

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTOR AUDIT REPORT



For

ELECTRICITY ASHBURTON LIMITED



Prepared by: Tara Gannon, Veritek Limited

Date audit commenced: 8 April 2019

Date audit report completed: 6 May 2019

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EXECUTIVE SUMMARY

This Distributor audit was performed at the request of **Electricity Ashburton Limited (EA Networks)**, 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 V7.2, which was produced by the Electricity Authority.

In general good processes are in place, and prompt update of information is treated as a priority. The new connection process is robust, and there are good monitoring controls in place. Loss factors have been reviewed since the 2018 audit, and it is hoped that this will reduce UFE. Fluctuations in irrigation loads make it difficult to predict losses.

Some specific areas requiring improvement were identified:

- The “new” status continues to be applied for 326 ICPs where the load and meters are associated with another active ICP in order to reduce the customer’s line charges and allow them to receive one invoice for the set of ICPs. The metered usage for all the ICPs is billed against one active ICP, and the other ICPs remain at “new” status. 1,5 “inactive reconciled elsewhere” status better reflects the supply situation for these ICPs. EA Networks intends to visit each site at “new” status to ensure that each ICP can be electrically disconnected without disconnecting any other ICP and is recorded against the correct transformer.
- Unmetered load is not recorded on the registry for any EA Networks ICPs. The Ashburton District Council distributed unmetered load (DUML) audit was completed around the same time as the distributor audit. As part of the DUML audit, EA Networks confirmed that they knew the unmetered load details for some private streetlights and were aware of the DUML ICPs. Unmetered load details for these ICPs should be recorded on the registry.
- Distributed generation details are added to the registry on approval of the application, rather than when installation of distributed generation is confirmed. The capacity is recorded as the value on the application rather than the generator’s nameplate.
- There continue to be some issues with the accuracy of event dates. The process to send updates from the EA Networks Customer Information System to the registry is automated, and the errors occurred during data entry and caused some late registry updates. The incidence of incorrect dates has decreased later in the audit period. A small number of other data accuracy issues were identified, including some missing and inaccurate initial electrical connection dates.
- The 2018 audit found 141 active ICPs not set up in “QuickMap” (which links to the GIS). This has now increased to 250 active ICPs. These ICPs may have incorrect NSPs assigned, do not receive planned outage notifications, and may not have their NSP updated where ICPs are to transfer between NSPs. Many of the ICPs which are not in QuickMap were created prior to 1998, when registry information was initially populated, but some new connections are also missing.

The audit found 11 non-compliances and makes two recommendations. The audit risk rating is 21, and the next audit frequency table indicates that the next audit be due in 6 months. Given that the audit risk rating is on the cusp of a 12 month recommendation, most of the non-compliances affected very small numbers of ICPs, and that controls were strong or moderate for eight of the 11 non-compliances, I recommend that the next audit is completed in 12 months.

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)	Not all practicable steps are taken to ensure that the information provided is complete and accurate.	Moderate	Low	2	Investigating
Requirement to correct errors	2.2	11.2(2) and 10.6(2)	Correction of data does not consistently occur as soon as practicable.	Weak	Low	3	Investigating
Timeliness of Provision of ICP Information to the registry manager	3.4	7(2) of Schedule 11.1	Registry not updated prior to commencement of trading for five ICPs.	Strong	Low	1	Investigating
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late population of the initial electrical connection date for seven ICPs.	Strong	Low	1	Investigating
Connection of ICP that is not an NSP	3.6	11.17	Registry not updated prior to commencement of trading for five ICPs.	Strong	Low	1	Identified
Management of "new" status	3.13	13 Schedule 11.1	326 ICPs incorrectly recorded as new.	Weak	Low	3	Investigating
Changes to registry information	4.1	8 Schedule 11.1	Some price, network, and address changes were backdated.	Moderate	Low	2	Identified
Notice of NSP for each ICP	4.2	7(1),(4) and (5) Schedule 11.1	At least four ICPs with an incorrect NSP recorded.	Moderate	Low	2	Identified
Distributors to Provide ICP Information to the Registry manager	4.6	7(1) Schedule 11.1	At least two ICPs with incorrect addresses. At least seven distributed generation records do not reflect what is physically installed. At least nine incorrect or missing initial	Weak	Low	3	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			<p>electrical connection dates.</p> <p>Unmetered load type and capacity is not recorded on the registry for some ICPs where EA Networks is aware of the details.</p> <p>Some price, network (including NSP), address, and status changes had incorrect event dates applied.</p>				
Provision of information to registry after the trading of electricity at the ICP commences	4.7	7(3) Schedule 11.1	Six backdated price category codes for new connections.	Strong	Low	1	Investigating
Management of “decommissioned” status	4.11	20 Schedule 11.	Eight ICPs were not decommissioned from the requested date.	Moderate	Low	2	Identified
Future Risk Rating						21	

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

RECOMMENDATIONS

Subject	Section	Recommendation	Description
Changes to registry information	4.1	Increase the frequency of NSP change checks	NSP changes for 14 days or more must be notified to the registry by the 15 th day after the change. The frequency of NSP change checks should be increased to ensure compliance.
Notice of NSP for each ICP	4.2	Update missing QuickMap information	Confirm locations and update QuickMap for the missing ICPs.

ISSUES

Subject	Section	Issue	Description
		Nil	

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

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

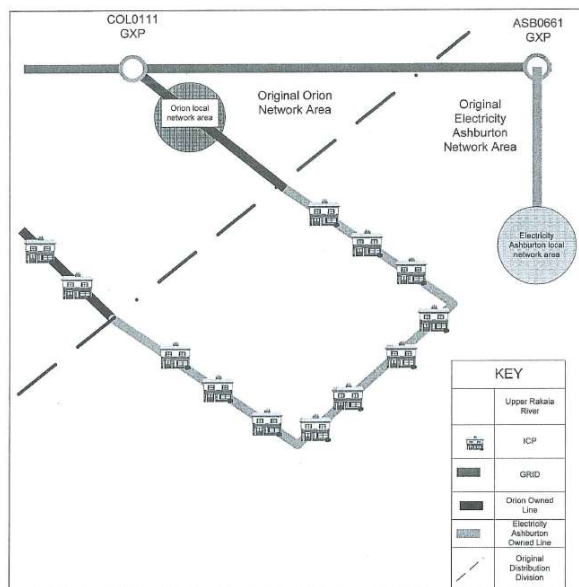
Audit commentary

Exemption number 163 exempts EA Networks from complying with clauses 10.3(f)(i) and 15.38 in relation to an embedded network connected to the Orion Network.

- Clause 10.3(f)(i) relates to the provision of a metering installation at the point of connection for the embedded network.
- Clause 15.38 relates to certification as a reconciliation participant.

The exemption notes that “EASH has in place a materially accurate method to calculate consumption for settlement”.

The diagram below shows the embedded network and also shows two ICPs connected to the embedded network which are physically in the Orion area. These two ICPs are treated as being connected to COL0111.



EA Networks is working with the Department of Conservation to arrange installation of a gateway meter. In the meantime, submissions are provided in accordance with the exemption.

I walked through the process to prepare the NSP volume submissions. The Coleridge parent NSP's profile is used, and daylight savings adjustments are applied where required. Initial submissions are automatically estimated based on volumes for the past three years, and the current loss factor is

applied. Revision submissions are based on retailers' EIEP submissions multiplied by the current loss factor.

EA Networks track UFE by comparing the submission and NSP level totals. I reviewed these results and found that by revision three to seven, UFE was normally at the expected level for the NSP.

