

# DISTRIBUTOR AUDIT REPORT

For

**Mainpower**

Prepared by: Paul Troon

Date audit commenced: 6 September 2017

Date audit report completed: 11 October 2017

Audit report due date: 13 October 2017

## TABLE OF CONTENTS

Executive summary .....	4
Audit summary.....	4
Non-compliances .....	4
Recommendations .....	4
Recommendations .....	<b>Error! Bookmark not defined.</b>
Issues 4 .....	
1. Administrative.....	5
1.1. Exemptions from Obligations to Comply With Code (Section 11) .....	5
1.2. Structure of Organisation .....	5
1.3. Persons involved in this audit .....	5
1.4. Use of Contractors (Clause 11.2A) .....	6
1.5. Supplier list.....	6
1.6. Hardware and Software .....	6
1.7. Breaches or Breach Allegations.....	6
1.8. ICP and NSP Data.....	6
1.9. Authorisation Received .....	7
1.10. Scope of Audit .....	7
1.11. Summary of previous audit .....	7
2. Operational Infrastructure.....	8
2.1. Requirement to provide complete and accurate information (Clause 11.2(1)).....	8
2.2. Requirement to correct errors (Clause 11.2(2)).....	9
3. Creation of ICPs.....	10
3.1. Distributors must create ICPs (Clause 11.4) .....	10
3.2. Participants may request distributors to create ICPs (Clause 11.5(3)).....	10
3.3. Provision of ICP Information to the registry (Clause 11.7).....	11
3.4. Timeliness of Provision of ICP Information to the registry (Clause 7(2) of Schedule 11.1).....	11
3.5. Timeliness of Provision of Initial Energisation Date (Clause 7(2A) of Schedule 11.1) .....	11
3.6. Connection of ICPs (Clause 11.17).....	13
3.7. Electrical connection of ICPs (Clause 10.28(7)) .....	13
3.8. Electrical connection of ICP that is not an NSP (Clause 10.31) .....	13
3.9. Electrical connection of NSP that is not a point of connection to the grid (Clause 10.30(2)) .....	14
3.10. Definition of ICP identifier (Clause 1(1) Schedule 11.1) .....	14
3.11. Loss category (Clause 6 Schedule 11.1).....	15
3.12. Management of “new” status (Clause 13 Schedule 11.1).....	15
3.13. Monitoring of “new” & “ready” statuses (Clause 15 Schedule 11.1).....	15
3.14. Embedded generation loss category (Clause 7(6) Schedule 11.1) .....	16
4. Maintenance of registry information .....	17
4.1. Changes to registry information (Clause 8 Schedule 11.1) .....	17
4.2. NSP for each ICP (Clauses 7(1),(4) and (5) Schedule 11.1).....	19
4.3. Customer queries about ICP (Clause 11.31(2)) .....	21
4.4. ICP location address (Clause 2 Schedule 11.1) .....	21
4.5. ICP de-energisation (Clause 3 Schedule 11.1).....	22
4.6. Distributors to Provide ICP Information to the Registry (Clause 7(1) Schedule 11.1).....	23
4.7. Provision of information to registry after the trading of electricity at the ICP commences (Clause 7(3) Schedule 11.1) .....	26
4.8. GPS coordinates (Clause 7(8) and (9) Schedule 11.1) .....	27
4.9. Management of “ready” status (Clause 14 Schedule 11.1) .....	27
4.10. Management of “distributor” status (Clause 16 Schedule 11.1) .....	28
4.11. Management of “decommissioned” status (Clause 20 Schedule 11.1) .....	28

