

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT



For

WAIPA NETWORKS LIMITED
ARC SYSTEM MATERIAL CHANGE

NZBN:9429038884085

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EXECUTIVE SUMMARY

The **Waipa Networks Ltd (Waipa)** intends to migrate from the magiQ system to ARC by the end of 2022. The system provider is Digital Stock.

magiQ is currently used to manage ICP information. The interface between magiQ and the registry is largely automated, with event reversals, unmetered load fields, and loss category codes apart from the 400V value updated manually on the registry. Event notifications are manually reviewed.

Waipa plans to replace magiQ with ARC in late 2022. ARC will initially be 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 considering a second phase to implement ARC's faults module which creates, dispatches, and manages faults.

The change to ARC is expected to improve efficiency, timeliness, and accuracy because the interface to the registry will be fully automated with all distributor updates originating from ARC, and improved monitoring.

Clause 8(1) of Schedule 15.1 requires that if a distributor intends to make a "material" change to any certified facilities, processes, or procedures then the changes must be subject to an audit prior to the change taking place. This audit was therefore performed at the request of Waipa so that it can be supplied to the Electricity Authority to satisfy the requirements of Clause 8(1). The audit was conducted in accordance with the Guideline for Distributor Audits V7.2.

Compliance was assessed for all areas which could be impacted by the material change. Four recommendations were made, which have been adopted or will be adopted after go live. Waipa's next audit due date is 30 July 2023. Given the significance of this material change and that it is expected to go live by the end of 2022, I believe that the current next audit date is appropriate.

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
Future Risk Rating						-	

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	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 ensure that all new ICPs which have not yet been moved to active are monitored.	Adopted
NSP changes	4.2	Confirm the process to pass transformer changes from GIS to ARC including: <ul style="list-style-type: none"> how event dates for changes will be determined; this should be the physical date that the NSP changed, whether approval of the change is required before the NSP change is sent to the registry, how often transformer changes will be updated in ARC, 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. 	To be adopted
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.	Adopted
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.	Adopted

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.