1.2. Structure of Organisation

Chief Executive Officer - CEO - Gordon Guthrie

Engineering - Safety Advisor - Ken Stirling
SSE Manager - Gerard Smith

Commercial Manager - Jeremy Adamson

Business Analyst - David Wilson
Commercial Analyst - Pat Ealam
Customer Support Analyst - Hailey Beevor
Solutions Architect - Matthew Harris

IT Engineer - Team Leader - Umbanazo Kapindula

ICT Support Specialist - Samantha Collins
ICT Support Specialist - Tony Tubbs

Network Manager - Brendon Quinn

Planning Engineer - Peter Lindsay

Engineering Services Manager - Shaneel Singh

CAD/Design Draughtsman - Gordon Tillier
CAD/GIS Draughtsman - Dirk Straver
CAD/GIS Draughtsman - Will Paddock
Electrical Engineer - Bereket Bahta
Electrical Engineer - Yee Mei Yong
Engineering Cadet - Ruth Odlin
Entry GIS Specialist - Eleri Clague
GIS Administrator - David Brown
IP Network Engineer - Laupaini Manu
Senior CAD Draughtsman - Cath King

Underground Manager - Chris Cunneen

Design Technician - Amy Stewart
Design Technician - Chris Doherty

Operations Manager - Myles Connew

Network Controller - David Bond
Network Controller - Gerard Hart
Network Controller - Tim Blackman
Vegetation Mgmt Coordinator - Robert Wright
Substation Maintenance Coordinator - Dewalt Venter

Overhead Manager - Wayne Watson

Lines Inspector - Frank Pethig
Lines Surveyor - Ken Saunders
Surveying Assistant - Len Doel
Store Manager - Phillip Collins
Storeman - Barrie Brown
Storeman - Symon Restieaux

Chief Financial Officer - CFO - Mark Lester

Custodian - Christine Robin
Cleaner - Georgia Robin
Management Accountant - Ronnie Campbell
Assistant Accountant - Charleen Swann
Receptionist - Abbie McAnally
Accounts Officer - Karlien Gillmore

Asset Information Manager - Phil Lalor

Assets/Accounts Officer - Charles Gladeinde
Asset Information Officer - Aafia Fagalima
Data Coordinator - Maureen Russell
System Accountant - Sheryl Rielly

1.3. Persons involved in this audit

Auditor:

Tara Gannon

Veritek Limited

Electricity Authority Approved Auditor

EA Networks personnel assisting in this audit were:

Name	Title
David Wilson	Business Analyst
David Bond	Network Controller
David Brown	GIS Administrator
Wayne Watson	Overhead Manager

1.4. Use of contractors (Clause 11.2A)

Code reference

Clause 11.2A

Code related audit information

A participant who uses a contractor

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

Audit observation

All activities are completed directly by EA Networks.

1.5. Supplier list

All activities are completed directly by EA Networks.

1.6. Hardware and Software

The EA Networks Customer Information System is a bespoke system used by EA Networks to manage their data and processes. The Access based Assets Database is used as a GIS. EA Networks is currently investigating replacing the GIS with Stream.

Some servers have been changed and processes for management of the IT environment have recently been reviewed, improved and standardised. An IT security audit has been completed and recommendations to improve security were implemented in March 2019.

Backups are carried out, and some backup copies are stored off site.

1.7. Breaches or Breach Allegations

The Electricity Authority confirmed that there have been no alleged breaches for EA Networks between May 2018 and March 2019.

1.8. ICP and NSP Data

EA Networks owns and operates the electricity network in the Ashburton region.

The table below lists the relevant NSPs and their associated balancing area, and the number of active ICPs connected. The embedded network described in **Section 1.1** is also shown.

NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	Number of ICPs
ASB0331	ASHBURTON			ASHBURTEASHG	G	01-05-08	6,080
ASB0661	ASHBURTON			ASHBURTEASHG	G	01-05-08	13,435
URK0111	UPPER RAKAIA	COL0111	ORON	UPPERAKEASHE	E	01-05-08	13

EA Networks' ICPs are summarised by status in the table below:

Status	Number of ICPs (2019)	Number of ICPs (2018)
New (999,0)	326	362
Ready (0,0)	11	10
Active (2,0)	19,528	19,307
Distributor (888,0)	-	-
Inactive – new connection in progress (1,12)	25	34
Inactive – electrically disconnected vacant property (1,4)	255	239
Inactive – electrically disconnected remotely by AMI meter (1,7)	27	28
Inactive – electrically disconnected at pole fuse (1,8)	2	3
Inactive – electrically disconnected due to meter disconnected (1,9)	3	2
Inactive – electrically disconnected at meter box fuse (1,10)	2	1

Status	Number of ICPs (2019)	Number of ICPs (2018)
Inactive – electrically disconnected at meter box switch (1,11)	-	0
Inactive – electrically disconnected ready for decommissioning (1,6)	21	31
Inactive – reconciled elsewhere (1,5)	-	0
Decommissioned (3)	2,228	2,246

1.9. Authorisation Received

An authorisation letter was not required. EA Networks provided all relevant information.

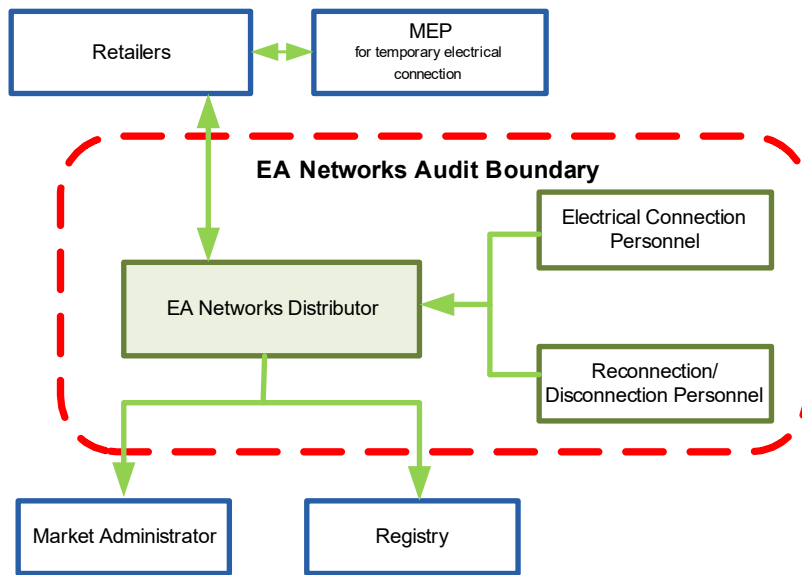
1.10. Scope of Audit

This Distributor audit was performed at the request of EA Networks, 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 V7.2, which was produced by the Electricity Authority.

The table below shows the tasks under clause 11.10(4) of Part 11, which EA Networks is responsible for. There are no other contractors who assist with these tasks:

Functions Requiring Audit Under Clause 11.10(4) of Part 11	Contractors Involved in Performance of Tasks
The creation of ICP identifiers for ICPs.	Nil
The provision of ICP information to the registry and the maintenance of that information.	
The creation and maintenance of loss factors.	

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



1.11. Summary of previous audit

EA Networks provided a copy of their previous audit, conducted in May 2018 by Steve Woods of Veritek Limited. The audit found six non-compliances and made one recommendations. The matters raised are detailed in the table below:

Subject	Section	Clause	Non-compliance	Status
Requirement to provide complete and accurate information	2.1	11.2(1)	Not all practicable steps are taken to ensure that the information provided is complete and accurate.	Still existing
Timeliness of Provision of ICP Information to the registry manager	3.4	7(2) of Schedule 11.1	Registry not updated prior to commencement of trading for 5 ICPs.	Still existing
Timeliness of Provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late population of the initial electrical connection date for 10 ICPs.	Still existing
Management of New status	3.13	13 Schedule 11.1	362 ICPs incorrectly recorded as New.	Still existing
Changes to registry information	4.1	8 Schedule 11.1	Some price, network, and address changes were backdated.	Still existing
Notice of NSP for each ICP	4.2	7(1),(4) and (5) Schedule 11.1	At least five ICPs with an incorrect NSP recorded.	Still existing

Subject	Section	Clause	Non-compliance	Status
Provide ICP Information to the Registry manager	4.6	7(1)(m) & (p) Schedule 11.1	Some DG and IECD discrepancies found.	Still existing
Price category codes for new connections	4.7	7(3) Schedule 11.1	Three backdated Price Category codes for new connections.	Still existing
Calculation of loss factors	8.1	11.2	Loss factors are not accurate in relation to reconciliation losses.	Cleared

Subject	Section	Clause	Recommendation	Status
Changes to registry information	4.1	8 Schedule 11.1	Update distributed generation fields on a daily basis rather than monthly.	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

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

The registry list file as at 06/03/19 was examined to confirm compliance.

Audit commentary

The EA Networks Customer Information System automatically sends updates to the registry when data that is also held in the registry changes. When a change is made, a ten minute timer starts. The record is sent ten minutes after the change is made if there is no further activity. Registry updates for approved new connections are sent to the registry each evening, as described in **section 3.2**.