4.12.	Maintenance of price category codes (Clause 23 Schedule 11.1) .....	29
5.	Creation and maintenance of loss factors .....	30
5.1.	Updating table of loss category codes (Clause 21 Schedule 11.1) .....	30
5.2.	Updating loss factors (Clause 22 Schedule 11.1) .....	30
6.	Creation and maintenance of NSPs (including decommissioning of NSPs and transfer of ICPs) .....	31
6.1.	Creation and decommissioning of NSPs (Clause 11.8 and Clause 25 Schedule 11.1) .....	31
6.2.	Provision of NSP information (Clause 26(1) and (2) Schedule 11.1) .....	31
6.3.	Notice of balancing areas (Clause 24(1) and Clause 26(3) Schedule 11.1) .....	32
6.4.	Notice of supporting embedded network NSP information (Clause 26(4) Schedule 11.1) .....	32
6.5.	Maintenance of balancing area information (Clause 24(2) and (3) Schedule 11.1) .....	32
6.6.	Notify when an ICP becomes an NSP (Clause 27 Schedule 11.1) .....	34
6.7.	Notification of transfer of ICPs (Clause 1 to 4 Schedule 11.2) .....	34
6.8.	Responsibility for metering information for NSP that is not a POC to the grid (Clause 10.25(1))	35
6.9.	Responsibility for metering information when creating an NSP that is not a POC to the grid (Clause 10.25(2)) .....	35
6.10.	Obligations concerning change in network owner (Clause 29 Schedule 11.1) .....	36
6.11.	Electrically connecting NSP that is not point of connection to grid (Clause 10.30(1)) .....	36
6.12.	Change of MEP for embedded network gate meter (Clause 10.22(1)(b)) .....	36
6.13.	Confirmation of consent for transfer of ICPs (Clauses 5 and 8 Schedule 11.2) .....	37
6.14.	Transfer of ICPs for embedded network (Clause 6 Schedule 11.2) .....	37
7.	Maintenance of shared unmetered load .....	38
7.1.	Notification of shared unmetered load ICP list (Clause 11.14(2) and (4)) .....	38
7.2.	Changes to shared unmetered load (Clause 11.14(5)) .....	38
8.	Calculation of loss factors .....	39
8.1.	Creation of loss factors (Clause 11.2) .....	39
	Conclusion .....	40
	Participant response .....	40

## EXECUTIVE SUMMARY

This audit has found 6 matters of alleged non compliance as documented in the report.

MPOW have been very helpful providing all information requested for this audit.

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Complete and accurate information	2.1	11.2(1)	Incorrect NSP and dedicated status information.	None	Medium	8	Identified
Initial energisation date.	3.5	7(2A) of schedule 11.1	The participant did not provide the initial energisation date for 34 new ICPs within the required time.	Weak	Low	3	Identified
Maintenance of registry information	4.1	8 of schedule 11.1	Registry information not updated with 3 business days.	Weak	Low	3	Identified
NSP fro ICP allocation	4.2	Clauses 7(1),(4) and (5) of schedule 11.1	Incorrect allocation of NSP to ICP.	None	Medium	8	Identified
Address information	4.4	Clause 2 of schedule 11.1	Addresses that do not facilitate ready location of ICP.	Weak	Low	3	Identified
Maintain registry information	4.6	Clause 7 (1) of schedule 11.1	Incorrect ICP dedicated status.	None	Medium	8	Identified
Future Risk Rating						33	

### RECOMMENDATIONS

Subject	Section	Recommendation	Description

### ISSUES

Subject	Section	Recommendation	Description

## 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

We have examined the Electricity Authority register of current exemptions from the Code.

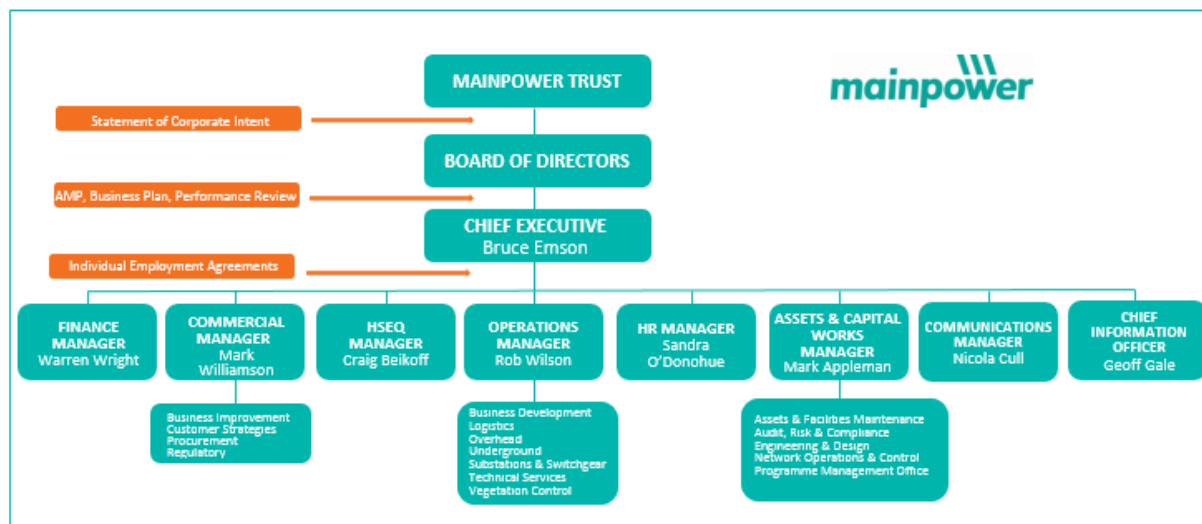
#### Audit commentary

Mainpower do not hold any exemption from compliance with the Code.

