

# **ELECTRICITY INDUSTRY PARTICIPATION CODE DISTRIBUTOR AUDIT REPORT**

For

## **TOP ENERGY**

Prepared by: Allan Borcoski

Date audit commenced: 2 October 2019

Date audit report completed: 25 October 2019

Audit report due date: 27-Oct-19

---

## TABLE OF CONTENTS

Executive summary .....	4
Audit summary .....	5
Non-compliances .....	5
Recommendations .....	6
Issues.....	6
1. Administrative.....	7
1.1. Exemptions from Obligations to Comply With Code (Section 11).....	7
1.2. Structure of Organisation .....	7
1.3. Persons involved in this audit .....	8
1.4. Use of contractors (Clause 11.2A) .....	8
1.5. Supplier list .....	8
1.6. Hardware and Software .....	8
1.7. Breaches or Breach Allegations.....	9
1.8. ICP and NSP Data.....	9
1.9. Authorisation Received.....	10
1.10. Scope of Audit .....	10
1.11. Summary of previous audit .....	10
2. Operational Infrastructure.....	12
2.1. Requirement to provide complete and accurate information (Clause 11.2(1) and 10.6(1)) .....	12
2.2. Requirement to correct errors (Clause 11.2(2) and 10.6(2)).....	13
3. Creation of ICPs.....	14
3.1. Distributors must create ICPs (Clause 11.4) .....	14
3.2. Participants may request distributors to create ICPs (Clause 11.5(3)) .....	14
3.3. Provision of ICP Information to the registry manager (Clause 11.7) .....	15
3.4. Timeliness of Provision of ICP Information to the registry manager (Clause 7(2) of Schedule 11.1) .....	15
3.5. Timeliness of Provision of Initial Electrical Connection Date (Clause 7(2A) of Schedule 11.1) .....	15
3.6. Connection of ICP that is not an NSP (Clause 11.17) .....	17
3.7. Connection of ICP that is not an NSP (Clause 10.31) .....	18
3.8. Temporary electrical connection of ICP that is not an NSP (Clause 10.31A).....	18
3.9. Connection of NSP that is not point of connection to grid (Clause 10.30) .....	19
3.10. Temporary electrical connection of NSP that is not point of connection to grid (Clause 10.30(A)).....	19
3.11. Definition of ICP identifier (Clause 1(1) Schedule 11.1) .....	20
3.12. Loss category (Clause 6 Schedule 11.1) .....	20
3.13. Management of “new” status (Clause 13 Schedule 11.1).....	21
3.14. Monitoring of “new” & “ready” statuses (Clause 15 Schedule 11.1).....	21
3.15. Embedded generation loss category (Clause 7(6) Schedule 11.1).....	22
4. Maintenance of registry information.....	24
4.1. Changes to registry information (Clause 8 Schedule 11.1) .....	24
4.2. Notice of NSP for each ICP (Clauses 7(1),(4) and (5) Schedule 11.1) .....	25
4.3. Customer queries about ICP (Clause 11.31).....	26
4.4. ICP location address (Clause 2 Schedule 11.1) .....	26
4.5. Electrically disconnecting an ICP (Clause 3 Schedule 11.1) .....	27

4.6. Distributors to Provide ICP Information to the Registry manager (Clause 7(1) Schedule 11.1) .....	28
4.7. Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1).....	30
4.8. GPS coordinates (Clause 7(8) and (9) Schedule 11.1) .....	31
4.9. Management of “ready” status (Clause 14 Schedule 11.1) .....	31
4.10. Management of “distributor” status (Clause 16 Schedule 11.1).....	33
4.11. Management of “decommissioned” status (Clause 20 Schedule 11.1).....	34
4.12. Maintenance of price category codes (Clause 23 Schedule 11.1).....	35
5. Creation and maintenance of loss factors.....	37
5.1. Updating table of loss category codes (Clause 21 Schedule 11.1).....	37
5.2. Updating loss factors (Clause 22 Schedule 11.1).....	37
6. Creation and maintenance of NSPs (including decommissioning of NSPs and transfer of ICPs).....	38
6.1. Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1) .....	38
6.2. Provision of NSP information (Clause 26(1) and (2) Schedule 11.1) .....	38
6.3. Notice of balancing areas (Clause 24(1) and Clause 26(3) Schedule 11.1) .....	39
6.4. Notice of supporting embedded network NSP information (Clause 26(4) Schedule 11.1).....	39
6.5. Maintenance of balancing area information (Clause 24(2) and (3) Schedule 11.1) .	40
6.6. Notice when an ICP becomes an NSP (Clause 27 Schedule 11.1) .....	40
6.7. Notification of transfer of ICPs (Clause 1 to 4 Schedule 11.2).....	40
6.8. Responsibility for metering information for NSP that is not a POC to the grid (Clause 10.25(1) and 10.25(3)) .....	41
6.9. Responsibility for metering information when creating an NSP that is not a POC to the grid (Clause 10.25(2)) .....	41
6.10. Obligations concerning change in network owner (Clause 29 Schedule 11.1) .....	42
6.11. Change of MEP for embedded network gate meter (Clause 10.22(1)(b)).....	42
6.12. Confirmation of consent for transfer of ICPs (Clauses 5 and 8 Schedule 11.2) .....	43
6.13. Transfer of ICPs for embedded network (Clause 6 Schedule 11.2).....	43
7. Maintenance of shared unmetered load .....	45
7.1. Notification of shared unmetered load ICP list (Clause 11.14(2) and (4)).....	45
7.2. Changes to shared unmetered load (Clause 11.14(5)) .....	45
8. Calculation of loss factors.....	46
8.1. Creation of loss factors (Clause 11.2) .....	46
Conclusion .....	47
Participant response.....	47
Appendix A - Template for non-compliance, issues and recommendations. ....	48
Non-compliance .....	48
Recommendation .....	48
Issue.....	48

## EXECUTIVE SUMMARY

This audit was performed at the request of Top Energy (TOPE), as required by clause 11.10 of Schedule 11, to assure compliance with the Electricity Industry Participation Code 2010. The relevant rules audited are as required by the Guidelines for Distributor Audits, version 7.0, issued by the Electricity Authority

Records indicate that 322 new ICPs were created on the Top Energy Ltd network during the audit period. Compliance practices appear to have improved in some areas from the last audit for example; managing ICP decommissions status, follow up of ICPs with registry status ready for longer than 4 months and initial electrical connection status in the registry. A significant amount of effort has gone into registry information clean-up. It appears some of the information clean-up may have had the unintended and unfortunate consequence of contributing to non-compliance in other areas. Top Energy Ltd aim to maintain accurate registry information, and the focus on meeting registry update requirements is evident. The new audit compliance summary report was introduced during the audit and it is suggested that it can be used as part of the regular compliance monitoring occurring.