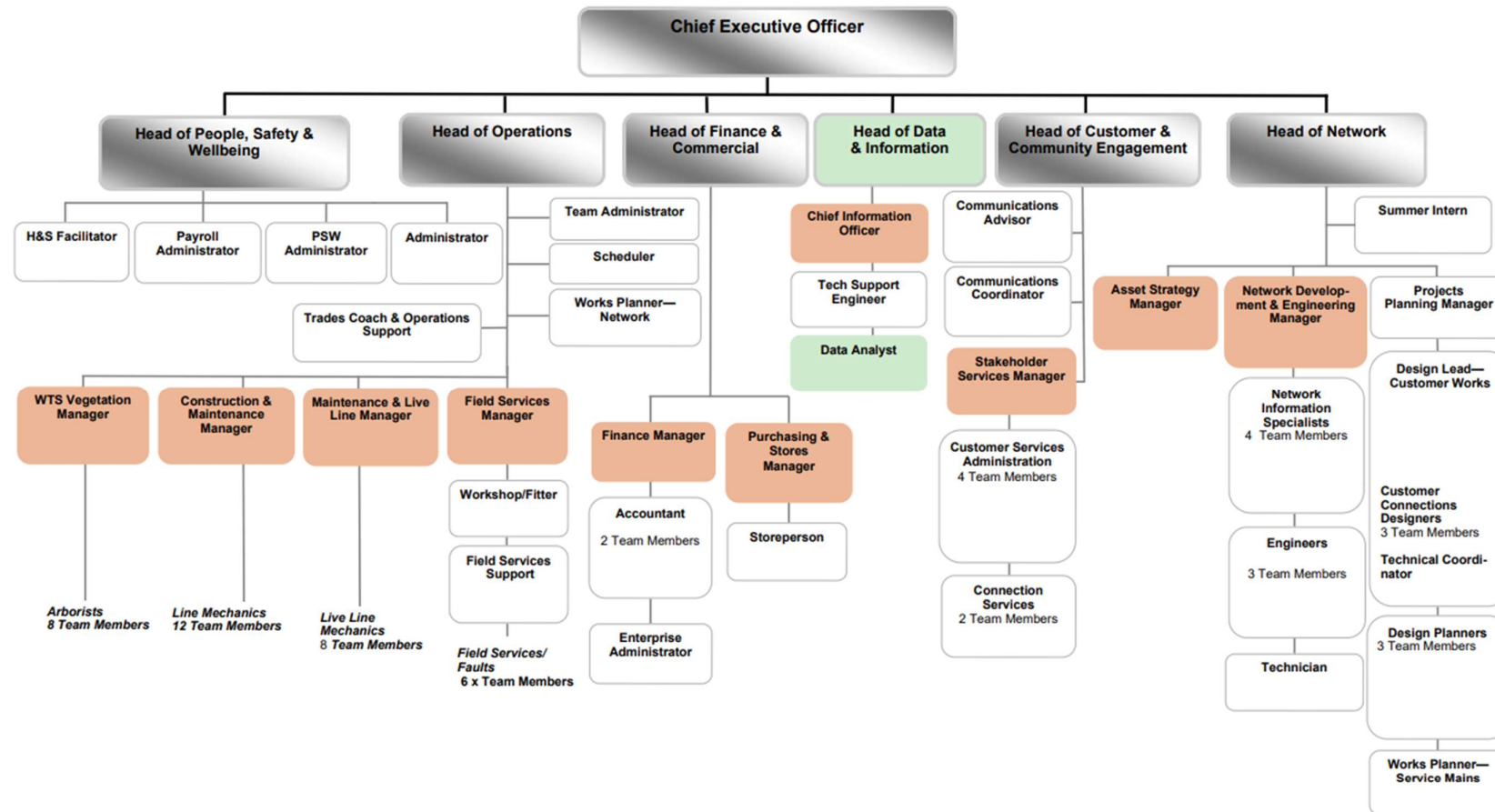
Audit observation

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



New Role

1.3. Persons involved in this audit

Auditor:

Name	Role	Company
Tara Gannon	Auditor	Veritek Limited

Personnel assisting in this audit were:

Name	Role	Company
Kerry Watson	Stakeholder Services Manager	Waipa Networks
Will Finlayson	Chief Technology Officer	Digital Stock
Jack Kelly	Project Manager	Digital Stock

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 were 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.

1.6. Hardware and Software

magiQ

Waipa currently uses magiQ, formerly Napier Computer Systems (NCS) as their hardware and software supplier.

magiQ is currently used to manage ICP information. The interface between magiQ and the registry is largely automated, with event reversals, unmetered load fields, and loss category codes apart from the 400V value updated manually on the registry. Event notifications are manually reviewed.

The magiQ database is backed up to another server in the Waipa complex and a cloud based real time back up service is in place.

ARC

Waipa plans to replace magiQ with ARC in late 2022. ARC will initially be 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 considering a second phase to implement ARC's faults module which creates, dispatches, and manages faults.

Access to ARC will be restricted using logins and passwords, and access to functionality within ARC will be 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

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

1.8. ICP and NSP Data

The table below lists the relevant NSPs, and their associated balancing areas. Waipa decommissioned the embedded solar power-based network within their network, LAK0111, during the audit period, the ICPs were transferred to NSP CBG0111.

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of active ICPs
WAIP	CBG0111	Cambridge			CBG0111WAIPG	G	1/5/2008	13,469
WAIP	TMU0111	Te Awamutu			TMU0111WAIPG	G	1/7/2016	14,925
WAIP	TPH0111	Te Pahu	TMU0111	WAIP	TMU0111WAIPG	I	2/11/2019	-

There are two embedded networks connected to the Cambridge NSP.