#### Audit outcome

Not applicable

### 1.2. Structure of Organisation



### 1.3. Persons involved in this audit

Name	Title	Company
Sarah Barnes	Regulatory Manager	Mainpower
Henry Palmer	GIS technician	Mainpower
Joel Hung	Commercial Analyst	Mainpower
Leigh Hill	Commercial administrator	Mainpower
Paul Troon	Auditor	Paul Troon Consultancy

#### 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 commentary

Mainpower do not use any contractor to perform any task relevant to this audit.

#### 1.5. Supplier list

Not applicable

#### 1.6. Hardware and Software

Mainpower use custom developed computer software systems and manual processes to manage their compliance responsibilities relevant to this audit.

#### 1.7. Breaches or Breach Allegations

We have examined the Electricity Authority web site and no existing breaches or breach allegations relevant to this audit are identified.

#### 1.8. ICP and NSP Data

**NSP** : The following NSP information is sourced from the NSP table.

NSP	POC code	Participant	Recon Type	Start Date	Bal area	MEP	Responsible party
ASY0111MPOWGN	ASY0111	MPOW	GN	01/10/2016	ASYAREAMPOWG	TPNZ	TPNZ
SBK0661MPOWGN	SBK0661	MPOW	GN	01/10/2016	KAI0111MPOWG	TPNZ	TPNZ
KAI0111MPOWGN	KAI0111	MPOW	GN	01/05/2008	KAI0111MPOWG	TPNZ	TPNZ
WPR0661MPOWGN	WPR0661	MPOW	GN	01/01/2016	SWCKMPOWG	TPNZ	TPNZ
WPR0331MPOWGN	WPR0331	MPOW	GN	01/08/2016	SWCKMPOWG	TPNZ	TPNZ
SBK0331MPOWGN	SBK0331	MPOW	GN	01/05/2008	SWCKMPOWG	TPNZ	TPNZ
CUL0661MPOWGN	CUL0661	MPOW	GN	01/08/2016	SWCKMPOWG	TPNZ	TPNZ
CUL0331MPOWGN	CUL0331	MPOW	GN	01/08/2016	SWCKMPOWG	TPNZ	TPNZ

**ICP**: The following ICP information is sourced from the audit data set.

Status	Number of ICPs 13/7/2017
Active (2,0)	38764
Inactive- new connection in progress (1,12)	70
Inactive – vacant (1,4)	815
Inactive – AMI remote disconnection (1,7)	33
Inactive –at pole fuse (1,8)	27

Inactive -- deenergised meter disconnected(1,9)	4
Inactive – de-energised at meter box switch (1,10)	0
Inactive- at meter box switch (1,11)	0
Inactive – ready for decommissioning (1,6)	166
Inactive - reconciled elsewhere (1,5)	0
Decommissioned (3)	3561

### 1.9. Authorisation Received

Not applicable - the auditor has not required authorisation to seek information from any party regarding this audit.

### 1.10. Scope of Audit

The scope of this audit is all distributor functions as required by Clauses 16A.3 to 16A.16 and 16A.23

The following additional matters specified by the Authority are considered.

#### Emphasis required by Authority Clause 10A.9

We have not received any notice of specific emphasis required by the Authority.

#### Self reported instances of non compliance

We have not been advised of any self reported instances of non compliance.

#### Follow up from previous audit

From the review of the previous audit we identify the following matters as included in the scope of audit.

- Backdating changes of price category code for ICP.

#### Compliance with exemption

Not applicable.

### 1.11. Summary of previous audit

The following information is sourced from the previous audit report.

#### Table of non-compliance

Non-compliance	Description	Audited party comment	Remedial action
<b>With:</b> Clause 8 (1) and (2) of schedule 11.1	Changes of price category code backdated greater than 3 business days.	Thank you for identifying this and providing the Electricity Authority's response. We will change our process so that we are not backdating our price category codes by more than 3 business days.	Identified
<b>From / to:</b> Open	<b>Indicative impact:</b> Positive		
<b>Report section:</b> <b>Error! Reference source not found.</b>	<b>Audit history:</b> Once <b>Procedures:</b> satisfactory		

#### Table of recommendations

There were no recommendations arising from the previous audit.

## 2. OPERATIONAL INFRASTRUCTURE

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

#### Code reference

Clause 11.2(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 Part 11 is:

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

#### Audit Observation

We have extensively evaluated the audit data set throughout this audit to determine instances of the provision of incorrect or incomplete information. As recorded in the audit report there are instances where incorrect information has been provided.

#### Audit commentary

We have not identified any incorrect information that is known to have had any significant impact, however moderate potential adverse impact could result from incorrect NSP and dedicated status information.