The main issue that stood out during the audit was missing registry information for a small number of distributed generation (solar) ICPs. This appears to be an industry wide problem. Top Energy Ltd are aware of the issue and are looking for ways to identify these sites when the installation falls outside the standard practice on the network.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. Table 1 of the Guidelines for Distributor audit provides some guidance on this matter. The Future Risk Rating score is 16 which results in an indicative audit frequency of 12 months. We agree with the result.

We thank Top Energy for its full and complete cooperation in this audit.

## 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	<i>Clause 11.2(1) and 10.6(1)</i>	Registry information missing for a small number of distributed generation and unmetered load ICPs.	Moderate	Low	2	Identified
Timeliness of Provision of Initial Electrical Connection Date	3.5	<i>Clause 7(2A) of Schedule 11.1</i>	11 ICPs out of 332 created during the audit period had Initial Electrical Connection Dates populated in the registry later than 10 days.	Moderate	Low	2	Identified
Monitoring of “new” & “ready” statuses	3.14	<i>Clause 15 Schedule 11.1</i>	65 ICPs that have remained in the ready status for more than 24 months.	Weak	low	3	Identified
Changes to registry information	4.1	<i>Clause 8 Schedule 11.1</i>	A number of registry information updates were greater than 3 business days from the event date.	Moderate	low	2	Identified
ICP location address	4.4	<i>Clause 2 Schedule 11.1</i>	81 ICPs identified where address and or GPS information do not meet the code requirements.	Moderate	low	1	Identified

Distributors to Provide ICP Information to the Registry manager	4.6	<i>Clause 7(1) Schedule 11.1</i>	The registry contains incorrect information for a number of ICPs with respect to Initial Electrical Connection Date, solar installations and unmetered load.	Moderate	low	2	Identified
Management of “ready” status	4.9	<i>Clause 14 Schedule 11.1</i>	Retailer/trader acceptance of responsibility for ICPs is not received by Top Energy Ltd prior to assigning the ready status in the registry.	Moderate	low	2	Identified
Maintenance of price category codes	4.12	<i>Clause 23 Schedule 11.1</i>	New price category codes were entered into the registry tables less than the 2 months required by the code	Moderate	low	2	Identified
Future Risk Rating						16	

## RECOMMENDATIONS

Subject	Section	Recommendation	Description

## 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

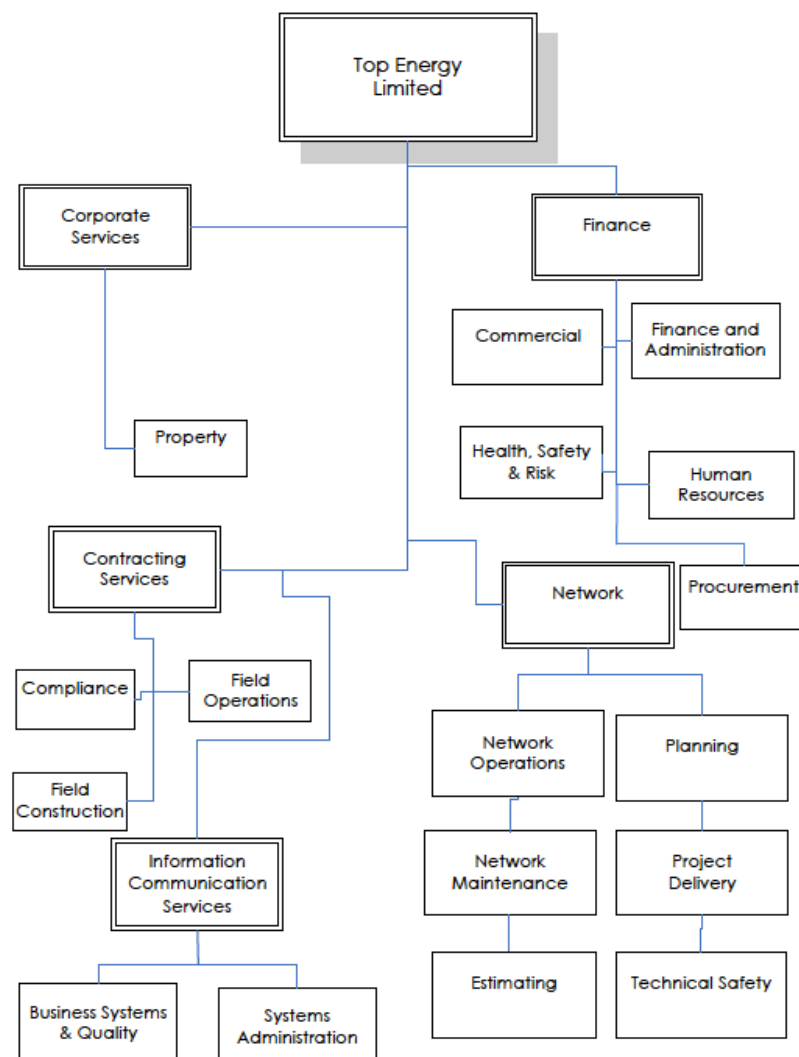
Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

#### Audit observation

Top Energy confirms there are no exemptions in place, relevant to the scope of this audit.

#### Audit commentary

### 1.2. Structure of Organisation



### 1.3. Persons involved in this audit

Name	Title	Company	Comment
Paul Doherty	General manager Finance	Top Energy Ltd	
Simon Bocock	Commercial and Pricing Manager	Top Energy Ltd	Contact Person
Sandra Dearnley	GIS Technician	Top Energy Ltd	
Rachel Cornwell	Metering Services Co-ordinator	Top Energy Ltd	
Ester Delamain	Business Analyst	Top Energy Ltd	
Helen Rush	Administrator	Top Energy Ltd	

### 1.4. Use of contractors (Clause 11.2A)

#### Code reference

Clause 11.2A

#### Code related audit information

*A participant who uses a contractor*

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

#### Audit observation

There are no contractors involved in the Top Energy Ltd operations audited.

#### Audit commentary

### 1.5. Supplier list

The suppliers who support the Top Energy operations audited:

1. Club ICP is supported by Hexagon
2. DigSILENT is provided by PowerFactory

### 1.6. Hardware and Software

Oracle Server is used to run the ICP database and retrieve reports from the registry.