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date
TENC	TCO0011	95 SWAYNE ROAD CAMBRIDGE	CBG0111	WAIP	TCO0011TENCE	E	16/04/2018
WAIK	OAK0111	OAKLANDS	CBG0111	WAIP	OAK0111WAIKE	E	1/5/2008

Waipa's ICPs are summarised by status below:

Status	Number of ICPs May 2022	Number of ICPs May 2021	Number of ICPs May 2020	Number of ICPs May 2019	Number of ICPs 2018
New (999,0)	94	56	40	34	36
Ready (0,0)	13	13	19	7	15
Active (2,0)	28,394	27,807	27,312	26,923	26,471
Distributor (888,0)	2	3	4	5	5
Inactive – new connection in progress (1,12)	62	53	23	26	61
Inactive – electrically disconnected vacant property (1,4)	415	397	384	374	371
Inactive – electrically disconnected remotely by AMI meter (1,7)	57	50	27	32	31
Inactive – electrically disconnected at pole fuse (1,8)	8	7	6	5	5
Inactive – electrically disconnected due to meter disconnected (1,9)	18	18	16	12	7
Inactive – electrically disconnected at meter box fuse (1,10)	-	-	1	1	-
Inactive – electrically disconnected at meter box switch (1,11)	-	-	-	-	-
Inactive – electrically disconnected ready for decommissioning (1,6)	80	42	56	42	24
Inactive – reconciled elsewhere (1,5)	-	-	-	-	-
Decommissioned (3)	2,889	2,838	2,744	2,671	2,594

1.9. Authorisation Received

A letter of authorisation was received.

1.10. Scope of Audit

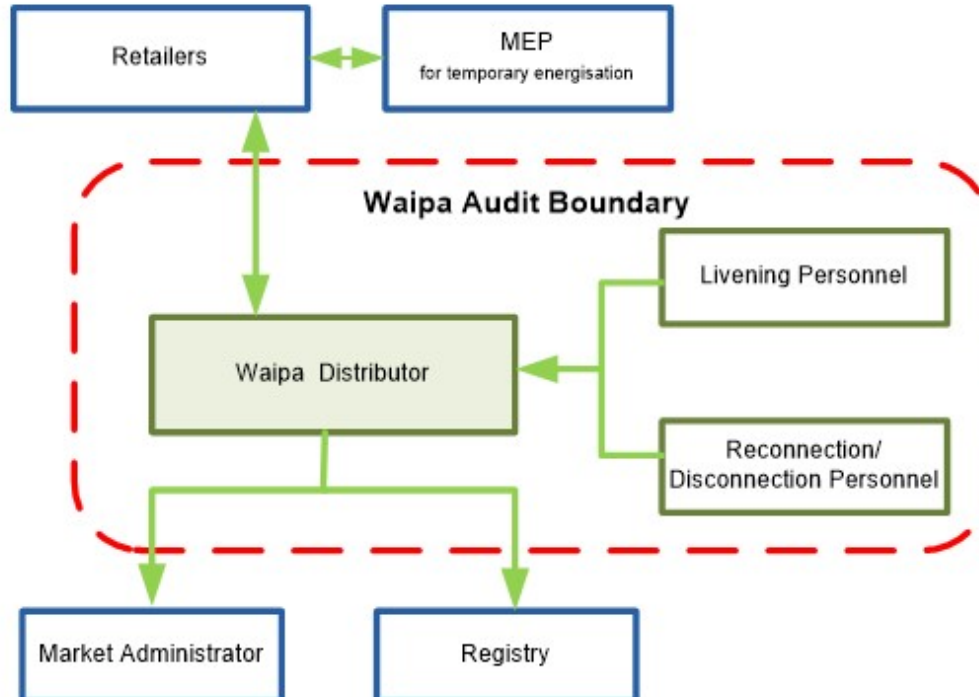
Waipa intends to migrate from the magiQ system to ARC by the end of 2022. ARC will initially be used for:

- **ICP information management:** the core module will manage ICP information and allow it to be validated against the registry,
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- **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 considering a second phase to implement ARC's faults module which creates, dispatches, and manages faults.

Clause 8(1) of Schedule 15.1 requires that if a distributor intends to make a "material" change to any certified facilities, processes, or procedures then the changes must be subject to an audit prior to the change taking place. This audit was therefore performed at the request of Waipa so that it can be supplied to the Electricity Authority to satisfy the requirements of Clause 8(1). The audit was conducted in accordance with the Guideline for Distributor Audits V7.2.

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 June 2022 by Brett Piskulic of Veritek Limited. The current status of the non-compliances and recommendations relevant to the scope of this audit is listed below.