Reversals of events are processed manually on the registry, and then imported into the EA Networks Customer Information System.

On weekdays at 4.30am, the EA Networks Customer Information System sends an automated request to the registry to retrieve all events since the last request was sent. Once received, the EA Networks Customer Information System imports the event detail file, along with registry notifications, acknowledgements, and metering event files received since the last import. The process ensures that the system only imports files that it has not received before, and that events are processed in the correct order. A check is conducted to ensure that all files have been imported. Acknowledgement numbers are recorded against the event, and the event will automatically be resent if acknowledgement is not received.

A suite of discrepancy reports are run daily, and any exceptions identified are reviewed and resolved:

- **price category** shows any ICPs which have an active status and a price category of POA;
- **missing initial energisation date** shows any ICPs which have an active status and no initial electrical connection date; and
- **duplicate address** shows any ICPs which have the same address as another ICP.

There were some instances where “not all practicable steps” had been taken to ensure information accuracy:

Description	Report section
<p>326 ICPs have new status recorded, but should have inactive or decommissioned status recorded. 11 of these ICPs do not have an associated active ICP but are expected to have any load reconciled under another active ICP.</p> <p>There is potentially an impact on settlement for the 11 ICPs which do not have an associated active ICP. The impact is expected to be low because it appears likely that the new ICPs may be disconnected or decommissioned along with the associated ICPs.</p>	3.13
ICP 0000015759EA05B has ready status recorded, but is inactive reconciled elsewhere.	3.14
Some incorrect event dates were applied for address, network, pricing, and status events.	4.1 & 4.6
Nine ICPs have incorrect or missing initial electrical connection dates.	4.6
Seven ICPs did not have the nameplate capacity of the generator recorded on the registry, and a further two ICPs with generation installed did not have generation details recorded on the registry.	4.6
Unmetered load for DUML ICPs and private streetlights is not recorded on the registry.	4.6

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 2.1</p> <p>With: 11.2(1) and 10.6(1)</p> <p>From: 01-May-18</p> <p>To: 06-Mar-19</p>	<p>Not all practicable steps are taken to ensure that the information provided is complete and accurate.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>
Audit risk rating	Rationale for audit risk rating
Low	<p>The controls are rated as moderate overall, as most information is correct and processes are automated. Discrepancies exist in certain areas – application of event dates (which occurred due to data entry errors), the use of new status, generation capacity, and unmetered load.</p> <p>All of the areas listed above have a minor impact on settlement or participants, therefore the audit risk rating is low.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
Please see relevant section for action taken to resolve issue.	May 2019	Investigating
Preventative actions taken to ensure no further issues will occur	Completion date	
Please see relevant section for Preventative actions taken.	February 2020	

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

Code reference

Clause 11.2(2) and 10.6(2)

Code related audit information

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

Audit observation

EA Networks' data management processes were examined. The registry list file as at 06/03/19 was examined to confirm compliance.

Audit commentary

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

Incorrect application of the new status and ICPs missing from the GIS have been an ongoing issues for several audits, and are recorded as non-compliant below. With the employment of new inspectors, many of these ICPs are expected to be investigated and corrected during the next audit period.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.2 With: Clause 11.2(2) and 10.6(2) From: 01-May-18 To: 06-Mar-19	Correction of data does not consistently occur as soon as practicable. Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are rated as weak. Although most information is corrected promptly, some issues have been outstanding for several audits. The issues relating to application of new status and ICPs not recorded on the GIS require site visits to confirm the correct data values.</p> <p>Both issues can have a minor impact on settlement or participants, therefore the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Please see relevant section for action taken to resolve issue.		May 2019	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Please see relevant section for Preventative actions taken.		February 2020	

3. CREATION OF ICPs

3.1. Distributors must create ICPs (Clause 11.4)

Code reference

Clause 11.4

Code related audit information

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

Audit observation

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

A diverse characteristics sample of 15 new connection applications of the 246 created since 30/04/2018 were checked from the point of application through to when the ICPs were created. The sample included ICPs with:

- various meter categories (including category 3);
- various proposed traders;
- various price categories;
- with and without distributed generation; and
- connected to different NSPs.

None of the new connections had unmetered load connected.

Audit commentary

EA Networks creates ICPs as required by clause 1 of schedule 11.1. No examples of points of connection without ICPs were found.

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 in detail. A diverse characteristics sample of 15 new connection applications of the 246 created since 30/04/2018 were checked to determine whether the ICPs had been created within three business days of a request by a trader.

Audit commentary

EA Networks receives most applications for new connections from customers or their agents. EA Networks manage the new connections within the EA Networks Customer Information System and attach scanned copies of the associated paperwork to the relevant ICP.

When new ICPs are created in the database the registry update is held until all information required has been provided and the trader has accepted responsibility. At 6pm each night, status, pricing, address and network events are transferred to the registry for new approved ICPs. Acknowledgement files imported the following morning confirm that the registry has been successfully updated.

ICPs are created at the “Ready” status, and new ICPs are electrically connected by EA Networks.

14 of the 15 ICPs were requested by traders, and one was requested by the customer. In all cases the ICP was created within three business days of the application being received and the trader had accepted responsibility for the ICP.

Audit outcome

Compliant

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

Code reference

Clause 11.7

Code related audit information

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

Audit observation

A diverse characteristics sample of 15 new connection applications of the 246 created since 30/04/2018 were checked from the point of application through to when the ICP was created, to confirm the process and controls worked in practice.

Audit commentary

ICP information provided to the registry by EA Networks was correct for the sample of ICPs checked. Registry population is automated and the file includes all relevant fields. Registry response information is checked to ensure the information is successfully sent.

Audit outcome

Compliant

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

Code reference

Clause 7(2) of Schedule 11.1

Code related audit information

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

Audit observation

The registry list for 06/03/19 and event detail report for 01/05/18 to 06/03/19 were examined to determine the timeliness of the provision of ICP information for new connections.

Audit commentary

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

246 new ICPs have been created since 30/04/18. I reviewed these new connections on the event detail report to identify ICPs where information was provided late.

Five ICPs had the proposed trader, pricing code, address, and ready status updated on the registry after the initial electrical connection date. The updates were late because there was a delay in receiving the completed network connection forms from the inspectors, which contains information required to complete the new connection.

The late update of the registry for five new ICPs is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.4 With: Clause 7(2) of Schedule 11.1 From: 31-Aug-18 To: 14-Dec-18	Registry not updated prior to commencement of trading for five ICPs. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong because a small number and proportion of updates (2%) were late. The audit risk rating is low because a very small number of late updates occurred, and they were between one and six calendar days late. Consumption information will be revised by retailers.		
Actions taken to resolve the issue		Completion date	Remedial action status
We are undertaking a review of our process to identify how the breaches occurred.		May 2019	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
It is expected that after our review has been completed there will be no additional breaches of the requirements.		February 2020	

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 sub-clause (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 registry list for 06/03/19 and event detail report for 01/05/18 to 06/03/19 were examined to determine the timeliness and accuracy of initial electrical connection dates for the 164 completed new connections.

Audit commentary

EA Networks expect notification from the field by the livening agent for each new connection. Once this is received the registry is updated. As discussed in **section 2.1**, reporting is in place to identify active ICPs without an initial electrical connection date.

The analysis of the event detail report found seven of the 164 ICPs which were electrically connected during the audit period had initial electrical connection dates populated more than ten business days after electrical connection.

- Six updates were late because there was a delay in receiving the completed network connection forms from the inspectors.
- One update initially missed being processed. It was identified and corrected the morning after the retailer updated the status to active, through the registry validation process described in **section 2.1**.

Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 3.5 With: Clause 7(2A) of Schedule 11.1 From: 17-Oct-18 To: 11-Jan-19	Late population of the initial electrical connection date for seven ICPs. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1	
Audit risk rating	Rationale for audit risk rating	
Low	Controls are rated as strong at the time of the audit. The last late update occurred in January 2019. This field is used as a source of validation for active and certification dates. There is no impact on settlement but there is a minor impact on participants who use this field in their validation processes. The audit risk rating is low.	
Actions taken to resolve the issue		Completion date
We are undertaking a review of our process to identify how the breaches occurred.		May 2019
		Investigating

Preventative actions taken to ensure no further issues will occur	Completion date	
It is expected that after our review has been completed there will be no additional breaches of the requirements.	February 2020	

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

Code reference

Clause 11.17

Code related audit information

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

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

In respect of ICPs across which unmetered load is shared, the distributor must not connect an ICP unless a trader is recorded in the registry as accepting responsibility for the shared unmetered load.