- Club ICP is used by Top Energy Ltd for managing the ICP database and connections to the registry.

- DigSILENT PowerFactory – is used by Top Energy Ltd as a network management tool for modelling electricity flows and recording specifications for equipment used to transfer electricity.

### 1.7. Breaches or Breach Allegations

Top Energy Ltd confirms there are no code breaches or breach allegations during the audit period.

### 1.8. ICP and NSP Data

Distributor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
TOPE	KOE1101	Kaikohe			KOE1101TOPEG	G	01/04/2012	33,672

Status	Number of ICPs 2019	Number of ICPs (2018)	Number of ICPs (2017)
New (999,0)	22	22	31
Ready (0,0)	204	182	159
Active (2,0)	32499	32,075	31,633
Distributor (888,0)	1	1	1
Inactive – new connection in progress (1,12)	27	25	15
Inactive – electrically disconnected vacant property (1,4)	938	952	1000
Inactive – electrically disconnected remotely by AML meter (1,7)	118	79	47
Inactive – electrically disconnected at pole fuse (1,8)	23	15	8
Inactive – electrically disconnected due to meter disconnected (1,9)	10	7	4
Inactive – electrically disconnected at meter box fuse (1,10)	8	7	0
Inactive – electrically disconnected at meter box switch (1,11)	0	0	1
Inactive – electrically disconnected ready for decommissioning (1,6)	2	93	60
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	4441	4283	4253

### 1.9. Authorisation Received

Top Energy provided a letter to the auditors authorising the collection of data and information from other parties for matters relevant to the audit.

### 1.10. Scope of Audit

This audit was performed at the request of Top Energy, as required by clause 11.10 of Schedule 11, to assure compliance with the Electricity Industry Participation Code 2010. The audit covers the following processes, under clause 11.10(4) of Part 11, performed by Top Energy:

- (a) -The creation of ICP identifiers for ICPs
- (b) -The provision of ICP information to the registry and the maintenance of that information
- (c) - The creation and maintenance of loss factors

The audit was carried out on the Top Energy premises at the John Butler Centre in Kerikeri, and Puketona, on the 15/16 October 2019.

### 1.11. Summary of previous audit

Subject	Section	Clause	Non-Compliance	Comment
Requirement to provide complete and accurate information	2.1	11.2(1)	Missing information for a number of embedded generation (solar) ICPs, missing information for some UML ICPs	Still exists. UML issues improved.
Timeliness of provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	8 ICPs out of 377 new connections had Initial Electrical Connection Date populated later than 10BD	Still exists
Monitoring “new” and “ready” statuses	3.14	15 of Schedule 11.1	9 ICPs with the status “ready” and 26 ICPs with the status “new” were not followed up with the trader	Still exists
Changes to registry information	4.1	8 of Schedule 11.1	Some updates to the registry were done later than 3BD.	Still exists. The cause of some of these events issue may have been identified.
ICP location address	4.4	2 of Schedule 11.1	Four ICPs have identical addresses. 36 ICPs do not have GPS coordinates populated and their address description does not meet compliance with this clause	Still exists  The new Audit Compliance summary report appears to have identified more

				historical discrepancies.
Distributor to provide ICP information to the registry manager	4.6	7(1) of Schedule 11.1	Incorrect information in the registry in relation to Initial Electrical Connection Date, connection of solar panels, UML	Still exists Registry clean up appears to have "created" a number of the IECD discrepancies. UML improved.
Management of "ready" status	4.9	14 of Schedule 11.1	Top Energy does not receive a trader acceptance of responsibility for the ICP before the registry assigns the ICP status "ready"	Still exists

## 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

A check of the Audit Compliance Summary Report the LIS file for the audit period and discussions with a number of Top Energy Ltd staff to assess if all practicable steps had been taken to provide accurate information.

#### Audit commentary

1. 6 ICPS with unmetered load were identified that had no load details populated in the registry. 3 were electrically disconnected and load removed.
2. 7 ICPs with distributed generation were identified that had the incorrect installation type, no generation capacity or fuel type populated in the registry. They were identified because the retailer had changed the profile field in the registry. Further investigation revealed that the ICPs recently had solar installed and the metering was installed by others not Top Energy Ltd. In a number of cases the ICPs appear in the Top Energy Ltd distributed generation application list but are not visible if metering work is completed by others. There has also been a history of solar being installed without application to Top Energy Ltd. These scenarios have been difficult to pick up in the exception reporting process

It is suggested Top Energy Ltd review the exception reporting process and find away to identify these discrepancies in future.

#### Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11.2(1) and 10.6(1)  From: 16-Aug-18 To: 01-Sep-19	Registry information missing for a small number of distributed generation and unmetered load ICPs.  Potential impact: Low  Actual impact: Low  Audit history: Last audit  Controls: Moderate  Breach risk rating: 2
<b>Audit risk rating</b>	<b>Rationale for audit risk rating</b>

<b>Low</b>	Controls are moderate. Exception reporting captures most incorrect data. It appears these two issues are difficult to identify with the current process. There is low risk of market settlement being affected with these small numbers.		
Actions taken to resolve the issue		Completion date	Remedial action status
We continue to work on ensuring registry information is accurate. Some actions include: - Ongoing work with councils and road authorities to improve unmetered records (significant work has already been done but dependant on 3rd parties) - Work through and correct ICP's identified with missing data in this audit		Ongoing  Dec 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
- Inclusion of requirements in specification of new IT system for ICP management - Ongoing continual improvement of processes of investment of training of new staff members to enhance knowledge.		Mar 2020  Ongoing	

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

### Code reference

Clause 11.2(2) and 10.6(2)

### Code related audit information

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

### Audit observation

A check of the Audit Compliance Summary Report the LIS file for the audit period and discussions with a number of Top Energy Ltd staff.

### Audit commentary

Top Energy Ltd actively monitors the registry data transfer files looking for discrepancies and where they are found correcting that information Exception reports are run weekly to check registry information against Club ICP data. For example, ICP status differences, incorrect price category codes, ICPs connected but not have an active status in the registry. A fortnightly exception report run identifies ICPs with active status in the registry but no initial electrical connection date.

### Audit outcome

Compliant

### 3. CREATION OF ICPS

#### 3.1. Distributors must create ICPs (Clause 11.4)

##### Code reference

Clause 11.4

##### Code related audit information

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

##### Audit observation

The new connection process is robust and has not changed since the last audit. A request for a new connection is made by the customer or his/her representative. A customer uses the Customer Initiated Work Application Form.