Table of Non-Compliance

Subject	Section	Clause	Non-Compliance	Status
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.	Future compliance is expected to improve with the implementation of ARC, and compliance will be assessed during the first audit following system implementation.
Requirement to correct errors	2.2	11.2(2) and 10.6(2)	Errors not corrected as soon as practicable.	
Provision of ICP Information to the registry manager	3.3	11.7	One ICP electrically connected but the initial electrical connection date had not been populated.	
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.	
Timeliness of initial electrical connection date	3.5	7(2A) of Schedule 11.1	157 initial electrical connection dates not updated within ten business days.	
Timeliness of registry updates	4.1	8 of schedule 11.1	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.	
ICP location address	4.4	2 & 7 (1)(a) of schedule 11.1	668 ICPs with addresses that are not readily locatable.	
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. 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.	
Provision of information to registry after the trading of electricity at the ICP commences	4.7	7(3) Schedule 11.1	Four late price code updates.	

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.	The recommendation will not be implemented as part of this material change, but future implementation of a new Billing System will enable more efficient review of EIEP 1 and 3 files. High-risk database checks are expected to be completed once tasks have been reviewed and reallocated.

2. OPERATIONAL INFRASTRUCTURE

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

Code reference

Clause 11.2(1) and 10.6(1)

Code related audit information

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

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

Audit observation

I considered whether the changes were likely to result in incomplete, incorrect, or misleading information. I viewed documentation and test results and walked through processes in the test system.

Audit commentary

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 will be populated.
- If a failure, the event status will change to "failure" and the reason for the failure will be 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 will display 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 expected to be 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 will 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. I recommend that 1,12 inactive new connection in progress ICPs are also tracked using this list.
- **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 awaiting 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 then can access the data causing the exception and take action as necessary. Waipa intends to review the Dashboard items daily to weekly and will finalise the schedule during user training.

Description	Recommendation	Audited party comment	Remedial action
Ready ICPs with no electrically connected date	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 ensure that all new ICPs which have not yet been moved to active are monitored.	This has now been included in the dashboard.	Adopted

Quick reports are also available for all ICPs with distributed generation records.

Waipa plans to continue with their existing processes to review the AC020 distributor compliance reports weekly to fortnightly. Digital Stock (the system provider) will monitor the audit compliance reports for all participating distributors and will use the information to inform future system compliance improvements.

System migration process

Initial data will be populated in ARC from the registry for all Waipa Network historic records. Once this is complete, the regular reconcile ICPs process will begin to be run which will ensure that ARC and the registry are consistent. magiQ will be required to provide outage notifications and will continue to run in parallel for several months.

There are no uncleared system defects remaining.

Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

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

I considered whether the changes were likely to result in incorrect or late information. I viewed documentation and test results and walked through processes in the test system.

Audit commentary

Waipa will continue to use the audit compliance report for validation weekly to fortnightly, and discrepancies found will be assigned to team members to investigate and action changes. The ARC Dashboard will also be used to find and correct errors as discussed in **section 2.1**.

Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

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

Audit observation

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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. I viewed documentation and test results and walked through processes in the test system.

Audit commentary

The process is robust and has good controls in place.

Future compliance is not expected to be affected by the material change.

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 three 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.

Audit commentary

The new connection application process will not change as part of this material change. New connection data will be entered into ARC instead of magiQ and transferred to the registry.

Future compliance is not expected to be affected by the material change.

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 process to create ICPs using ARC was checked. I viewed documentation and test results and walked through processes in the test system.

Audit commentary

ARC's ICP creation process will ensure 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 and provide information to the registry is as follows:

1. A compliant ICP number will be created within ARC as described in **section 3.11** and will have a blank status recorded.
2. Initial address, network and pricing information will be populated in ARC awaiting approval.
3. The entered data will be reviewed and approved by an appropriately qualified user by selecting EDB approval. ICPs requiring approval will be accessible from the new ICPs requiring EDB approval on the dashboard.
4. Following EDB approval, ARC will:
 - a. send an email to the trader requesting their approval, and
 - b. send 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 will be 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 will show as failed and the discrepancy will be identified on the dashboard for resolution.
5. 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.
6. Following trader approval ARC will release the pricing record to the registry, which will update the registry status from new to ready. The registry acknowledgement file and notification files will be 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 will show as failed and the discrepancy will be identified on the dashboard for resolution.
7. Once the ICP is ready, the initial electrical connection date may be populated once the ICP is confirmed to be connected.