Audit observation

The new connection process was examined in **section 3.2**.

The registry list for 06/03/19 and event detail report for 01/05/18 to 06/03/19 were examined to determine compliance.

Audit commentary

The new connection process requires applications for new connections to be approved by traders.

Review of the registry list confirmed that a trader is currently recorded for all active ICPs. As discussed in **section 3.4**, five ICPs did not have a trader recorded on the registry on the date they were electrically connected. This is recorded as non-compliance below.

A review of the registry list confirmed that there is no known shared unmetered load on EA Networks' network.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 3.6</p> <p>With: Clause 11.17</p> <p>From: 31-Aug-18</p> <p>To: 14-Dec-18</p>	<p>Registry not updated prior to commencement of trading for five ICPs.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Twice</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>

Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls are rated as strong because a small number and proportion of updates (2%) were late.</p> <p>The audit risk rating is low because a very small number of late updates occurred, and they were between one and six calendar days late. Consumption information will be revised by retailers.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
The issue highlighted occurred due to key staff members involved in the process being on sick leave.		May 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will train additional staff in the process to cover the key staff member when they are on leave.		February 2020	

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.

Audit observation

The new connection process was examined in **section 3.2**.

A diverse characteristics sample of 15 new connection applications of the 246 created since 30/04/2018 were checked to determine if the ICPs were connected at the request of the trader.

The registry list as at 06/03/19 was reviewed to confirm that all active ICPs had a trader recorded.

Audit commentary

The new connection process requires applications for new connections to be submitted by traders.

The registry list showed that all active ICPs had a trader recorded on the registry. The sample of 15 new connections checked confirmed they had been approved by the trader.

As discussed in **section 3.4**, five ICPs did not have a trader recorded on the registry on the date they were electrically connected. I confirmed that all had been accepted by the trader before electrical connection, and compliance with clause 10.31 is achieved.

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.*

Audit observation

The new connection process was examined in **section 3.2**. The registry list for 06/03/19 and event detail report for 01/05/18 to 06/03/19 were examined to determine compliance.

Audit commentary

EA Networks' 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.

I identified six new connections where the meter certification date was prior to the initial electrical connection date, indicating that they may have been temporarily electrically connected for meter certification. In all cases, a trader was recorded on the registry on the meter certification date.

Audit outcome

Compliant

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

Code reference

Clause 10.30

Code related audit information

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

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

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

Audit observation

The NSP table was reviewed.

Audit commentary

No new NSPs were created by EA Networks during the audit period.

Audit outcome

Not applicable

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

Code reference

Clause 10.30(A)

Code related audit information

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

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

Audit observation

The NSP table was reviewed.

Audit commentary

No new NSPs were created by EA Networks during the audit period.

Audit outcome

Not applicable

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

Code reference

Clause 1(1) Schedule 11.1

Code related audit information

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

xxxxxxxxxxccc where:

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

Audit observation

The process for the creation of ICPs was examined.

Audit commentary

ICP numbers are created in the EA Networks Customer Information System. The process for the creation of ICPs was examined, and all ICPs are created in the appropriate format.

Audit outcome

Compliant

3.12. Loss category (Clause 6 Schedule 11.1)

Code reference

Clause 6 Schedule 11.1

Code related audit information

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

Audit observation

The list file as at 06/03/19 was examined to confirm all active ICPs have a single loss category code.

Most ICPs have the L01 loss factor assigned. HHR ICPs, generation ICPs, ICPs with high voltage metering and directly connected to the sub transmission system have different loss factors.

Audit commentary

Each active ICP has a single loss category, which clearly identifies the relevant loss factor. Loss factors are determined based on new connection information.

Audit outcome

Compliant

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

Code reference

Clause 13 Schedule 11.1

Code related audit information

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

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

Audit observation

The ICP creation process was reviewed. The registry list for 06/03/19 and event detail report for 01/05/18 to 06/03/19 were examined to determine compliance.

Audit commentary

EA Networks’ current process is to create all ICPs at “ready” status, and “new” status is not normally applied for new connections.

The registry list file records 326 ICPs with “new” status, all of which have been at the status for more than 24 months. EA Networks applies “new” status for ICPs where the load and meters are associated with another active ICP in order to reduce the customer’s line charges and allow them to receive one invoice for the set of ICPs. This often occurs for rural addresses where there may be separate ICPs for a house, shed, and pumps. The metered usage for all the ICPs is billed against one active ICP, and the other ICPs remain at “new” status.

Proposed traders are only recorded for five of the 326 ICPs at “new” status. Traders are unlikely to be aware of the existence of the other 321 ICPs.

Because these ICPs are not in the construction phase, and are active, the use of “new” status is invalid. 1,5 “inactive reconciled elsewhere” status better reflects the supply situation for these ICPs. This is recorded as non-compliance below.

315 of the ICPs at “new” status had a corresponding active ICP which load is reconciled under. 11 ICPs did not have an associated “active” ICP. These ICPs should be checked to confirm whether the “new” status ICP is also “inactive” or “decommissioned”, and the registry should be updated accordingly.

New status ICP	Associated ICP status
0000020856EA686	Inactive vacant
0000017300EA943	Decommissioned
0000011716EABA0	Decommissioned
0000017648EACF7	Decommissioned
0000019261EAB32	Decommissioned
0000017000EAA40	Decommissioned
0000018834EA5DF	Decommissioned
0000018854EAA2F	Decommissioned
0000016579EA5E9	Decommissioned
0000017322EA493	Decommissioned
0000017871EA355	Decommissioned

EA Networks intends to visit each site at new status to ensure that each ICP can be electrically disconnected without disconnecting any other ICP, and is recorded against the correct transformer. EA Networks recently employed two new inspectors and it is intended that checking and correcting these ICPs will be undertaken as a project.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 3.13</p> <p>With: Clause 13</p> <p>Schedule 11.1</p> <p>From: 01-May-18</p> <p>To: 08-Apr-19</p>	<p>326 ICPs incorrectly recorded as new.</p> <p>Potential impact: Medium</p> <p>Actual impact: None</p> <p>Audit history: Multiple times</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>
Audit risk rating	Rationale for audit risk rating
Low	<p>The controls are recorded as weak, because new status is applied incorrectly.</p> <p>There is potentially an impact on settlement for the 11 ICPs which do not have an associated active ICP. The impact is expected to be low because it appears likely that the new ICPs may be disconnected or decommissioned along with the associated ICPs. The other 315 ICPs have their load settled under an active ICP.</p>

Actions taken to resolve the issue	Completion date	Remedial action status
We are undertaking a review of our process to identify how the breaches occurred.	May 2019	Investigating
Preventative actions taken to ensure no further issues will occur	Completion date	
It is expected that after our review has been completed there will be no additional breaches of the requirements	February 2020	

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

Code reference

Clause 15 Schedule 11.1

Code related audit information

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

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

Audit observation

The process to monitor ICPs at “new” and “ready” status was reviewed. The registry list for 06/03/19 and event detail report for 01/05/18 to 06/03/19 were examined to determine compliance.

Audit commentary

New ICPs

Examination of the registry list found:

Status	Number of ICPs at status as at 06/03/19	Number of ICPs at status for more than 12 months	Number of ICPs at status for more than 24 months
New (999,0)	326	326	326

As discussed in **section 3.13**, the ICPs at new status are electrically connected, with the load and meters associated with another active ICP to reduce the customer’s line charges and allow them to receive one invoice for the set of ICPs. 315 of the ICPs currently have an associated active ICP. The remaining 11 do not, but may be disconnected or decommissioned.

The ICPs at new status are not in the process of being connected, and do not normally have a proposed trader recorded. This matter will be dealt with as a project and it is not expected that traders will be liaised with until the field visits are being coordinated.