##### Audit commentary

A customer provides details about a new installation, single or three phase, capacity (commercial), is builders temp required, name of retailer/trader. Once an application is received it is passed to an estimator to assess and create a quote. An ICP identifier is uploaded to the registry once the quote has been paid.

The customer's contribution is required to be paid before any work to facilitate a connection begins. Once the payment is made an ICP identifier is created in the CLUB ICP and uploaded to the registry. The customer contacts the chosen trader and provides them with the ICP.

##### Audit outcome

Compliant

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

##### Code reference

Clause 11.5(3)

##### Code related audit information

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

##### Audit observation

An ICP identifier is issued to a customer or their agent (e.g. electrician) not a participant

##### Audit commentary

This clause is not applicable.

Compliance was not assessed

##### Audit outcome

Not applicable

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

#### Code reference

*Clause 11.7*

#### Code related audit information

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

#### Audit observation

The new connection process and EDA Report for the audit period was reviewed and discussed with a number of Top Energy Ltd staff.

#### Audit commentary

Club ICP generates new ICPs based on information provided by a customer in the Customer Initiated Work Application form. Club ICP uploads a file to the registry overnight to create the ICP.

The EDA for the audit period was checked. We confirm that all information required is uploaded. CLUB ICP has built-in validation to ensure mandatory fields are populated.

#### 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 Audit Compliance Report was checked for the audit period.

#### Audit commentary

There appears to be 2 ICPs where the ICP was active prior to the ready status. A subsequent check of the registry shows the issues have been corrected. The 11 ICPs checked through the new connection process indicated no issues.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 7(2A) of Schedule 11.1*

#### Code related audit information

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

### Audit observation

The Audit Compliance Report was checked for the audit period and discussed with a number of Top Energy Ltd staff.

1. 12 ICPs have the IECD populated in the registry greater than 10 days after the actual connection date.
2. 1 ICP had the IECD input 1 day prior to the metering installation date
3. 3 ICPs had an IECD populated in the registry but no active status populated.
4. 322 ICPs were created during the audit period.

### Audit commentary

1. One CP was created in error and subsequently decommissioned. The remainder were just missed initially although connection information was returned to the retailer. The errors were identified in the exception reporting and corrected.
2. We believe this was simply a typographical error.
3. We believe this was just a report timing issue. The respective retailer/traders subsequently updated the active statuses a couple of days after the report was run.

The delay ranged from 11 to 181 business days.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: <i>Clause 7(2A) of Schedule 11.1</i>  From: 16-Aug-18 To: 01-Sep-19	11 ICPs out of 332 created during the audit period had Initial Electrical Connection dates populated in the registry later than 10 days.  Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are moderate. Exception reporting captures incorrect data. There is low risk of market settlement being affected.		
Actions taken to resolve the issue		Completion date	Remedial action status

Continual effort to ensure Initial Electrical Connection Dates are populated within the timeframe.  Will look at whether changing the frequency of reports to identify issues is viable  Investigation of automatic population of the Initial Electrical connection date	Ongoing  Mar 2020  Mar 2020	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
Implement periodic review of the new EA Audit compliance reports to ensure ongoing compliance with existing processes  Ongoing continual improvement of processes of investment of training of new staff members to enhance knowledge.	Dec 2019  Ongoing	

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

#### Code reference

Clause 11.17

#### Code related audit information

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

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

*In respect of ICPs across which unmetered load is shared, the distributor must not connect an ICP unless a trader is recorded in the registry as accepting responsibility for the shared unmetered load, and all traders that are responsible for an ICP on the shared unmetered load have been advised.*

#### Audit observation

The new connection process was reviewed and discussed with a number of Top Energy Ltd staff. 11 ICPs were checked through.

#### Audit commentary

Top Energy Ltd does not allow shared unmetered load to be connected on its network.

The new ICP connection process (see below) review demonstrated that Top Energy does not connect an ICP unless a trader is recorded in the registry and a service request is received from the retailer/trader recorded in the registry against that ICP, requesting the ICP be connected to the network

#### Audit outcome

Compliant

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

#### Code reference

Clause 10.31

#### Code related audit information

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

#### Audit observation

The new connection process was reviewed and discussed with a number of Top Energy Ltd staff.

#### Audit commentary

Top Energy Ltd new connection process is well documented and followed. Once the ICP has been created it is provided to the customer so they can setup their retailer/trader arrangements. Top Energy Ltd then wait for a service request (SR) from the retailer/trader recorded in the registry requesting that ICP to be connected to the network. All retailer/traders' requests go through VircomEMS. Once a SR is received Top Energy contact the customer or nominated electrician to check if the job is ready for connection to the network. If it is Top Energy Ltd issue a job pack/instruction containing all required details to a Top Energy Ltd inspector to go on site to carry out an inspection, install metering and complete the connection to the network. Inspectors return paperwork and switchboard photos to Top Energy Ltd and Club ICP is updated including the Initial Electrical Connection Date (IECD) and subsequently the registry. All documentation is sent to VircomEMS and the retailer/trader.

The safeguard of not connecting an ICP without a trader accepting responsibility is that only Top Energy Ltd inspectors/and staff are authorised to electrically connect an installation after receiving a service request from a retailer/trader.

#### Audit outcome

Compliant

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

#### Code reference

Clause 10.31A

#### Code related audit information

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

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

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

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

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

#### Audit observation

This was discussed with Top Energy Ltd staff during the audit.

#### **Audit commentary**

Top Energy Ltd has not been asked to temporarily electrically connect, however if requested they would do so.

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

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

#### **Audit observation**

A check of the NSP table in the registry shows that Top Energy Ltd has not had any such connections during the audit period.

#### **Audit commentary**

As above

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 10.30(A)*

#### **Code related audit information**

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

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

#### **Audit observation**

A check of the NSP table in the registry shows that Top Energy Ltd has not had any such connections during the audit period.

### Audit commentary

As above

### Audit outcome

Compliant

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

### Code reference

Clause 1(1) Schedule 11.1

### Code related audit information

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

*xxxxxxxxxxxccc where:*

- *xxxxxxxxxxx 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

A check of the Audit Compliance Summary Report the LIS file and new connection process was completed. This area was also discussed with a number of Top Energy Ltd staff.

### Audit commentary

Club ICP uses an algorithm to create ICPs based on a sequential network connection number combined with the unique distributor code TE and a checksum.