Timeliness depends on people and processes and will be checked during the first audit after go-live. Future compliance is not expected to be affected by the material change.

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

I considered whether the migration to ARC was likely to result in late provision of registry information. I viewed documentation and test results and walked through processes in the test system.

Audit commentary

The distributor must provide to the registry the information listed in clause 7(2) of schedule 11.1 as soon as practicable, and before electricity is traded at the ICP.

Registry updates occur immediately on changes being saved (and approved if necessary) in ARC. 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.

Timeliness depends on people and processes and will be checked during the first audit after go-live. Future compliance is not expected to be affected by the material change.

Audit outcome

Non-compliant

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

Code reference

Clause 7(2A) of Schedule 11.1

Code related audit information

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

Audit observation

I considered whether the migration to ARC was likely to result in late provision of initial electrical connection dates. I viewed process documentation and test results and walked through the new connection process.

Audit commentary

The process to determine initial electrical connection dates will not change as part of this material change. 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 will be entered into ARC instead of magiQ and transferred to the registry.

Users will not be able to populate the initial electrical connection date until the ICP has moved to ready status. The initial electrical connection date will be added to the network record, and the event date will be updated to match the initial electrical connection date. Registry updates occur immediately on changes being saved in ARC. 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.

Timeliness depends on people and processes and will be checked during the first audit after go-live. Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

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. I viewed process documentation and test results and walked through the new connection process.

Audit commentary

The new connection process ensures that trader acceptance is gained prior to initial electrical connection.

Once the initial ICP details are approved allowing the ICP to be created at new status, ARC will send an email to the trader requesting their approval. 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 and contacted if the trader declines.

Following trader approval ARC will release the pricing record to the registry, which will update the registry status from new to ready. The ICP can only be connected once it is at ready status.

Waipa does not allow or intend to allow any new shared unmetered load connections.

Future compliance is not expected to be affected by the material change.

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. I viewed process documentation and test results and walked through the new connection process.

Audit commentary

The new connection process ensures that trader acceptance is gained prior to initial electrical connection as described in **section 3.6**. ICPs cannot move to ready status until trader approval is received.

Waipa does not allow or intend to allow any new shared unmetered load connections.

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

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

Audit observation

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

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

Code reference

Clause 1(1) Schedule 11.1

Code related audit information

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

xxxxxxxxxxccc where:

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

Audit observation

The process for the creation of ICPs was examined. I viewed process documentation and test results and walked through the process to create an ICP number.

Audit commentary

ARC will mirror the existing ICP creation process and will not allow duplicate ICP numbers to be created. ICPs will be created from 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 will appear so that initial address and network information can be populated and sent to the registry.

Future compliance is not expected to be affected by the material change.

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 will continue to be determined from the information provided on applications for a new connection.

Future compliance is not expected to be affected by the material change.

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 process for the creation of ICPs was examined. I viewed process documentation and test results and walked through the new connection process.

Audit commentary

ICPs are created at the new status upon receipt of an application for network connection from an electrician, retailer, a customer, or their agent. ICPs move to ready status once a trader has accepted responsibility, and the ICP is ready to be connected.

Future compliance is not expected to be affected by the material change.

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. I viewed process documentation and test results and walked through the new connection process.

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. New and ready ICPs will be followed up with the proposed trader at least every 24 months in accordance with Clause 15 of Schedule 11.1.

Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

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

Code reference

Clause 7(6) Schedule 11.1

Code related audit information

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

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

Audit observation

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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 3 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 8 business days after the change takes effect.

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

In the case of decommissioning an ICP, notification must be given by the later of 3 business days after the registry manager has advised the distributor that the ICP is ready to be decommissioned, or 3 business days after the distributor has decommissioned the ICP.

Audit observation

The process to manage ICP and NSP changes were examined. I viewed documentation and test results and walked through processes in the test system.

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 will change to "success" and the registry event number will be populated.
- If a failure, the event status will change to "failure" and the reason for the failure will 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.