#### Audit outcome

##### Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 11.2(1)  From: 13-Oct-16 To: 06-Sep-17	Incorrect NSP and dedicated status information has potential to cause localised medium adverse impact on market settlement.  Potential impact: Medium  Actual impact: Low  Audit history: None  Controls: None  Breach risk rating: 8		
Audit risk rating	Rationale for audit risk rating		
Medium	The incorrect information provided has the potential to cause localised medium adverse impact on settlement.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have rectified the incorrect NSP information identified in this audit. We have also identified the source of the incorrect dedicated status information.		4 October 2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	



(a) We will correct the incorrect dedicated status information.	30 November 2017	
(b) A check will be incorporated into the new connections process to ensure that the dedicated status is correct when new ICPs are loaded onto the Registry.	13 October 2017	
(c) We are currently seeking advice and developing a solution to ensure that we monitor MainPower's systems to identify and correct errors in information to be submitted to the Registry.	Q1 2018	

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

### Code reference

Clause 11.2(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

MPOW have a good understanding of the new connections process and relevant staff are proactive at correcting errors. In general MPOW demonstrated a poor understanding of the maintenance of the non new connections related matters in clause 7 (1) of schedule 11.1.

### Audit commentary

MPOW were not aware of the errors we have identified during audit, and have showed a readiness to correct errors we have identified to them.

Non compliance for unrecognised errors is raised in other sections of this audit - we find MPOW compliant with this clause.

### Audit outcome

**Compliant**

### 3. CREATION OF ICPs

#### New connections sample selection.

Compliance with the requirements for the creation of ICPs is determined by examining a sample of the new connections created by the distributor and made active by a trader during the period of audit. It is necessary to examine a sample because the registry does not hold all information relevant to auditing these functions, and consequently additional information must be obtained from the distributor.

A risk analysis is performed to inform the sample size selection. The inherent risk for these functions is determined by the Authority as high and the controls in place to ensure compliance are assessed as weak for the various functions performed. The residual risk is therefore high and we examine all obligations with a high sample size that is appropriate to the population size.

MPOW have created 808 new connections during the period of audit. We randomly select a sample of 2.5% (20) of these using the judgment based methodology.

#### 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

We have examined the ICP identifiers for all new ICPs created during the period of audit.

##### Audit conclusion

All ICP identifiers have passed the registry ICP identifier test. Compliance is confirmed.

##### 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 from a participant 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

We have examined the distributors records for each of the 20 ICPs in the new connections sample to identify if a request for the creation of an ICP identifier has been made by a participant.

##### Audit commentary

None of the ICPs were created as a result of a request from a participant, compliance is confirmed.

We further note that the distributor has created all ICPs on the registry in a timely manner.

##### Audit outcome

**Compliant**

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

#### Code reference

*Clause 11.7*

#### Code related audit information

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

#### Audit observation

We have examined all ICPs in the new connections sample and confirm that all achieved status active which can only be achieved if the distributor has provided all the required information.

#### Audit commentary

Based on the audit observation described above we find the participant compliant with this clause of the Code.

#### Audit outcome

**Compliant**

### 3.4. Timeliness of Provision of ICP Information to the registry (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

We have examined all new connections in the audit data set to determine the date on which the distributor provided all the information required. We have compared this date with the date on which the trader first traded electricity at the ICP.

#### Audit commentary

In all instances the required information was provided to the registry before the ICP was traded. Compliance is confirmed.

#### Audit outcome

**Compliant**

### 3.5. Timeliness of Provision of Initial Energisation 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 no later than 10 business days after the date on which the ICP is initially energised.*

#### Audit Observation

MPOW obtain the initial energisation date from information returned to them by the connection agent, in most cases this is a metering report. MPOW advise that in all cases the date of electrical connection and the date of first energisation are the same.

We examined the registry energised date field for each of the 808 new ICPs identified in the audit data set and identified 24 of these for which an initial energised date has not been provided and more than 10 business days has elapsed. For the remaining ICPs where an initial energised date has been provided we test if the information

was provided within 10 business days of the stated initial energisation date.

We identify 34 ICPs for which the initial energisation date was provided later than 10 business days.

#### Audit commentary

Based on examination of all new connections created during the period of audit we find the participant non compliant with this clause of the Code.

No participant or reconciliation process depends on this information being provided, we therefore assess the potential adverse impact of the alleged non compliance as Low.

