICP 0002625351WAF3C was potentially temporarily electrically connected as the meter certification is earlier than the first active and initial electrical connection date. This discussed in <b>section 3.8</b> .  The meter was certified one day after the electrical connection date for ICP 0053800367WA3AE.
IECD ≠ active date and IECD = MCD	0		
IECD ≠ active date and MCD	6	4	ICP 0077751051WAD89 has a meter certification date that is earlier than the initial electrical connection date and is discussed in <b>section 3.8</b> .  The remaining five ICPs were examined and found: <ul style="list-style-type: none"> <li>• that the incorrect initial electrical connection date was recorded in four instances due to human error; these are being corrected, and</li> <li>• ICP 0000313802WACB7 was confirmed to be correct and the first active date is the permanent supply date and has been incorrectly recorded by the trader.</li> </ul>
<b>Total</b>	<b>60</b>	<b>4</b>	

The audit compliance report identified nine ICPs where the initial electrical connection date is populated but the ICP is not "active". These were reviewed and all have since been made "active" by the trader for the same date as the initial electrical connection date.

The timeliness of provision of information on initial electrical connection date is discussed in **section 3.5**.

## Unmetered Load

Waipa allows standard unmetered load but does not allow shared unmetered connections to their network. ARC stores the distributor unmetered load in three fields: watts, hours per day and description. These are concatenated with a “;” delimiter when they are sent to the registry, ensuring that the recommended format is applied.

Review of the registry list files confirmed that there was no shared unmetered load, and one new unmetered load was connected during the audit period. The new connection for ICP 0032190051WA780 was completed prior to the move ARC and the unmetered load details have not been populated. This is being corrected.

The list file was examined and found 130 active ICPs where the trader indicates there is unmetered load present. Waipa has unmetered load details for 87 of these ICPs. I compared the kWh value where the description allowed (63 ICPs). The values all matched the traders within +/- 0.1 kWh.

## DUML

As detailed in **section 3.16**, new streetlight connections require an application to Waipa to connect new load. The bucket ICP is required to be provided as part of this application. The trader is requested to accept the new load. The notification of when the load is electrically connected is not always reaching the correct party and I recommend that this process is reviewed.

Description	Recommendation	Audited party comment	Remedial action
Electrical connection of new streetlights	Review process of notification of electrical connection of new streetlights.	Once streetlights are connected, we notify the relevant council. We will review this process with a focus on ensuring accurate notifications are being sent to Councils.	Identified

DUML audits for streetlight databases on Waipa’s network were reviewed to determine whether there were any issues relating to distributor unmetered load records.

Database	Last audit date	Comment
Waikato District Council	18 November 2022	Recommendation for the trader to review network liveness notifications with Waipa.
Otorohanga District Council	25 November 2022	No issues noted.
Waka Kotahi Waikato	2 February 2023	Recommendation for the trader to review network liveness notifications with Waipa.

## Audit outcome

Non-compliant



Non-compliance	Description		
Audit Ref: 4.6 With: Clause 7(1) Schedule 11.1  From: 01-Jun-22 To: 15-May-23	Chargeable capacity incorrectly recorded on the registry when it is being derived from the retailer billing files.  Two ICPs with the incorrect distributed generation details recorded of the sample of 28 ICPs checked.  Four ICPs with an incorrect initial electrical connection date populated.  One ICP with a "known" unmetered load not recorded on the registry.  Potential impact: Low  Actual impact: Low  Audit history: Multiple times  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as strong with ARC in place as controls will mitigate risk to an acceptable level.  The risk rating is assessed to be low as data accuracy overall is high.		
Actions taken to resolve the issue		Completion date	Remedial action status
Capacities have been amended and event stacking has been reversed. ICP 0001132003WA6F3 is still undergoing investigation to see if generation is recorded on the correct ICP.		31/08/2023	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Monitoring the High-Risk database as well as checking the report EIEP1 & 3 to pick up any discrepancies. ARC has a separate field for separate storage of Chargeable Capacity values, which will not be sent up to the registry.		Ongoing and actioned.	

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

##### Code reference

Clause 7(3) Schedule 11.1

##### Code related audit information

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

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

### Audit observation

The new connection process was examined in detail. The audit compliance report for the period 1 June 2022 to 15 May 2023 was checked to determine if any price codes were assigned later than ten business days after trading commenced.

### Audit commentary

Waipa can confirm these details in most cases prior to electrical connection of the ICP. If any changes are required these are updated as soon as possible. The audit compliance report identified ICP 0053800367WA3AE as having a late price category code assigned. This was a correction to an ICP start date and not a change to a price category code, so the price category code was populated within ten days of the trading of electricity commenced and is compliant.

### 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 was reviewed to determine compliance.

### Audit commentary

Waipa do not populate GPS co-ordinates.

### 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

I examined the new connections process and reviewed the registry list file from 1 June 2022 to 15 May 2023 to identify that all ICPs at “ready” status had a nominated trader and a single price category recorded.