Club ICP uploads the ICP to the registry. The ICP is checked and validated during the upload process.

### 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

A check of the Audit Compliance Summary Report the LIS file and new connection process was completed. This area was also discussed with a number of Top Energy Ltd staff.

### Audit commentary

All registry status active and inactive ICPs have a single loss category code.

### 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

A check of the Audit Compliance Summary Report the LIS file and new connection process was completed. This area was also discussed with a number of Top Energy Ltd staff.

#### Audit commentary

The new connection process is robust, well documented and followed meticulously.

Top Energy Ltd does not use the new status on the registry.

The Top Energy Ltd application process for a new connection to the network is completed, including the initiation of any works required to facilitate a connection to the network, prior to any registry activity. At this point the ICP is created in the registry and as all information required is available the ICP is created, the registry status is assigned to ready. The customer is provided with the ICP number and the retailer is notified they have a new ICP on the Top Energy Network.

There are currently 18 ICPs with new status. These are historic and will be reviewed as part of the ongoing registry clean-up work.

#### Audit outcome

Compliant

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

#### Code reference

Clause 15 Schedule 11.1

#### Code related audit information

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

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

#### Audit observation

A check of the Audit Compliance Summary Report and the LIS file and identified:

1. 65 ICP records in the registry that have remained in the ready status for more than 24 months.

#### Audit commentary

These all have event dates between 2011 and 2017. Top Energy Ltd have been actively reviewing these ICPs records in their systems and working through an administrative decommissioning process where appropriate to do so. Top Energy Ltd may wish to also

consider checking the physical connection where works may have been completed, prior to completing the administrative decommissioning.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.14 With: <i>Clause 15</i> <i>Schedule 11.1</i>  From: 16-Aug-18 To: 01-Sep-19	65 ICPs that have remained in the ready status for more than 24 months.  Potential impact: Low  Actual impact: Low  Audit history: Multiple times  Controls: Weak  Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are weak. The established process has not been followed. It is acknowledged that effort has been put into addressing this non-compliance since the last audit.  There is low risk of market settlement being affected.		
Actions taken to resolve the issue		Completion date	Remedial action status
Continue to review the current manual decommissioning process and implement improvements to regain compliance in this area		Mar 2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing continual improvement of processes of investment of training of new staff members to enhance knowledge.		Ongoing	

### 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*

- *the ICP identifier of the ICP*
- *the NSP identifier of the NSP to which the ICP is connected*
- *the plant name of the embedded generating station.*

#### **Audit observation**

The Audit Compliance Summary Report and the LIS file for the audit period identified that Top Energy Ltd has one embedded generation station (Ngawha Geothermal Power Station) connected to its network.

#### **Audit commentary**

Ngawha Geothermal Power Station ICP 0000003490TE5AE has the unique loss category code assigned (GEN1).

#### **Audit outcome**

Compliant

## 4. MAINTENANCE OF REGISTRY INFORMATION

### 4.1. Changes to registry information (Clause 8 Schedule 11.1)

#### Code reference

Clause 8 Schedule 11.1

#### Code related audit information

*If information held by the registry that relates to an ICP for which the distributor is responsible changes, the distributor must give written notice to the registry manager of that change.*

*Notification must be given by the distributor within 3 business days after the change takes effect, unless the change is to the NSP identifier of the NSP to which the ICP is usually connected (other than a change that is the result of the commissioning or decommissioning of an NSP).*

*In those cases, notification must be given no later than 8 business days after the change takes effect.*

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

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

#### Audit observation

The Audit Compliance Summary Report and the LIS file for the audit period identified:

1. 2186 address changes
2. 4208 pricing changes
3. 150 network changes
4. 105 change status to decommissioned

#### Audit commentary

##### Registry Updates Greater Than 3 days

1. 546 address changes Range 4 to 4074 days
2. 1052 pricing changes Range 4 to 783 days
3. 30 network changes Range 4 to 1286 days
4. 15 change status to decommissioned Range 112 to 1102 days

Discussing these findings with Top Energy Ltd leads to two main reasons for apparent delays in registry updates. Firstly, participants requesting event backdates for some changes. Top Energy Ltd actively discourages this practice particularly for pricing changes however it is deemed more important to maintain accurate registry information. The second reason is the programme of correcting historic information discrepancies. This diligence has the unfortunate effect of generating some non-compliance. One other issue came to light in that whilst internally the 3-day update requirement was being met, the registry update file was processed the next day. The registry records the change on the 4<sup>th</sup> day, unfortunately making the changes non-compliant. Staff are now aware of this and will make changes to correct this.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: <i>Clause 8 Schedule 11.1</i>  From: 16-Aug-18 To: 01-Sep-19	A number of registry information updates were greater than 3 business days from the event date. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are moderate. The diligence of trying to correct and maintain historical registry records appears to have had the unintended consequence of contributing to this non-compliance There is low risk of market settlement being affected.		
Actions taken to resolve the issue		Completion date	Remedial action status
Our objective remains that of achieving an accurate Registry. Change our internal process for updating the registry to ensure all updates meet the required timeframe e.g. 3 days		Dec 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Our aim is for compliance however where ensuring the registry is accurate causes a non-compliance, we believe this is acceptable. We do however wish to minimise this as much as possible. Implement periodic reviews of the new EA Audit compliance reports to ensure ongoing compliance with existing processes		Dec 2019	

#### 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 NSP mapping table stored in the registry was checked.

### Audit commentary

Top Energy Ltd has one NSP **KOE1101**.

Club ICP ensures that KOE1101 is the NSP an ICP will be connected to when created.

### Audit outcome

Compliant

## 4.3. Customer queries about ICP (Clause 11.31)

### Code reference

*Clause 11.31*

### Code related audit information

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

### Audit observation

Queries are received typically by phone, email or service request such as the Orb system. Phone requests are usually dealt with immediately

### Audit commentary

Top Energy Ltd have a robust well documented customer service process that is diligently followed

### 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

A check of the Audit Compliance Summary Report and the LIS file for the audit period identified:

1. 79 ICPs with no physical address details
2. 2 ICPs with no GPS coordinates populated.