#### Audit outcome

#### Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.5</p> <p>With: 7(2A) of schedule 11.1</p> <p>From: 13-Oct-16</p> <p>To: 06-Sep-17</p>	<p><i>Distributor provides initial energisation date to registry.</i></p> <p><i>The participant did not provide the initial energisation date for 34 new ICPs within the required time.</i></p> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: None</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	<p>Audit risk is assessed as Low because no participant or reconciliation process depends on this information and there has not been any material adverse impact.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
The missing initial energization dates have been obtained and the Registry updated.		19/9/2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will continue to work with our livening agent to ensure that we receive the data that we require. In the short term this will be a reminder of MainPower's obligations under the Code. In the longer term we are reviewing utilizing the livening agent's electronic system currently used to populate data to the registry on behalf of an MEP.		30 October 2017 for reminder of obligations. Q2 2018 for electronic system.	

### 3.6. Connection of ICPs (Clause 11.17)

#### Code reference

Clause 11.17

#### Code related audit information

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

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

#### Audit Observation

For the new connections sample we have identified from the registry record the date on which the first trader was recorded on the registry. We have obtained from the distributor the date on which each ICP in the new connections sample was electrically connected.

#### Audit commentary

In all 20 cases examined the first trader was recorded on the registry before the ICP was electrically connected. Compliance is confirmed.

#### Audit outcome

**Compliant**

### 3.7. Electrical connection of ICPs (Clause 10.28(7))

#### Code reference

Clause 10.28(7)

#### Code related audit information

*A network owner must not electrically connect a new point of connection that is to be quantified by metering unless requested to do so by the:*

- *MEP (for a temporary energisation); or*
- *reconciliation participant responsible for ensuring there is a metering installation.*

#### Audit Observation

For the new connections sample of 20 ICPs we asked the distributor to provide evidence of approval from the trader assuming responsibility for metering at the ICP, and we examined that evidence to determine the date on which the approval (request to connect) was given.

#### Audit commentary

We compared the approval date with the date each ICP in the sample was electrically connected, and in all 20 cases the ICP was electrically connected after approval was given by the first trader.

Compliance is confirmed.

#### Audit outcome

**Compliant**

### 3.8. Electrical connection of ICP that is not an NSP (Clause 10.31)

#### Code reference

Clause 10.31

### Code related audit information

*A distributor must not electrically connect an ICP that is not also an NSP unless:*

- *the trader trading at the ICP has requested the electrical connection; or*
- *the MEP who has an arrangement with the trader trading at the ICP has requested temporary energisation of the ICP.*

### Audit Observation

This requirement is a duplication of the requirement in section 3.7 of this audit report. Please Refer to section 3.7 of this audit report for the compliance outcome.

### Audit commentary

Refer to section 3.7 of this audit report

### Audit outcome

**Compliant**

## 3.9. Electrical connection of NSP that is not a point of connection to the grid (Clause 10.30(2))

### Code reference

*Clause 10.30(2)*

### Code related audit information

*A distributor must, within 5 business days of electrically connecting an NSP that is not also a point of connection to the grid, notify the reconciliation manager of the following in the prescribed form:*

- *the NSP electrically connected*
- *the date of the electrical connection*
- *the participant identifier of each MEP*
- *the certification expiry date for each metering installation.*

### Audit Observation

We have examined the current NSP mapping table and determined that no connection has been made to the distributors network during the period of audit of any new NSP that is not a connection to the grid.

### Audit commentary

Compliance is confirmed.

### Audit outcome

**Compliant**

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

### Code reference

*Clause 1(1) Schedule 11.1*

### Code related audit information

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

*xxxxxxxxxxccc where:*

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

### Audit Observation

This requirement is a duplication of requirement 3.1 of this audit report. Please refer to section 3.1 of this audit report for the audit observation.

#### **Audit commentary**

Refer to section 3.1 of this audit report. Compliance is confirmed.

#### **Audit outcome**

#### **Compliant**

### **3.11. 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**

For all ICPs in the audit data set we have examined the registry record to confirm that each ICP has a loss factor code.

The distributor loss factors have been obtained from the registry static data, and we confirm that all loss factor codes provided for ICPs in the new connections sample are referenced in such a way that the associated loss factors are identified.

#### **Audit commentary**

Based on the audit observation described above we find the participant compliant with this clause of the Code.

#### **Audit outcome**

#### **Compliant**

### **3.12. 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**

We have examined all ICPs in the audit data set and none are in status new. We note that MPOW routinely create ICPs in the ready state.

#### **Audit commentary**

With the qualification that no such events have occurred during the period of audit we find the participant compliant with this clause of the Code.

#### **Audit outcome**

#### **Compliant**

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

### Code reference

Clause 15 Schedule 11.1

### Code related audit information

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

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

### Audit Observation

We have examined the audit data set and find no ICPs with the status new or ready for 24 calendar months or more at the time of audit. There is only one proposed ICP which was created in 2017 which is in the ready state.

We requested from the distributor evidence of the results of the last 3 times their process was run to identify ICPs with the status new or ready for 24 calendar months. We are advised that there is no evidence available for the checks being undertaken and we cannot evaluate the process.