### Audit commentary

Waipa’s new connections process as noted in **section 3.2** ensures that a retailer has taken responsibility for ICPs before the status is changed from the “new” status to the “ready” status. All ICPs with the “ready” status have an expected retailer populated.

ARC will only allow one price category; therefore, the requirement to ensure that an ICP has a single price category will always be met. This was confirmed by checking the list file. The application form requires the Price Category to be specified.

The audit compliance report identified three ICPs at “new” and two ICPs at the “ready” status for more than 24 months. This is discussed further 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

The management of ICPs in relation to the use of the “distributor” status was examined. The list file and event detail report for the period from for 1 June 2022 to 15 May 2023 were examined in relation to the use of the “distributor” status.

### Audit commentary

Waipa’s list file shows two ICPs with an ICP status of “distributor”, and these are points of connection between embedded networks and the Waipa network.

Waipa does not have any shared unmetered load ICPs and has no intention of allowing new shared unmetered load ICPs.

### 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 management of ICPs in relation to the use of the “decommissioned” status was examined. The list file and event detail report for the period from for 1 June 2022 to 15 May 2023 were examined in relation to the use of the “decommissioned” status.

##### Audit commentary

Requests for decommissioning are mostly received from the property owner and sometimes directly from traders. Once the ICP’s status is updated to “inactive - ready for decommissioning” by the trader, Waipa completes a site verification to confirm the ICP is decommissioned. Waipa then updates the ICP status to “decommissioned”, enters the required status reason from a drop-down list, and selects the decommissioning event date in ARC. The update is sent to the registry as soon as it is saved. ICPs at “ready for decommissioning” statuses are identified and monitored using the ARC dashboard. As noted in **section 2.1**, the date of the ICP having been made “ready for decommissioning” is being added to the dashboard.

The material change audit identified that ICPs could not be moved from “new” or “distributor” status to “decommissioned - set up in error”. I reviewed the event detail report and confirmed that this is no longer the case and ICPs can be moved from the “new” or “distributor” status to “decommissioned - set up in error”.

Review of the registry list showed no ICPs were pending decommissioning.

A sample of ten decommissioned ICPs were checked and confirmed that the correct event date had been recorded.

##### 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 two 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**

Waipa keeps the price category table up to date and 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

No new loss category codes were created 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 two 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 on 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

Waipa does not have any loss category codes with more than one loss factor. No loss factors have been updated during the audit period.

The loss factor review process is discussed in **section 8.1**.

#### 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.*

*The notice provided to the reconciliation manager must be provided no later than 30 days prior to the intended date of creation or decommissioning.*

*If the intended date of creation or decommissioning changes the distributor must provide an updated notice as soon as possible.*

*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 on the registry was examined.

#### Audit commentary

No NSPs have been created or decommissioned 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 one month before the NSP is electrically connected or the ICP is transferred.*

### Audit observation

The NSP table on the registry was examined.

### Audit commentary

No new NSPs were created 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 on the registry was examined.

### Audit commentary

No new NSPs were created during the audit period.

### 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 examined.

##### Audit commentary

No new NSPs were created during the audit period.

##### Audit outcome

Compliant

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

##### Code reference

Clause 24(2) and (3) Schedule 11.1

##### Code related audit information

*The distributor must give written notice to the reconciliation manager of any change to balancing areas associated with an NSP supplying the distributor's network. The notification must specify the date and trading period from which the change takes effect and be given no later than 3 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 one 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

Waipa 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 NSP supply point table was examined.

**Audit commentary**

The NSP supply point table was reviewed, and it showed that WEL Networks is responsible for the interconnection point TPH0111, so Waipa has no responsibility for the meter certification for the interconnection point.

**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 the reconciliation participant for the NSP (Clause 10.25(2)(b)); and*
- *no later than 5 business days after the date of certification of each metering installation, advise the reconciliation manager of*
  - a) *the MEP for the NSP (Clause 10.25(2)(c)(i)); and*
  - b) *the NSP of the certification expiry date (Clause 10.25(2)(c)(ii)).*

**Audit observation**

The NSP supply point table was reviewed.

### **Audit commentary**

Waipa have not connected 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 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 supply point table was reviewed.

### **Audit commentary**

Waipa 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**

Waipa is not responsible for any embedded gate meters.

### **Audit outcome**

Compliant

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

### Code reference

*Clauses 5 and 8 Schedule 11.2*

### Code related audit information

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

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

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

### Audit observation

The NSP supply point table was reviewed.

### Audit commentary

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

### Audit outcome

Compliant

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

### Code reference

*Clause 6 Schedule 11.2*

### Code related audit information

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

### Audit observation

The NSP supply point table was reviewed.

### Audit commentary

Waipa 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 file was reviewed to identify any ICPs with shared unmetered load connected.