I checked each type of distributor registry update and confirmed that the required fields are recorded in ARC, and the field requirements are consistent with the registry. Each registry update type was successfully tested.

Timeliness depends on people and processes and will be checked during the first audit after go-live. Future compliance is not expected to be affected by the material change.

Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

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 provide NSP information was checked. I viewed process documentation and test results and walked through the NSP assignment process.

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 will be updated in ARC. This process is still being refined, and I recommend this is completed before going live.

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">• how event dates for changes will be determined; this should be the physical date that the NSP changed,• whether approval of the change is required before the NSP change is sent to the registry,• how often transformer changes will be updated in ARC, and• 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.	<p>This process will be introduced post-go live and prior to the next Distributor Audit. In the mean time we will monitor any changes/corrections to NSP our GIS database to ensure these are manually corrected on the Registry.</p>	<p>To be adopted.</p>

Audit outcome

Compliant

4.3. Customer queries about ICP (Clause 11.31)

Code reference

Clause 11.31

Code related audit information

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

Audit observation

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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 provide NSP information were checked. I viewed documentation and test results and walked through processes in the test system.

Audit commentary

ICP addresses will be confirmed through Quick Maps and site visits.

ARC will offer suggested 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.

Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

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 process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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 process to provide complete and accurate ICP information was checked. I viewed process documentation and test results.

Audit commentary

The synchronisation processes discussed in **section 2.1** will ensure that data is updated on the registry completely and accurately. Future compliance is not expected to be affected by the material change.

Initial Electrical Connection Date

The process to determine initial electrical connection dates will not change as part of this material change. 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 will be entered into ARC, instead of magiQ and transferred to the registry. Users will not be able to populate the initial electrical connection date until the ICP has moved to ready status.

Waipa plans to continue with their existing processes to review the AC020 distributor compliance reports weekly to fortnightly which will help to identify any discrepancies between trader active dates, MEP meter certification dates and initial electrical connection dates.

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).

Distributed generation details for each application will be entered into ARC. Once all records are entered and the distributed generation is connected, the send registry update box will be checked and the connection date for the distributed generation will be entered. This will create 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.

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.

The recommendation will not be implemented as part of this material change, but future implementation of a new Billing System will enable more efficient review of EIEP 1 and 3 files. High-risk database checks are expected to be completed once tasks have been reviewed and reallocated.

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.

Chargeable Capacity

The chargeable capacity is calculated from the retailer billing received on the 4th of the following month and therefore the chargeable capacity should not be recorded on the registry. The previous audit recorded non-compliance because some ICPs had a non-zero chargeable capacity recorded. Waipa intends to ensure that all ICPs have the correct chargeable capacity recorded before migration to ARC.

Audit outcome

Compliant

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 process for providing pricing information was examined. I viewed process documentation and test results.

Audit commentary

Waipa can confirm pricing details once a proposed trader has been approved, and pricing is a mandatory field in ARC. If any changes are required these are updated as soon as possible.

Timeliness depends on people and processes and will be checked during the first audit after go-live.

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Waipa do not populate GPS coordinates. GPS coordinates are stored in the back end of the database but cannot be accessed or updated through the user interface. Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

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

Code reference

Clause 14 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

The management of ICPs in relation to the use of the ready status was examined. I viewed documentation and test results and walked through processes in the test system.

Audit commentary

Waipa's new connections process as noted in **section 3.2** ensures that a retailer has taken responsibility for ICPs, and pricing is recorded before the status is changed from new to ready.

Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 11.1

Code related audit information

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

Audit observation

Processes to manage the distributor status were reviewed.

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.

ARC will allow ICPs to be recorded with distributor status and new ICPs with distributor status were created during testing. In **section 4.11** I recommend that the decommissioning process for distributor status ICPs is also tested, to ensure that ICPs can move directly from distributor status to decommissioned.

Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

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

Code reference

Clause 20 Schedule 11.1

Code related audit information

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

Decommissioning only occurs when:

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

Audit observation

The decommissioning process was examined. I viewed documentation and test results and walked through processes in the test system.