Ready ICPs

Examination of the registry list found:

Status	Number of ICPs at status as at 06/03/19	Number of ICPs at status for more than 12 months	Number of ICPs at status for more than 24 months
Ready (0,0)	11	5	1

The process to monitor ICPs at the “new” and “ready” statuses is carried out every six months. ICP 0000015759EA05B had “ready” status recorded for more than 24 months. This ICP is electrically connected with the load and meters associated with another active ICP, and the status was updated to “ready” in error. EA Networks normally applies the “new” status for these ICPs, although the “inactive reconciled elsewhere” status is a better fit. EA networks attempted to reverse the status update, but it was not possible because this was the first status record for the ICP.

Audit outcome

Compliant

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

Code reference

Clause 7(6) Schedule 11.1

Code related audit information

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

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

Audit observation

The registry list as at 06/03/19 was examined to determine compliance.

Audit commentary

ICP 0000026335EA378 has a capacity greater than 10 MW (28 MW) and it has a unique loss category (H01).

Audit outcome

Compliant

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

Code reference

Clause 10.33A

Code related audit information

- (1) A reconciliation participant may electrically connect a point of connection, or authorise the electrical connection of a point of connection, only if—
- (a) the reconciliation participant is recorded in the registry as being responsible for the ICP; and
 - (b) 1 or more certified metering installations are in place at the ICP in accordance with this Part; and
 - (c) in the case of an ICP that has not previously been electrically connected, the owner of the network to which the point of connection is connected has given written approval of the electrical connection.
- (2) A reconciliation participant described in subclause (1)(a)—
- (a) may authorise the electrical connection of an ICP if—
 - (i) a metering installation is in place at the ICP; and
 - (ii) the metering installation is operational but not certified; and
 - (iii) the reconciliation participant arranges for the certification of the metering installation to be completed within 5 business days of the ICP being electrically connected;
 - (b) may electrically connect an ICP if the point of connection is solely for unmetered load.
- (3) A reconciliation participant must not authorise the electrical connection of a point of connection in either of the following circumstances:
- (a) a distributor has electrically disconnected the point of connection for safety reasons, and has not subsequently approved the electrical connection of the point of connection;
 - (b) electrically connecting the point of connection would breach the Electricity (Safety) Regulations 2010.
- (4) No participant may electrically connect a point of connection or authorise the electrical connection of a point of connection, other than a reconciliation participant in the circumstances described in subclause (1), (2), or (3).

Audit observation

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

Audit commentary

EA Networks are aware of their obligation to ensure that the trader has provided approval before streetlights are connected. Approval as part of EA Networks' new connection process discussed in **section 3.2**.

There have been no new streetlight circuits connected during the audit period.

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 14 days, the time within which notification must be effected in accordance with Clause 8(3) of Schedule 11.1 begins on the 15th day after the change.

Audit observation

The management of registry updates was reviewed.

The registry list and event detail report for 01/05/18 to 06/03/19 were reviewed to determine compliance. A diverse sample of 30 backdated events were reviewed to determine the reasons for the late updates, including ten late address, network and pricing events.

The management of NSP changes was examined.

Audit commentary

When information that is held by the registry changes, the distributor responsible for that ICP must provide notice to the registry of that change within three business days of that change taking effect. The event detail reports were examined to identify backdated event updates.

Compliance for initial population of address, network, pricing, and status information is assessed in **sections 3.4 and 3.5**.

Address events

1,698 address updates not relating to initial population of data for new connections were identified. 113 were made more than three business days after the event, and 64 were made more than 30 business days after the event.

A sample of ten late updates over 30 business days late were checked. All were corrections, and were late because the event date for the previous address update was applied.

Network events

6,736 network updates not relating to initial population of data for new connections were identified. 77 were made more than three business days after the event, and 41 were made more than 30 business days after the event.

A sample of ten late updates over 30 business days late were checked.

- Six updates were late because the event date for the previous network event update was applied instead of the event date for the change.
- Four updates were late because of delays in confirming generation details.

The 2018 audit found distributed generation details were updated monthly, which resulted in some late network updates. This process is now completed daily, and applications are processed as they are received.

NSP changes

32 ICPs with NSP changes were identified on the registry list for 01/05/18 to 06/03/19. One of these was backdated more than 30 business days because the event date for the previous network update was applied.

Early in the audit period, a fortnightly check was conducted to identify NSP changes. Now a two monthly trace on the network is completed and feeders are updated, which map to the substation and NSP. The changes are updated in the Assets Database which does not record an effective date. At 7.30pm each Friday, the EA Networks Customer Information System process checks for any ICPs with a different NSP recorded in the Assets Database and updates its own records, then sends the change to the registry. The frequency of these checks is not sufficient to ensure compliance with the Code.

Recommendation	Description	Audited party comment	Remedial action
Increase the frequency of NSP change checks	NSP changes for 14 days or more must be notified to the registry by the 15 th day after the change. The frequency of NSP change checks should be increased to ensure compliance.	NSP ASB0331 is currently a backup NSP and is on standby. Over the coming financial year, it is planned to decommission this NSP and solely operate the core system using ASB0661. Registry has been amended to reflect this as at 24 th May 2019.	Identified

Pricing events

365 pricing updates not relating to initial population of data for new connections were identified. 150 were made more than three business days after the event, and 31 were made more than 30 business days after the event.

A sample of ten late updates over 30 business days late were checked. All were backdated because the event date for the previous pricing update was applied.

Status events

76 status updates to decommissioned were identified. These were all made within three business days.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 4.1</p> <p>With: Clause 8 Schedule 11.1</p> <p>From: 01-May-18</p> <p>To: 06-Mar-19</p>	<p>Some price, network, and address changes were backdated.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>

Audit risk rating	Rationale for audit risk rating		
Low	<p>Controls are rated as moderate because are sufficient to ensure that the registry is updated within three business days most of the time. The majority of the late updates occurred early in the audit period.</p> <p>The risk rating is low, because most of the delayed updates were processed within 30 days. Based on the sample checked, the late updates appear mostly due to incorrect application of event dates.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
EA Networks has put ASB0331 on standby mode. Hence, no ICPs are currently been serviced by this NSP. Moving forward there are no plans to use the ASB0331 to service ICPs. Registry has been amended to reflect this.		May 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Within 12 months EA Networks will decommission ASB0331 and as a result this issue will not exist.		May 2020	

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

Code reference

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

Code related audit information

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

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

Audit observation

The process to determine the correct NSP was examined. The registry list for 06/03/19 was reviewed to determine compliance.

Audit commentary

Each ICP application is checked in the GIS to determine the correct feeder, and the database then maps from the feeder to the substation and NSP. The NSP is noted on the connection form and entered into the EA Networks Customer Information System.

The 2018 audit found 141 active ICPs not set up in “QuickMap” (which links to the GIS). This has now increased to 250 active ICPs. These ICPs may have incorrect NSPs assigned, do not receive planned outage notifications, and may not have their NSP updated where ICPs are to transfer between NSPs. Many of the ICPs which are not in QuickMap were created prior to 1998, when registry information was initially populated, but some new connections are also missing.

I recommend that data is gathered for these ICPs, and updated:

Recommendation	Description	Audited party comment	Remedial action
Update missing QuickMap information	Confirm locations and update QuickMap for the missing ICPs.	Data flow issues in recent times and lack of historical data are thought to be the cause of this issue. Works are in progress to actively address a small portion of this. To fully address this issue field research will be required.	Identified

The registry list was reviewed to determine whether all active ICPs with the same physical address street, suburb, and town combination had the same NSP recorded. I found 294 unique street, suburb, town combinations which were connected to more than one NSP. Of those, 66 had more than 50% of the ICPs connected to one NSP and up to five ICPs connected to another.

I reviewed 15 of these streets, and found:

- four streets had the correct NSPs assigned;
- for five streets the correct NSP could not be confirmed because some ICPs were not recorded in QuickMap, and tracing is required to confirm the correct feeder and NSP;
- for two streets, some street addresses were incorrectly recorded, but all ICPs were assigned to the correct NSP; the incorrect addresses were updated during the audit and are recorded as non-compliance in **section 4.6**; and
- four streets had some ICPs assigned to an incorrect NSP.