### Audit commentary

There appears to be some improvement in this area since the last audit. Perhaps due to the remedial work being carried out since the last audit.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: <i>Clause 2 Schedule 11.1</i> From: 16-Aug-18 To: 01-Sep-19	81 ICPs identified where address and or GPS information do not meet the code requirements. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are moderate. There are suitable reports available that provide visibility to this problem. There has been some improvement since the last audit. There is a low risk to market settlement		
Actions taken to resolve the issue		Completion date	Remedial action status
As per previous audits, we are continuing to apply GPS coordinates to new ICP's or when they are visited for maintenance. Will review the list of ICP's identified by the auditor so we can update and correct where possible		Ongoing Dec 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

#### 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 network connection application process is very robust and well documented. Network connection designs would not allow an ICP to be dependent on another ICP for it to be electrically disconnected.

##### Audit commentary

The network connection application process requires every proposed connection to the network (ICP) to be verified against the GIS to ensure it has a discrete disconnect point and connection to the network. Top Energy staff carry out the works to connect the ICP to the network.

### Audit outcome

Compliant

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

### Code reference

Clause 7(1) Schedule 11.1

### Code related audit information

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

- *the location address of the ICP identifier (Clause 7(1)(a) of Schedule 11.1)*
- *the NSP identifier of the NSP to which the ICP is usually connected (Clause 7(1)(b) of Schedule 11.1)*
- *the installation type code assigned to the ICP (Clause 7(1)(c) of Schedule 11.1)*
- *the reconciliation type code assigned to the ICP (Clause 7(1)(d) of Schedule 11.1)*
- *the loss category code and loss factors for each loss category code assigned to the ICP (Clause 7(1)(e) of Schedule 11.1)*
- *if the ICP connects the distributor's network to an embedded generating station that has a capacity of 10MW or more (Clause 7(1)(f) of Schedule 11.1):*
  - a) *the unique loss category code assigned to the ICP*
  - b) *the ICP identifier of the ICP*
  - c) *the NSP identifier of the NSP to which the ICP is connected*
  - d) *the plant name of the embedded generating station*
- *the price category code assigned to the ICP, which may be a placeholder price category code only if the distributor is unable to assign the actual price category code because the capacity or volume information required to assign the actual price category code cannot be determined before electricity is traded at the ICP (Clause 7(1)(g) of Schedule 11.1)*
- *if the price category code requires a value for the capacity of the ICP, the chargeable capacity of the ICP as follows (Clause 7(1)(h) of Schedule 11.1):*
  - a) *a placeholder chargeable capacity if the distributor is unable to determine the actual chargeable capacity*
  - b) *a blank chargeable capacity if the capacity value can be determined for a billing period from metering information collected for that billing period*
  - c) *if there is more than one capacity value at the ICP, and at least one, but not all, of those capacity values can be determined for a billing period from the metering information collected for that billing period-*
    - (i) *no capacity value recorded in the registry field for the chargeable capacity; and*
    - (ii) *either the term "POA" or all other capacity values, recorded in the registry field in which the distributor installation details are also recorded*
  - d) *if there is more than one capacity value at the ICP, and none of those capacity values can be determined for a billing period from the metering information collected for that billing period-*

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

### **Audit observation**

A check of the Audit Compliance Summary Report and the LIS file for the audit period identified:

1. 7 distributed generation ICPs with no fuel type, generation capacity recorded in the registry and an incorrect installation type recorded.
2. 9 ICPs with the incorrect IECD recorded in the registry
3. 3 ICPs with IECDs that didn't match the metering install date
4. 6 UML ICPs with no load details recorded in the registry

### **Audit commentary**

We examined the non-compliances further and found the following.

1. these are ICPs where TOP Energy Ltd did not install the metering and so have never received any information to populate Club ICP and subsequently the registry. This appears to be a common problem in the industry currently.

The current exception reporting does not identify this discrepancy. We suggest using the Audit Compliance Summary Report in future to identify this discrepancy.

2. These ICPs are existing ICPs that have had solar installed. The solar install date was mistakenly populated into the IECD field as a way of identifying the solar IECD. This practice has been ceased.
3. 1 ICP was a typographical error. 2 ICPs IECDs were initially not populated in the registry but they were identified by the exception reporting and corrected at a later date.

4. 3 of these ICPs were private streetlights that had been disconnected. 3 were ICPs where the un-metered load details had not been populated in the registry.

Non-compliance in this area appears to have improved from the last audit with a lower number of discrepancies.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.6 With: <i>Clause 7(1) Schedule 11.1</i>  From: 16-Aug-18 To: 01-Sep-19	The registry contains incorrect information for a number of ICPs with respect to Initial Electrical Connection Date, solar installations and unmetered load.  Potential impact: Low  Actual impact: Low  Audit history: Multiple times  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are moderate. There is diligent regular but manual exception reporting and correction of information taking place, but discrepancies are still occurring. It is suggested that using the new Audit Compliance Report may be helpful and continuing to refine the exception reports. There is low risk of market settlement being affected.		
Actions taken to resolve the issue		Completion date	Remedial action status
This is very similar to the issues identified in 2.1 as it is the same information and as such are penalised twice. - Same actions as 2.1.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

- 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 IC* This is very similar to the issues identified in 2.1 as it is the same information and as such are penalised twice.
- *Same actions as 2.1.P determined by the price category code assigned to the ICP (if any) (Clause 7(3)(b) of Schedule 11.1)*
  - *the actual distributor installation details of the ICP determined by the price category code assigned to the ICP (if any) (Clause 7(3)(c) of Schedule 11.1).*

#### **Audit observation**

The new connection process was reviewed and discussed with Top Energy Ltd. The audit compliance summary pricing updates sheet was checked and showed no anomalies.

#### **Audit commentary**

The price category code is assigned in Club ICP when a new ICP is created. The code is assigned based on information collected in the network connection application. A daily upload file from Club ICP to the registry populates the registry with the price category code.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 7(8) and (9) Schedule 11.1*

#### **Code related audit information**

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

#### **Audit observation**

The LIS file dated 02/10/2019 was checked.

#### **Audit commentary**

Of the 32499 active ICPs in the registry, there were 214 do not have GPS coordinates populated in the registry. 20 of those ICPs were created and initially energised during this audit period. Most of these ICPs have the same Metering Equipment Provider.

Addresses are maintained in the GIS system which is linked to Club ICP. There is a programme currently in place to correct and add more detail to addresses, particularly rural ICPs.

The GPS coordinates comply with the NZTM2000 standard.

#### **Audit outcome**

Compliant

### **4.9. Management of “ready” status (Clause 14 Schedule 11.1)**

#### **Code reference**

*Clause 14 Schedule 11.1*

#### **Code related audit information**

*The ICP status of “Ready” must be managed by the distributor and indicates that:*

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

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

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

### **Audit observation**

A check of the LIS file for the audit period shows that Top Energy Ltd had 204 ICPs in the ready status in the registry.as at 02/10/2019.