### Audit commentary

With the qualification that we are unable to identify any ICPs in the new or ready state we find the participant compliant with this clause of the Code.

### Audit outcome

**Compliant**

## 3.14. 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

We have examined all ICPs in the audit data set with generation (type B and G) and find none have a generation capacity of 10MW or more. Examination of the participants Asset Management Plan confirms this observation.

### Audit commentary

MPOW do not have any embedded generators with capacity of 10MW or more, compliance is confirmed.

### 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 provide notice to the registry 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 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

From the audit data set, registry pricing and network event creation dates are compared to event dates to assess timely creation of records on the registry. When evaluating the timing of events we allow 4 business days because it is common for the registry to introduce an extra day due to computer process timing.

The results of examining registry events are presented in the following table.

Item	Events Identified	Events > 3 Business days
<b>Address events</b>		
Address change	3048	394
<b>Pricing events</b>		
Price category code	2670	110
Loss code	1	0
Chargeable capacity	4	0
Installation details	0	0
<b>Network events</b>		
Dedicated status	1	0
Installation type	151	72
Reconciliation type	0	0
SI List	0	0
UNM detail	0	0

#### Audit commentary

We have examined all relevant registry events for the period of audit and find the participant non compliant with this clause of the Code as indicated in the table above.

**Address information:** Updates of address information have in some cases been applied using the original event date for that information rather than being applied from the date the change was made, hence the arising alleged non compliance.

**Installation type:** 72 changes were made from Load to Both generation and load.

**Price category:** The backdating of price category code for ICP was identified in the previous audit as an alleged non compliance which was accepted by Mainpower. Many of the identified changes resulted from retailers requesting backdated price changes, particularly for changes between low and normal user charges. MPOW have changed their policy and no longer accept backdated price code changes from retailers.

110 backdated price code changes are identified, the majority of these are for changes from builders temporary to permanent or changes to DG.

A review was conducted of DG on the network which identified ICPs having DG that MPOW had not been advised of. The pricing for these was backdated to the installation of the DG. Other changes were backdated to the implementation date after the late delivery of paperwork for the relevant changes.

#### Audit outcome

#### Non-compliant

Non-compliance	Description		
Audit Ref: 4.1 With: 8 of schedule 11.1  From: 03-Jan-16 To: 13-Jul-17	<i>Participant provides changes to registry information within 3 business days of the change taking effect. Participant did not provide information within 3 business days as tabulated in audit report for changes of address, price category code and installation type.</i>  Potential impact: Low  Actual impact: Low  Audit history: Once  Controls: Weak  Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Although controls in place are weak, the identified issues of alleged non compliance have little or no adverse effect.		
Actions taken to resolve the issue		Completion date	Remedial action status
A process has been adopted to monitor DG applications on a monthly basis ensuring that there is not the requirement for large scale updating of DG information including price category. This will reduce the requirement to backdate information. We are adhering to the policy that information will not be backdated by more than 3 working days.  We have updated our processes to ensure that when address information is changed we record the event date.		13/10/2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

We are reviewing utilizing the livening agent's electronic system currently used to populate data to the registry on behalf of an MEP. This will assist us to populate the tariff change data when an ICP shifts from builder's temporary supply to permanent supply within 3 working days.	Q2 2018 for electronic system.	
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#### 4.2. NSP for each ICP (Clauses 7(1),(4) and (5) Schedule 11.1)

##### Code reference

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

*Clause 8 of schedule 11.1*

##### Code related audit information

*The distributor must notify the registry of the NSP identifier of the NSP to which the ICP is usually connected under Clause 7(1)(b) of Schedule 11.1.*

*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.*

*Changes of NSP for ICP must be notified within 8 business days unless the change is in place for less than 14 days.*

##### Audit Observation

No ICPs have a nominated NSP.

**Registry changes:** We have examined the registry events for changes of NSP for ICP and find only two events created for a total of 2 ICPs during the audit period.

As discussed in previous audits of MPOW the network is largely rural and elongated which means there are relatively few possibilities for change of NSP, and a low number of recorded changes on the registry can be expected. However, from our knowledge of network management we consider it unlikely there would only be 2 ICPs for which NSP has changed in a 12 month period and have further investigated.

**Process to maintain NSP for ICP:** MPOW do not have any demonstrable process in place to maintain NSP for ICP. We are advised that if staff consider it necessary a largely manual process is triggered which uses ICP feeder allocations defined in the GIS system to create an update file for the registry. This process, which is described as largely manual, could not be demonstrated to us.

There is no process in place to periodically review and check the validity of GIS allocation of ICP to feeder and hence NSP.