Street	ASB0331	ASB0661	Comments
Ashburton Staveley Rd, Ashburton Forks	1	100	All should be on ASB0661
Harrison Street, Ashburton	137	1	All should be on ASB0331
Church Street, Ashburton	34	1	All should be on ASB0331
David St, Hinds	1	10	All should be on ASB0661

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 4.2</p> <p>With: Clauses 7(1),(4) and (5) Schedule 11.1</p> <p>From 06-Mar-19</p> <p>To: 06-Mar-19</p>	<p>At least four ICPs with an incorrect NSP recorded.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Twice</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>

Audit risk rating	Rationale for audit risk rating	
Low	<p>The controls are rated as moderate because most ICP to NSP relationships are now managed. There are 250 active ICPs not recorded in QuickMap and there is insufficient information available to confirm the correct NSP.</p> <p>The audit risk rating is low because both relevant NSPs are in the same balancing area, thus reducing the impact on settlement. This year, EA Networks intends to decommission ASB0331 and move the remaining ICPS to ASB0661.</p>	
Actions taken to resolve the issue		Completion date
Tracing methodology is being rewritten to enable tracing from ICP to NSP. At completion ICPs will be allocated to the correct NSP.		May 2019
Preventative actions taken to ensure no further issues will occur		Completion date
Extensive back office research and field audits are required to fix and update EA Networks' electrical connectivity model to capture every ICP from load to NSP.		May 2024

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 three business days after receiving a request for that information.

Audit observation

The management of customer queries was examined.

Audit commentary

EA Networks seldom receives direct requests for ICP identifiers. ICP identifiers can be provided immediately on request once the address has been confirmed.

Audit outcome

Compliant

4.4. ICP location address (Clause 2 Schedule 11.1)

Code reference

Clause 2 Schedule 11.1

Code related audit information

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

Audit observation

The process to determine correct and unique addresses was examined. The registry list for 06/03/19 was reviewed to determine compliance.

Audit commentary

Addresses for active and inactive ICPs were checked:

- all ICPs have a street number or details in the address property name to assist with location;
- there are no examples where the ICP is used in the property name to ensure the record is unique; and
- no duplicate addresses exist.

As discussed in **section 2.1**, reporting is in place to identify duplicate addresses. Addresses are checked to ensure that they are readily locatable at the time of application, and also by the inspector as part of the inspection process.

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

The management of this process was discussed.

Audit commentary

For new connections, this clause is well understood. The Network Connection Form contains details of isolation (fusing) which confirms individual isolation points for each ICP.

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

Audit observation

The management of registry information was reviewed. The registry list as at 06/03/19 was reviewed to determine compliance. A typical sample of data discrepancies were checked.

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

Audit commentary

Some data discrepancies were identified:

Address

Two ICPs with incorrect street addresses were identified during checks to confirm that NSPs were assigned correctly. Both were corrected during the audit.

Some address changes were found to be recorded with incorrect event dates, and are discussed in **section 4.1**.

Status

Some status changes to decommissioned were found to be recorded with incorrect event dates, and are discussed in **section 4.11**.

NSPs

Assignment of NSPs was reviewed in **section 4.2**.

NSP changes may not be recorded with the correct date. As discussed in **section 4.1**, when a NSP change occurs the Assets Database is updated but does not record an effective date for the change. At 7.30pm each Friday, the EA Networks Customer Information System process checks for any ICPs with a different NSP recorded in the Assets Database and updates its own records. The EA Networks Customer Information System dates the changes with today's date, because the effective date is not available. Due to the nature of the process, event dates for NSP changes will normally be after the physical date of the change.

32 ICPs with NSP changes were identified on the registry list for 01/05/18 to 06/03/19. A sample of ten changes were checked, and found that the NSP change was correct but the dates applied were incorrect:

- For four changes from ASB0331 to ASB0661 on 19/10/19 an incorrect NSP effective date was applied. EA Networks advised the correct change dates were 13/12/16 (0000010102EA7A1) and 20/03/17 (0000022327EAFD0, 0000022325EAF55 and 0000022326EA395).
- The other six changes were corrections from ASB0331 to ASB0661 where the ICP had been physically connected to ASB0661 since at least 2000. The following ICPs were updated effective from dates between 13/07/18 and 22/02/19: 0000010633EA31E, 0000014268EAF43, 0000016280EA4AD, 0000019719EA97E, 0000033626EAFD1, and 0000022366EA130.

Installation type and generation details

EA Networks requires an application from customers who wish to connect distributed generation. The registry is normally updated on approval of the application for distributed generation, rather than when EA Networks receives confirmation that generation is installed.

Analysis of the registry list confirmed there are 221 active ICPs with generation capacity recorded. All ICPs with generation capacity have a generation capacity, fuel type, and installation type of "B" or "G" recorded on the registry.

There were five ICPs with generation metering installed and no generation capacity recorded by EA Networks:

- two were confirmed not to have generation installed;
- one was a timing difference, and the registry has since been updated; and
- ICPs 0000033267EAD30 and 0000019602EA403 were confirmed to have generation installed but were not updated because no application had been received.

29 of the 221 active ICPs where EA Networks have generation recorded do not have profiles consistent with generation. In 27 cases, I was able to confirm that an application and/or record of inspection (ROI) had been received. For ICPs 0000013312EA5EB and 0000029944EA90A application and ROI information was unable to be located.

I checked the accuracy of generation details recorded on the registry for a sample of 29 ICPs. Generation capacity is taken from the application rather than the ROI, and may differ from what is installed. The rationale for using the application information is that generation capacity may be installed in stages, but the code requires the generation capacity to reflect “*nameplate capacity of the generator*”. The following discrepancies were identified:

ICP	Registry generation capacity	Expected generation capacity
0000024415EA26F	4	3.8 kW
0000024566EA2F6	5	3.06 kW
0000026407EAB07	5.6	5 kW on application (ROI not provided)
0000026844EA96E	3	3.8 kW
0000028015EA5EE	5	3 kW
0000032477EA03B	4	3 kW
0000033738EAFE3	3.42	3.8 kW on application (ROI not provided)

Some network updates were found to be recorded with incorrect event dates, and are discussed in **section 4.1**.

Issues identified in the 2018 audit were followed up, and found to be cleared.

Price and loss categories

Analysis of the list file found all active ICPs had a price category and loss category assigned. As discussed in **section 2.1**, reporting is in place to identify active ICPs with a POA pricing code.

Some pricing updates were found to be recorded with incorrect event dates, and are discussed in **section 4.1**.

Unmetered load

Part 11 states the distributors must provide unmetered load type and capacity of the unmetered load to the registry “if known”.

EA Networks does not have unmetered load details recorded for any of its ICPs. None of the ICPs created during the audit period have unmetered load recorded by the trader, and the most recently created ICPs with unmetered load were created in 2017.

I checked the five most recently created ICPs with unmetered load recorded by the trader, the oldest of which was created in 2016. EA networks advised that they do not know the capacity of the unmetered load, and the code allows them not to update the registry under these circumstances.

The Ashburton District Council distributed unmetered load (DUML) audit was completed around the same time as the distributor audit. As part of the DUML audit, EA Networks confirmed that there are a small number of private unmetered streetlights on their network. These are typically associated with another ICP. EA Networks does not have unmetered load recorded on the registry for the affected ICPs, and confirmed that they normally provide unmetered load details to retailers on request when the ICPs switch between retailers. Because EA Networks is aware of this unmetered load, it should be recorded on the registry.

In addition, EA Networks is aware that there is DUML load connected to the following ICPs, and the registry should be updated to reflect this.

ICP Number	Description
0000010559EAD7C	Ashburton District Council – Streetlighting
0000025163EA218	Ashburton District Council – Streetlighting
0000025164EAFD2	Open Spaces - Parks and Amenities
0000030218EA553	Methven
0000033381EAF01	NZTA Methven
0000033382EA3C1	NZTA not Methven

Initial Electrical Connection date

All 164 ICPs electrically connected during the audit period had an initial electrical connection date recorded. As discussed in **section 2.1**, reporting is in place to identify active ICPs without an initial electrical connection date.