The new connection process including ICP creation (through Club ICP) and registry status updates is well documented, recently updated and followed by Top Energy Ltd. The process was demonstrated by Top Energy Ltd during the audit.

Customers or their nominated agent (e.g. builder or electrician) directly make an application to Top Energy Ltd for a new connection to the network and elect a potential retailer.

Retailers/traders are not involved in the application process.

### **Audit commentary**

The Top Energy Ltd application process for a new connection to the network is completed, including the initiation of any works required to facilitate a connection to the network, prior to any registry activity. At this point the ICP is created in the registry and as all information required is available the ICP is created, the status is assigned to ready and the retailer is notified they have a new ICP on the Top Energy Network.

Top Energy Ltd does not have any "blanket" agreements in place with retailers/traders to accept new ICPs.

A single price category code is assigned to the ICP in the registry when the ICP creation is uploaded to the registry.

### **Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 4.9 With: <i>Clause 14</i> <i>Schedule 11.1</i>  From: 16-Aug-18 To: 01-Sep-19	Retailer/trader acceptance of responsibility for ICPs is not received by Top Energy Ltd prior to assigning the ready status in the registry.  Potential impact: Low  Actual impact: Low  Audit history: Twice previously  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are moderate, there is a well-documented and followed process. It works well for the retailer and customer; however, it is non-compliant because the new status is by passed and a retailer/trader has not taken responsibility for the ICP prior to the ready status being updated in the registry. There is a low risk that this non-compliance will impact on market settlement.		
Actions taken to resolve the issue		Completion date	Remedial action status
We will re-engage with retailers to obtain a blanket acceptance.  If this is not achievable, we will look at alternative processes internally where all ICP's are created following a request from the retailer and not after a customer accepts/pays a quote as is the current practice.		31 March 2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above			

#### 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

A check of the LIS file for the audit period indicates only 1 distributor ICP.

#### **Audit commentary**

Top Energy Ltd has 1 distributor status ICP 0000005544TE522 (Kerikeri Retirement Village), a connection to an embedded network.

Top Energy Ltd does not allow shared unmetered load on its network.

#### **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**

A check of the Audit Compliance Summary Report and the LIS file for the audit period shows 2 ICPs where there was a significant delay in updating the registry with decommissioned status. However, there were a further 13 ICPs with delays between 1016 and 114 days.

#### **Audit commentary**

There appears to have been a considerable improvement in the total number of ICPs waiting for decommission status to be updated in the registry and in the ongoing management of the decommission process. As a response to the last audit result there has been a concerted effort to reduce the historic list of ICPs inactive awaiting decommission using the exception reporting process and by actively following up with retailers. The exception report monitoring is a manual process and a small number of exceptions are getting through.

Top Energy Ltd decommissions an ICP on trader (or its service provider) instruction. Top Energy Ltd staff carries out the decommission of the physical connection to the network and a trader is notified once complete. Top Energy Ltd may also be asked to check the installation, for example if a meter reader reports that a building “was gone” or “no meters”. The trader is notified of the findings and Top Energy Ltd wait for further instructions from the trader. Top Energy Ltd may also receive a request from a contractor to dismantle a connection on a customer’s behalf. In this instance Top Energy Ltd will contact the trader to confirm it is ok and for a service request. After physically dismantling a connection to the network, a notification is sent to the trader. Once a trader changes the registry status to “Inactive-ready for decommissioning” (monitored by reporting and active follow up), Top Energy Ltd will update the ICP status to decommissioned on the registry.

It is recommended that Top Energy Ltd review the monitoring and exception reporting process to improve the timeliness of updating the decommissioned status in the registry.

#### **Audit outcome**

Compliant

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

##### **Code reference**

*Clause 23 Schedule 11.1*

##### **Code related audit information**

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

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

*A price category code takes effect on the specified date.*

##### **Audit observation**

The Price Category Codes table in the registry was checked and during the audit period four new price categories were entered into the registry on 18 /02/2019 with a start date of 1/04/2019.

They were:

<b>Code</b>	<b>Description</b>
SC	Standard User TOU All Inclusive
SU	Standard User TOU Uncontrolled
LC	Low User TOU All Inclusive
LU	Low User TOU Uncontrolled

The new price category codes were entered into the registry 42 days prior to the new codes taking effect. The code requirement is two months prior. To meet this requirement the new codes would have to have been entered into the registry on or before 31 January 2019.

##### **Audit commentary**

Further investigation revealed that the new price category codes were related to a TOU pricing run by Top Energy Ltd trial on its network. To be selected to take part in the trial ICPs must meet criteria set by Top Energy Ltd and be selected to participate. The trial is not open to all customers on the Network and therefore the new trial price category codes would be used for a small number of managed ICPs (no more than 500 according to the price schedule). The trial price category information was published in the 2019/20 Price Schedule. The LIS file indicates there were 67 ICPs using the trial price category codes.

#### **Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 4.12 With: <i>Clause 23</i> <i>Schedule 11.1</i>  From: 16-Aug-18 To: 01-Sep-19	New price category codes were entered into the registry tables less than the 2 months required by the code.  Potential impact: Low  Actual impact: Low  Audit history: Once previously  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls recorded as moderate as Top Energy during discussions on this area demonstrated they are well aware of the required timeline for entering price category updates into the registry, they also said there had been a previous non-compliance in this area. The trial nature of this event appears to have contributed to the delayed update. The potential and actual impacts are set as low because they impact only a small number of informed parties. Consequently, the risk to market settlement is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Include action into our companywide automated compliance process tool (Assura). This is an online system where actions are loaded and managed. This includes assignment to staff, deadlines, reminder notifications and escalation if not completed by predefined dates.		Dec 2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above			

## 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

We checked the Loss Factor Code table in the registry

#### Audit commentary

Top Energy Ltd did not add any new Loss Factor Codes during this audit period.

#### Audit outcome

Compliant

### 5.2. Updating loss factors (Clause 22 Schedule 11.1)

#### Code reference

Clause 22 Schedule 11.1

#### Code related audit information

*Each loss category code must have a maximum of 2 loss factors per calendar month. Each loss factor must cover a range of trading periods within that month so that all trading periods have a single applicable loss factor.*

*If the distributor wishes to replace an existing loss factor on the table in the registry, the distributor must enter the replaced loss factor on the table in the registry.*

#### Audit observation

We checked the Loss Factor Code table in the registry

#### Audit commentary

Top Energy Ltd Loss Factor Codes have a single value for the full year. Top Energy Ltd did not change the value of any Loss Factor Codes during this audit period.