We have identified one instance where 110 ICPs were moved from WPR0331 to ASY0111 because of a change of open point location, this change was not reported to the registry. There is no demonstrable evidence of a process in place to identify and report these changes to the registry.

**Registry data:** We have performed an indicative evaluation of allocated NSP against address information using network connectivity information published in the MPOW asset management plan to determine where in rural towns it is highly unlikely there would be isolated ICPs allocated to NSPs other than the NSP the remainder of the ICPs are allocated to.

Care must be taken with such an evaluation because parts of towns or ends of streets may well be supplied by separate feeders with separate NSPs. When that is the case we see groups of ICPs allocated to the same NSP.

We quickly identified 6 such examples of incorrect allocation of NSP to ICP noting that many more examples are apparent in the data set. Of these 6 examples MPOW agreed that 5 were incorrect and demonstrated that the 6th is correctly configured.

### Audit commentary

There are demonstrable errors in allocation of ICP to NSP on the registry and no processes have been demonstrated to maintain this information or identify and correct errors.

We therefore allege non compliance and assess the associated risk of reoccurrence as high and control strength as none. Because balancing areas ensure all consumption is allocated we consider the audit risk is medium.

### Audit outcome

#### Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.2</p> <p>With: Clauses 7(1),(4) and (5) of schedule 11.1</p> <p>From: 13-Oct-16</p> <p>To: 06-Sep-17</p>	<p><i>There are demonstrable errors in the allocation of ICP to NSP on the registry and no processes have been demonstrated to maintain this information or identify and correct errors.</i></p> <p>Potential impact: Medium</p> <p>Actual impact: Unknown</p> <p>Audit history: None</p> <p>Controls: None</p> <p>Breach risk rating: 8</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Medium</b>	Incorrect allocation of NSP to ICP can have significant impact on reconciliation, however balancing areas mitigate the adverse effect of these errors.		
Actions taken to resolve the issue		Completion date	Remedial action status
The errors identified in the audit have been corrected.		4 October 2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Training will be undertaken with new staff in the Network Control Centre and the records staff responsible for updating the GIS system to advise them of updating requirements.</p> <p>We are currently developing a process for monitoring the allocation of ICP to GXP to ensure we identify and correct errors in a timely fashion.</p>		<p>30 November 2017.</p> <p>Q1 2018</p>	

#### 4.3. Customer queries about ICP (Clause 11.31(2))

##### Code reference

*Clause 11.31(2)*

##### 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

We asked the distributor if they had any requests from any customer or their authorised agent for their ICP identifier during the period of audit.

##### Audit commentary

We are advised there were no such requests. With this qualification we find the participant compliant with this clause of the Code. We are confident that any consumer or their agent requesting the ICP address would be provided that information promptly.

##### 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.*

*A DUMML ICP may have the address of the DUMML database.*

##### Audit Observation

MPOW have GPS coordinates for the majority of the ICP's in their network which will allow ready identification of the ICP location.

1. **The presence of unique GPS coordinates:** We identify 276 ICP addresses without GPS coordinates, we examine these addresses further.
2. **Duplication of addresses:** From the above identified 276 ICPs, we identify 4 addresses that are duplicated.
3. **Missing key information:** From the above identified 276 ICPs we have examined 18 ICPs with missing number or street information, and find in all cases there is other information provided that would allow the ICP to be readily located.
4. **DUMML ICPs:** 24 DUMML ICPs are identified to us by MPOW. 22 of these have an address that is not the address of the DUMML database.

**Address change event timing:** Is reported in section 4.1 of this audit report.

##### Audit commentary

The following alleged non compliance is identified:

- 4 ICP location address are duplicates.
- There is no information that would allow ready location of 22 DUMML ICPs (the DUMML database).

The alleged non compliance involves only 26 ICPs, we therefore assess the materiality of this alleged non compliance as Low.

## Audit outcome

### Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: Clause 2 of schedule 11.1  From: 13-Oct-16 To: 06-Sep-17	<i>Address information provided for 26 ICPs would not allow ready location of the ICP.</i>  Potential impact: None  Actual impact: None  Audit history: None  Controls: Weak  Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	A very small number of ICPs are involved and each ICP may be readily located by means other than distributor provided information.		
Actions taken to resolve the issue		Completion date	Remedial action status
The errors identified in the audit have been corrected.		4 October 2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
This issue is caused by the address field for the DUMML ICPs being overwritten whenever the GPS coordinates are updated. This removes the addresses for the DUMML ICPs (being the address of the office where the DUMML database is located). In the short term the issue will be addressed by adding a step to the GPS update process that the addresses for the DUMML ICPs is restored.  In the longer term the system for recording ICP information and updating the registry will be designed to ensure that the address field for the DUMML ICPs is not overwritten by information from the MainPower GIS system.		30 October 2017         Q1 2018	

#### 4.5. ICP de-energisation (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 de-energised without de-energisation of 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 difference between the total consumption for the embedded network and all other ICPs on the embedded network.*

#### **Audit Observation**

Compliance with this requirement could only be confirmed by field examination of a large number of installations, and in most cases would require a power outage at the installation. This is considered beyond the scope of this audit.