Ten ICPs electrically connected during the audit period had discrepancies between the initial electrical connection date and earliest active date recorded by the retailer and/or meter certification date. For nine ICPs the initial electrical connection date was confirmed to be correct, and for one ICP the date was incorrect:

ICP	Initial electrical connection date	Earliest active date	Meter certification date	Correct initial electrical connection date
0000033644EA0A4	29/09/2018	28/09/2018	28/09/2018	28/09/2018

Another ICP with consistent active, meter certification, and initial electrical connection dates was found to have an incorrect initial electrical connection date when I checked the ICP details against connection paperwork:

ICP	Initial electrical connection date	Earliest active date	Meter certification date	Correct initial electrical connection date
0000033711EACE7	09/11/2018	09/11/2018	09/11/2018	06/11/2018

One ICP at “new” and two ICPs at “ready” have initial electrical connection dates populated. The initial electrical connection dates were updated in error for these non-traded ICPs following a fault and undergrounding of the electricity supply. EA Networks attempted to reverse the records but was unsuccessful as this was the first network event for each ICP:

ICP	ICP Status Code	Initial Electrical Connection Date
0000015759EA05B	0	10/04/2017

ICP	ICP Status Code	Initial Electrical Connection Date
0000015809EA75C	999	5/08/2015
0000016622EA036	0	17/01/2019

Four “active” ICPs which were commissioned since 29/08/13 (when recording initial electrical connection dates became required) do not have initial electrical connection dates recorded on the registry:

ICP	Initial electrical connection date	Original Commissioning Event Date	Correct initial electrical connection date
0000015008EAB14		17/02/2015	17/02/2015
0000031691EA3E9		29/08/2013	29/08/2013
0000032149EA15D		26/08/2014	16/01/2015
0000032344EA401		8/01/2015	15/01/2015

Initial electrical connection date discrepancies identified in the 2017 and 2018 audit were followed up, and found to be cleared.

Non-compliance is recorded in **section 3.5** for the late population of initial electrical connection dates.

Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 4.6</p> <p>With: Clause 7(1)(m) & (p) Schedule 11.1</p> <p>From: 01-Sep-17</p> <p>To: 31-Mar-18</p>	<p>At least two ICPs with incorrect addresses.</p> <p>At least seven distributed generation records do not reflect what is physically installed.</p> <p>At least nine incorrect or missing initial electrical connection dates.</p> <p>Unmetered load type and capacity is not recorded on the registry for some ICPs where EA Networks is aware of the details.</p> <p>Some price, network (including NSP), address, and status changes had incorrect event dates applied.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are rated as weak primarily due to the weaker controls over distributed generation and unmetered information.</p> <p>The audit risk rating is recorded as low because the overall number of variances is low and the impact is negligible.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Installation type and generation details – six of seven listed ICPs have been amended however 0000033738EAFE3 solar installation was cancelled, Registry has been amended to reflex this.</p> <p>Unmetered load – EA Network is aware of the existence of unmetered lighting connected to our network as they are shown on the streetlight geo-schematic & in a spreadsheet (although not actively maintained). What is not recorded is the ICP they relate to, Traders hold this information. We research load information on behalf of the Trader when requested.</p> <p>Initial Electrical Connection date - 0000033644EA0A4 record has been amended.</p>		May 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Installation type and generation details – When ROI is provided, the registry will be amended with generation details.</p> <p>Initial Electrical Connection date – More attention will be paid in future amending the initial Electrical Connection date.</p>		May 2019	

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

Code reference

Clause 7(3) Schedule 11.1

Code related audit information

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

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

Audit observation

The management of registry information was reviewed. The registry list and event detail report for 01/05/18 to 06/03/19 were reviewed to determine compliance.

Audit commentary

ICPs are initially created with a POA pricing code, and updated to an actual pricing code once network connection information is received.

The analysis of the event detail report found that 164 new ICPs were electrically connected during the audit period. Six of those ICPs did not have their pricing details updated to the actual price category, chargeable capacity and distributor installation details within ten business days of initial electrical connection. All were late because there was a delay in receiving the completed network connection forms from the inspectors.

As discussed in **section 2.1**, reporting is in place to identify active ICPs with a POA pricing code.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.7 With: Clause 7(3) Schedule 11.1 From: 17-Oct-18 To: 11-Jan-19	Six backdated price category codes for new connections. Potential impact: Low Actual impact: None Audit history: Once Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as strong because a small number and proportion of updates (3.7%) were late. There is no impact on settlement and a minor impact on participants; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
We are undertaking a review of our process to identify how the breaches occurred.		May 2019	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
It is expected that after our review has been completed there will be no additional breaches of the requirements.		February 2020	

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

Code reference

Clause 7(8) and (9) Schedule 11.1

Code related audit information

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

Audit observation

The registry list as at 06/03/19 was reviewed to determine compliance.

Audit commentary

EA Networks does not use GPS coordinates.

Audit outcome

Not applicable

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

Processes to manage the “ready” status were reviewed.

The registry list and event detail report for 01/05/18 to 06/03/19 were reviewed to identify ICPs at the “ready” status and check compliance.

Audit commentary

EA Networks’ current process is to create all ICPs at the “ready” status.

The registry list showed 11 ICPs currently at “ready” status, five have been at “ready” status for more than one year, and one has been at “ready” status for more than two years. These ICPs are discussed further in **section 3.14**.

All ICPs at “ready” status had a single price category assigned and proposed trader identified.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 11.1

Code related audit information

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

Audit observation

Processes to manage the “distributor” status were reviewed.

The registry list and event detail report for 01/05/18 to 06/03/19 were reviewed to identify ICPs at the “distributor” status and check compliance.

Audit commentary

There are no ICPs with “distributor” status.

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 registry list and event detail report for 01/05/18 to 06/03/19 were reviewed to identify ICPs at the “decommissioned” or “ready for decommissioning” status.

A diverse sample of ten “decommissioned” ICPs was examined. I also examined all 21 ICPs at “ready for decommissioning” status.

Audit commentary

Examination of the list file found 21 ICPs are at “ready for decommissioning status”. There were no ICPs at “ready for decommissioning” where decommissioning should have occurred on the registry.

The 10 “decommissioned” ICPs examined all had the correct “decommissioned” status applied. Eight of the ten ICPs did not have the requested decommissioning date recorded on the registry:

ICP	Event date	Correct event date
0000010600EA826	30/07/2018	14/06/2018

ICP	Event date	Correct event date
0000011107EAB4E	9/10/2018	7/09/2018
0000019439EA728	27/11/2018	23/11/2018
0000020747EAF61	17/12/2018	23/11/2018
0000024854EA083	30/07/2018	25/06/2018
0000025046EAB06	4/02/2019	16/01/2019
0000031752EA1C2	20/08/2018	16/08/2018
0000023994EAA08	21/01/2019	13/11/2018

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.11</p> <p>With: Clause 20</p> <p>Schedule 11.1</p> <p>From: 30-Jul-18</p> <p>To: 04-Feb-19</p>	<p>Eight ICPs were not decommissioned from the requested date.</p> <p>Potential impact: Medium</p> <p>Actual impact: None</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate, because the process should normally ensure that ICPs are decommissioned from the correct date.</p> <p>There is not expected to be an impact on settlement. ICPs must be at inactive ready for decommissioning status prior to being decommissioned.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
An investigation to understand this Issue was undertaken.		May 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Daily reporting will be modified to include a report that monitors ICP that have the "ready for decommissioning" status thus enable prompt decommissioning of ICPs		September 2019	

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

No price category code changes occurred 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 loss category codes were added or ended during the audit period. Changes to the loss factors for the existing codes are discussed in **section 5.2**.

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 in the registry, the distributor must enter the replaced loss factor on the table in the registry.

Audit observation

The loss category code table on the registry was examined.

Audit commentary

All existing loss factors for consumption and generation were updated effective from 01/04/19 on 31/01/19. Only one loss factor per calendar month applied for each loss code.

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 two 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 two embedded networks, the embedded network owner must give written notice to the reconciliation manager of the creation or decommissioning.

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

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

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

Audit observation

The NSP table was examined.

Audit commentary

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 two 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 was examined.

Audit commentary

No NSPs have been created or decommissioned during the audit period.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

The NSP table was reviewed.

Audit commentary

No balancing area changes have occurred 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 one month before the creation or transfer of:

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

Audit observation

The NSP table was reviewed.

Audit commentary

EA Networks have not created any new embedded networks during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 24(2) and (3) Schedule 11.1

Code related audit information

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

Audit observation

The NSP table was reviewed.

Audit commentary

No balancing area changes have occurred during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 27 Schedule 11.1

Code related audit information

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

Audit observation

The NSP table was reviewed.

Audit commentary

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

Audit outcome

Not applicable

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

EA Networks does not have responsibility for any NSP metering.

Audit commentary

EA Networks does not have responsibility for any NSP metering.