#### Audit outcome

Compliant

## 6. CREATION AND MAINTENANCE OF NSPS (INCLUDING DECOMMISSIONING OF NSPS AND TRANSFER OF ICPS)

### 6.1. Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1)

#### Code reference

Clause 11.8 and Clause 25 Schedule 11.1

#### Code related audit information

*If the distributor is creating or decommissioning an NSP that is an interconnection point between 2 local networks, the distributor must give written notice to the reconciliation manager of the creation or decommissioning.*

*If the embedded network owner is creating or decommissioning an NSP that is an interconnection point between 2 embedded networks, the embedded network owner must give written notice to the reconciliation manager of the creation or decommissioning.*

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

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

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

#### Audit observation

We checked the NSP mapping table in the registry.

#### Audit commentary

Top Energy Ltd has one NSP only. Top Energy Ltd did not establish or decommission a new NSP during this audit period.

#### Audit outcome

Compliant

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

#### Code reference

Clause 26(1) and (2) Schedule 11.1

#### Code related audit information

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

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

#### Audit observation

Top Energy Ltd did not create a new NSP during this audit period.

**Audit commentary**

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

**Audit outcome**

Not applicable

**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**

Top Energy Ltd did not create any new NSP during this audit period.

**Audit commentary**

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

**Audit outcome**

Not applicable

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

**Code reference**

*Clause 26(4) Schedule 11.1*

**Code related audit information**

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

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

**Audit observation**

Top Energy did not become the owner of embedded network during this audit period.

**Audit commentary**

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

### Audit outcome

Not applicable

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

### Code reference

Clause 24(2) and (3) Schedule 11.1

### Code related audit information

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

### Audit observation

We checked the NSP mapping table in the registry.

### Audit commentary

Top Energy has one balancing area, KOE1101TOPEG. The NSP mapping table in the registry showed that there were no changes to the balancing area during this audit period.

### Audit outcome

Compliant

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

### Code reference

Clause 27 Schedule 11.1

### Code related audit information

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

### Audit observation

Top Energy Ltd did not transfer any ICPs that became NSPs.

### Audit commentary

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

### Audit outcome

Not applicable

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

### Code reference

Clause 1 to 4 Schedule 11.2

### Code related audit information

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

### Audit observation

Top Energy Ltd did not transfer any ICPs.

### Audit commentary

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

### 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 1 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

Top Energy does not have any NSPs that are not connections to the grid for which they are responsible.

### Audit commentary

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

### 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**

Top Energy does not have any NSPs that are not connections to the grid for which they are responsible.

#### **Audit commentary**

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

#### **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 1 month notification is required before the acquisition (Clause 29(2) of Schedule 11.1).*

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

#### **Audit observation**

Top Energy Ltd does not own any embedded networks.

#### **Audit commentary**

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

#### **Audit outcome**

Not applicable

### **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**

Top Energy Ltd does not own any embedded networks.

**Audit commentary**

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

**Audit outcome**

Not applicable

**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**

Top Energy Ltd does not own any embedded networks.

**Audit commentary**

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

**Audit outcome**

Not applicable

**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**

Top Energy Ltd does not own any embedded networks.

**Audit commentary**

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

**Audit outcome**

Not applicable

## 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

We confirmed Top Energy Ltd does not allow shared unmetered load to be installed on its network.

#### Audit commentary

As above.

#### 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

Top Energy Ltd does not allow shared unmetered load to be installed on its network.

#### Audit commentary

This clause is not applicable to Top Energy Ltd and therefore was not assessed.

#### 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

There was no change to loss factors during the period of audit and they remained as they were for the 2018 audit.

#### Audit commentary

The loss factor calculation methodology was outlined by Top Energy Ltd. The methodology applied is based on the requirements as set out in the Electricity Authority's Guidelines on the Calculation and use of Loss Factors for Reconciliation Purposes. Data analysis utilises HHR metering data as a base and where this data is not available appropriate data from the network SCADA is used. Technical losses are calculated using the DigSILENT Power factory software.

Top Energy Ltd monitor their network losses on a monthly basis and if the losses differ from the forecast profile by a pre-determined tolerance then the losses will be reviewed. The decision to update the loss factors will be made by October of each year to ensure the new loss factors are notified and applied to meet code requirements. In addition, TOP Energy Ltd have their loss factors and methodology reviewed by an external party on a regular basis.

Top Energy has three ICC (Individually Calculated Customer), JNL, AFFCO, and Ngawha Generation.

We confirmed that TOP Energy Ltd website published a brief outline of the loss factor calculations.

#### Audit outcome

Compliant

## CONCLUSION

### PARTICIPANT RESPONSE

It is disappointing that our overall rating has reduced slightly from last year (from 14 to 16), especially when the same data errors are penalised under two code requirements. (2.1 and 4.6) and some of non-compliances are due to information clean ups which may have “unintended and unfortunate consequence of contributing to non-compliance in other areas”

We do acknowledge that we remain non-compliant in several areas, all of which provide no material reconciliation issues. As our objective is to maintain an accurate registry, we will continue to look for opportunities where we can improve compliance. The addition of the new EA Audit Compliance Report will assist this and will be reviewed on a periodic basis throughout the year.

Over the last year we have continued to look at alternatives to Club ICP as we identified in last year’s audit. Unfortunately, the solutions provider we were working with, in conjunction with 3 other distributors, informed us that they were unable to provide a suitable solution.

We will continue looking at alternatives over the next year, but this has delayed progress in the area by at least 12 months.

We thank Allan for his constructive and engaged approach to the audit.

## APPENDIX A - TEMPLATE FOR NON-COMPLIANCE, ISSUES AND RECOMMENDATIONS.

### NON-COMPLIANCE

Non-compliance	Description	
Audit Ref: With:  From: Click here to enter a date. To: Click here to enter a date.	Potential impact: Choose an item. Actual impact: Choose an item. Audit history: Controls: Choose an item. Breach risk rating:	
Audit risk rating	Rationale for audit risk rating	
Choose an item.		
Actions taken to resolve the issue	Completion date	Remedial action status
		Choose an item.
Preventative actions taken to ensure no further issues will occur	Completion date	

### RECOMMENDATION

Recommendation	Description	Audited party comment	Remedial action

### ISSUE

Issue	Description	Remedial action