#### Audit commentary

Waipa does not intend to allow any new shared unmetered load connections. Review of a registry list confirmed there is no shared unmetered load connected to any Waipa ICPs. Review of the streetlight audit reports confirmed no shared unmetered load has been identified.

#### 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 file was reviewed to identify any ICPs with shared unmetered load connected.

#### Audit commentary

As detailed in **section 7.1** above, Waipa has no shared unmetered load on their network.

#### 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 Waipa’s process and compliance against the guidelines recommended thresholds. I assessed the loss factor accuracy looking for any rolling UFE that was greater than +/- 1% (as indicated in the guideline).

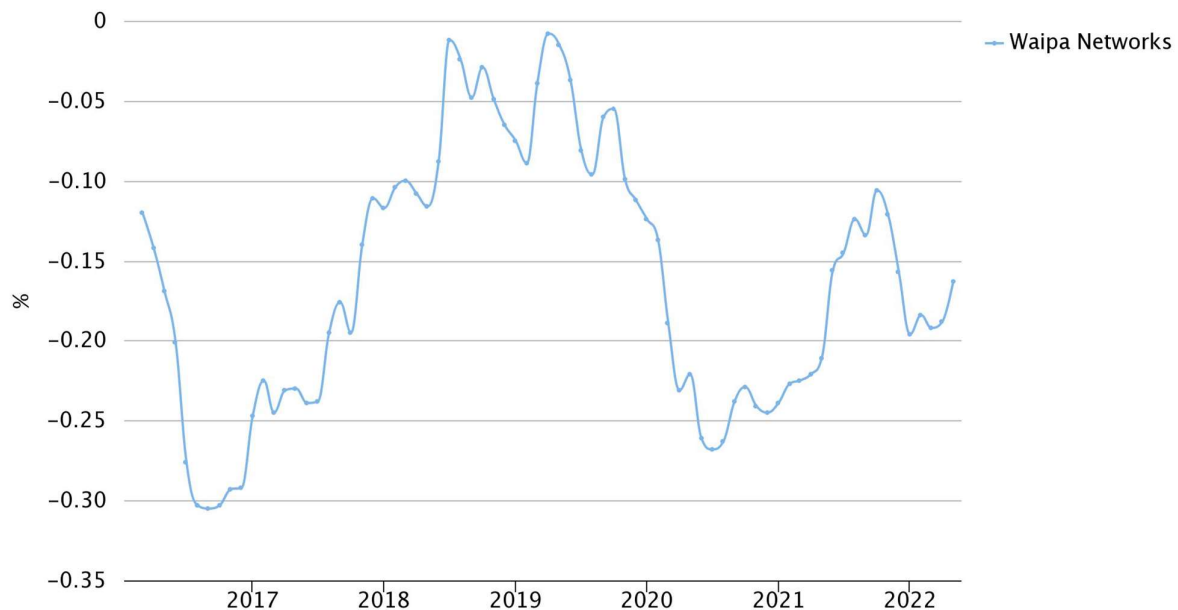
#### Audit commentary

Changes to loss factors are detailed in **section 5** of this report.

Waipa’s management of loss factors has not changed during the audit period. Waipa reviews loss factors annually and provided information on their methodology to calculate loss factors, and their latest loss factor review calculations.

Due to staffing changes the methodology was not provided to the Electricity Authority as recommended in the “Guidelines on the calculation and use of loss factors for reconciliation purposes”. Waipa expect this to be provided to the Electricity Authority at the next due date which is due in March 2024.

The UFE graph from the EMI website details the reconciliation losses (UFE) which indicate they are tracking within the +/- 1% threshold:



**Audit outcome**

Compliant



## CONCLUSION

Waipa replaced magiQ with ARC in April 2023. A material change audit was completed prior to deployment. I have considered the findings in both this and the last audit in this audit.

ARC is being used for:

- **ICP information management:** the core module manages ICP information and validates against the registry,
- **Registry communications:** the ICP manager module creates and transmits all new and changed ICP information to the registry, and
- **Billing:** the billing module receives trader data and creates billing files; the billing process is outside of the scope of this audit.

The ARC system provides a much-improved visibility for ICP management and robust controls. The dashboard reporting is being improved as it currently does not include relevant dates to be easily able to prioritise management of ICPs. This is expected to be in production soon. I recommend that the audit compliance reporting is used in the interim.

Waipa is progressing the second phase to implement ARC's faults module which creates, dispatches, and manages faults. This module is outside of the scope of this audit.

A critical member of the team has had to take time out due to illness and this has caused some processes to be paused while resources are reallocated. This has had only a minor effect on the overall result.

This audit found nine non-compliances and makes five recommendations. The overall compliance level has improved, and this is reflected in the future risk rating score reducing from 21 to 13. The next audit frequency table indicates that the next audit be due in 12 months. I have considered this in conjunction with Waipa's comments and agree with this recommendation.

## PARTICIPANT RESPONSE

Waipa have reviewed this audit and their comments are contained in the body of the report. No further comments were provided.