Audit outcome

Not applicable

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

Code reference

Clause 10.25(2)

Code related audit information

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

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

- c) *no later than 20 business days after the data of certification of each metering installation, advise the reconciliation participant for the NSP of the certification expiry date (Clause 10.25(2)(c)).*

Audit observation

The NSP supply point table was reviewed.

Audit commentary

EA Networks does not have responsibility for any NSP metering.

Audit outcome

Not applicable

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 months 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

EA Networks 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

EA Networks is not responsible for embedded network gate meters; compliance was not assessed.

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

EA Networks 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

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

Audit outcome

Compliant

7. MAINTENANCE OF SHARED UNMETERED LOAD

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

Code reference

Clause 11.14(2) and (4)

Code related audit information

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

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

Audit observation

The registry list for 01/05/18 to 06/03/19 was reviewed to identify any ICPs with shared unmetered load connected.

Audit commentary

EA Networks has not recorded any shared unmetered load. As discussed in **section 4.6**, there are some private streetlights on the network which may be associated with another ICP or ICPs.

Audit outcome

Not applicable

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 for 01/05/18 to 06/03/19 was reviewed to identify any ICPs with shared unmetered load connected.

Audit commentary

EA Networks does not have any shared unmetered load.

Audit outcome

Not applicable

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 EA Networks’ process and compliance against the guideline’s recommended thresholds.

I reviewed correspondence and documentation relating to the loss factor review.

Audit commentary

EA Networks monitors reconciliation losses for each financial year.

The 2018 audit found that loss factors appeared to be too low, and had not changed since 2012. The difference between reconciliation losses and loss factors indicated the loss factors were not “complete and accurate”.

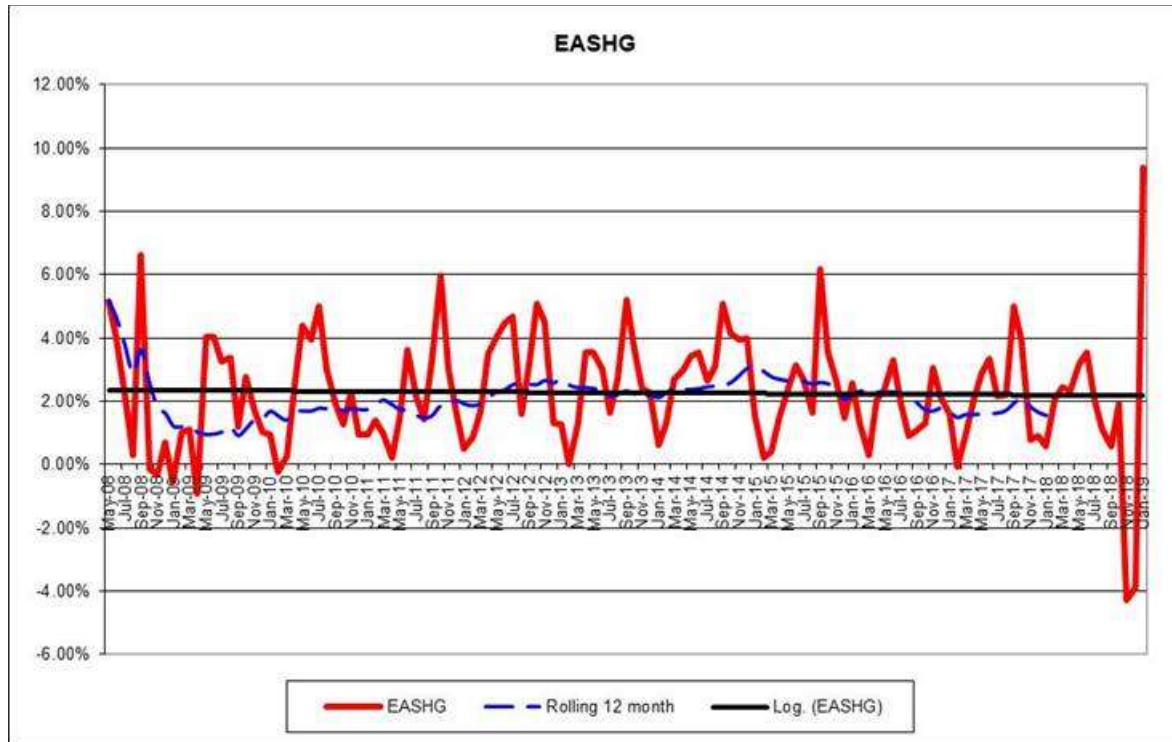
A loss factor review was completed in January 2019, which followed the EA’s guidelines. Seasonal loss factors have been introduced to increase accuracy; new winter loss factors will apply effective from 01/04/19, and summer loss factors will apply effective from 01/10/19. Codes M05 and U01 will have constant loss factor codes from 01/04/19. I confirmed that the updated loss factors recorded on the registry were consistent with the revised loss factor calculations.

EA Networks intends to review loss factors annually from 2019 onwards. Losses are tracked monthly by reviewing reconciliation results provided by the reconciliation manager.

The Electricity Authority provided the reconciliation losses which indicate UFE is not tracking within the +/- 1% threshold indicated in the guideline. By the 14 month wash up, UFE is around 1.5-2%.

Review of correspondence between the Electricity Authority and EA Networks confirmed that the highly variable technical losses are largely due to the unpredictable nature of some loads connected to the network (such as irrigation), and will impact on unaccounted for electricity (UFE). The Authority agreed that EA Networks’ method which used averaging to calculate the loss factors appeared to be the best solution.

The unaccounted for electricity (UFE) is allocated to retailers so there is no adverse impact on reconciliation, however Retailers will make pricing decisions based on published loss factors and if the factors are not accurate this may have an impact. New Retailers in particular may rely more on published loss factors because they will not have their own history.



Audit outcome

Compliant

CONCLUSION

In general good processes are in place, and prompt update of information is treated as a priority. The new connection process is robust, and there are good monitoring controls in place. Loss factors have been reviewed since the 2018 audit, and it is hoped that this will reduce UFE. Fluctuations in irrigation loads make it difficult to predict losses.

Some specific areas requiring improvement were identified:

- The “new” status continues to be applied for 326 ICPs where the load and meters are associated with another active ICP in order to reduce the customer’s line charges and allow them to receive one invoice for the set of ICPs. The metered usage for all the ICPs is billed against one active ICP, and the other ICPs remain at “new” status. 1,5 “inactive reconciled elsewhere” status better reflects the supply situation for these ICPs. EA Networks intends to visit each site at “new” status to ensure that each ICP can be electrically disconnected without disconnecting any other ICP, and is recorded against the correct transformer.
- Unmetered load is not recorded on the registry for any EA Networks ICPs. The Ashburton District Council distributed unmetered load (DUML) audit was completed around the same time as the distributor audit. As part of the DUML audit, EA Networks confirmed that they knew the unmetered load details for some private streetlights and were aware of the DUML ICPs. Unmetered load details for these ICPs should be recorded on the registry.
- Distributed generation details are added to the registry on approval of the application, rather than when installation of distributed generation is confirmed. The capacity is recorded as the value on the application rather than the generator’s nameplate.
- There continue to be some issues with the accuracy of event dates. The process to send updates from the EA Networks Customer Information System to the registry is automated, and the errors occurred during data entry and caused some late registry updates. The incidence of incorrect dates has decreased later in the audit period. A small number of other data accuracy issues were identified, including some missing and inaccurate initial electrical connection dates.
- The 2018 audit found 141 active ICPs not set up in “QuickMap” (which links to the GIS). This has now increased to 250 active ICPs. These ICPs may have incorrect NSPs assigned, do not receive planned outage notifications, and may not have their NSP updated where ICPs are to transfer between NSPs. Many of the ICPs which are not in QuickMap were created prior to 1998, when registry information was initially populated, but some new connections are also missing.

The audit found 11 non-compliances and makes two recommendations. The audit risk rating is 21, and the next audit frequency table indicates that the next audit be due in 6 months. Given that the audit risk rating is on the cusp of a 12 month recommendation, most of the non-compliances affected very small numbers of ICPs, and that controls were strong or moderate for eight of the 11 non-compliances, I recommend that the next audit is completed in 12 months.

PARTICIPANT RESPONSE

EA Networks have reviewed this report, and their comments are contained within its body.