Audit commentary

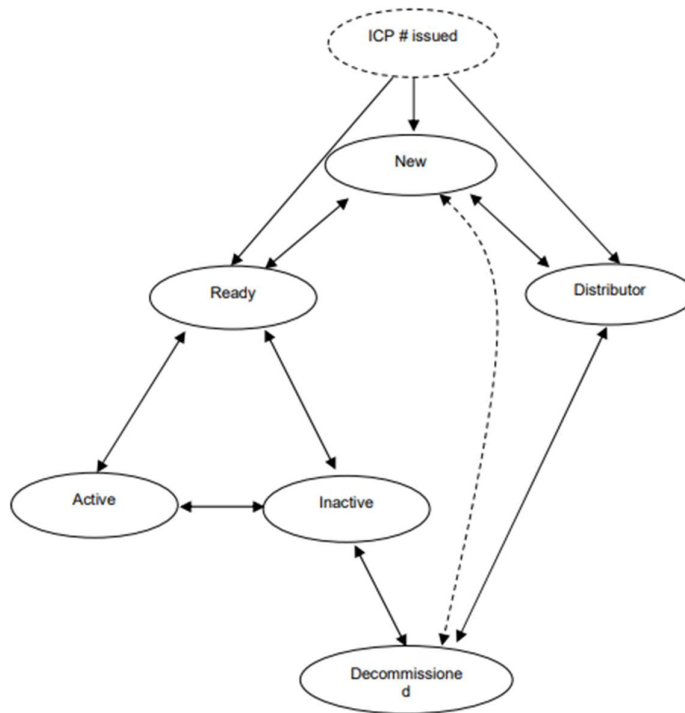
Requests for decommissioning will continue to be received from the property owner and sometimes directly from traders. Once the ICP's status is updated to inactive ready for decommissioning by the trader, Waipa will complete a site verification to confirm the ICP is decommissioned. Waipa will then update the ICP status to decommissioned, enter the required status reason from a drop-down list, and select the decommissioning event date in ARC. The update will be sent to the registry as soon as it is saved. ICPs at ready for decommissioning status will be identified and monitored using the ARC Dashboard.

The Registry Functional Specification allows ICPs to move directly from new status or distributor status to decommissioned, as shown below.

1.13 ICP Status lifecycle

1.13.1 The lifecycle of an ICP is managed by updating the Status attribute of the ICP, which is part of the Status event type. There is a different lifecycle for the two types of ICPs (Distributor-only and Standard ICPs).

Figure 2: ICP lifecycle



I recommend that further testing is conducted to ensure that ICPs can move directly from new or distributor status to decommissioned status, without being moved to inactive ready for decommissioning status first. The registry does not require ICPs with new or distributor status to be moved to inactive ready for decommissioning prior to being decommissioned.

Description	Recommendation	Audited party comment	Remedial action
Test decommissioning of ICPs at new (999) status	Test the process to decommission ICPs which are at new status. These ICPs should be able to move directly to decommissioned status.	This was tested and found to be not operational. The developer has now corrected this.	Adopted.
Test decommissioning of ICPs at distributor (888) status	Test the process to decommission ICPs which are at distributor status. These ICPs should be able to move directly to decommissioned status.	This was tested and found to be not operational. The developer has now corrected this.	Adopted.

Audit outcome

Compliant

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

Code reference

Clause 23 Schedule 11.1

Code related audit information

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

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

A price category code takes effect on the specified date.

Audit observation

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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 two local networks. In all other cases, the request must be made at least 1 month before the NSP is electrically connected or the ICP is transferred.

Audit observation

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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 five 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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Waipa does not intend to allow any new shared unmetered load connections. Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Waipa does not intend to allow any new shared unmetered load connections. Future compliance is not expected to be affected by the material change.

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

This process is not affected by the material change.

Audit commentary

Future compliance is not expected to be affected by the material change.

Audit outcome

Compliant

CONCLUSION

The change to ARC is expected to improve efficiency, timeliness, and accuracy because the interface to the registry will be fully automated with all distributor updates originating from ARC, and improved monitoring.

Compliance was assessed for all areas which could be impacted by the material change. Four recommendations were made, which have been adopted or will be adopted after go live. Waipa's next audit due date is 30 July 2023. Given the significance of this material change and that it is expected to go live by the end of 2022, I believe that the current next audit date is appropriate.

PARTICIPANT RESPONSE

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