#### **Audit commentary**

We have discussed this requirement with the participant and find they are aware of the requirement and have an unwritten policy that each ICP must be able to be deenergised without de-energising any other ICP.

Given modern electrical practice that has been in place since the year 2002, we think it extremely unlikely any ICP would have been connected that could not be isolated without isolating any other ICP, and we consider the risk of non compliance to be extremely low.

With this qualification we find the participant compliant with this clause of the Code.

#### **Audit outcome**

### **Compliant**

#### **4.6. Distributors to Provide ICP Information to the Registry (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:*

- *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 energisation date of the ICP (Clause 7(1)(p) of Schedule 11.1).*

#### Audit observation

Item Clause 7 (1)	
(a): Location address.	Refer to section 4.4 of this report
(b): NSP usually connected	Refer to section 4.2 of this report
(c): Installation type	<p>There are 38,764 active ICPs on the network  38,177 are configured as installation type L  588 are configured as installation type B  1 is configured as installation type G</p> <p>During the period of audit MPOW have reviewed ICPs with DG connected, this resulted in approximately 150 backdated changes.</p> <p>MPOW now have a process to regularly examine retailer provided profile information on the registry and then determine if DG is present at the ICP. We identified 3 ICPs with retailer profiles including PV1 and installation type L. We asked MPOW to provide evidence of the process being implemented and were provided with copies of relevant emails.</p> <p>One ICP was changed by the retailer on the day after the process was last run approximately 3 weeks prior to the audit and one ICP was identified by Mainpower in February 2017 as having DG installed and remains with installation type set at L on the registry.</p> <p>This is identified as an alleged non compliance.</p>
(d): Reconciliation type	<p>The participant is not responsible for any embedded networks.</p> <p>We have examined all active ICPs in the audit data set and confirm that none are reconciliation type EN.</p>
(e): Loss category code	<p>We have examined all records for active ICPs in the audit data set and find that all have valid loss category codes applied.</p> <p>Refer also to sections 3.11 and section 5 of this report for further examination of loss category codes and loss factors.</p>
(f): EG > 10MW	We have examined the audit data set and not identified any ICPs with capacity equal to or greater than 10MW.
(g): Price category code	<p>We have examined all records in the audit data set for price category code and confirm that each ICP has a price category code.</p> <p>We have compared the price category codes in the audit data set with the participants price information records and with the registry. All codes are valid and have associated pricing information.</p> <p>The participant does not use placeholders for price category codes.</p>
(h): Chargeable capacity	<p>We have examined the participants pricing disclosure and found that the price code 124 has a capacity charge. This code is for irrigation and the capacity charge is kW connected which cannot be determined from meter data.</p> <p>We confirm that only ICPs with price category code 124 have chargeable capacity values published on the</p>



Item Clause 7 (1)	
	registry.
(i): Installation details	<p>(i) the <b>distributor</b> installation details of the <b>ICP</b> determined by the <b>price category</b> code assigned to the <b>ICP</b> (if any), which may be placeholder <b>distributor</b> installation details only if the <b>distributor</b> is unable to assign the actual <b>distributor</b> installation details because the capacity or <b>volume information</b> required to assign the actual <b>distributor</b> installation details cannot be determined before <b>electricity</b> is traded at the <b>ICP</b>:</p> <p>We have examined the participants pricing disclosure and do not find any requirements for the participant to publish installation details for any ICP on the registry.</p>
(j): First trader	Refer to section 3.6 for provision of first trader. This information is provided when an ICP is first energised and is not subsequently maintained.
(k): ICP status	<p>ICP status is not directly managed by distributors. Depending on the information provided to the registry an ICP will be allocated a particular status, distributors may effect new, ready and decommissioned status. Refer to the following sections of this audit report for status change analysis.</p> <p><b>New:</b> Section 3.12  <b>Ready:</b> Section 4.9  <b>Decommissioned:</b> Section 4.11</p>
(l): Dedicated status	<p>(l) designation of the <b>ICP</b> as "Dedicated" if the <b>ICP</b> is located in a <b>balancing area</b> that has more than 1 <b>NSP</b> located within it, and—</p> <p>(i) the <b>ICP</b> will be supplied only from the <b>NSP</b> with the <b>NSP identifier</b> provided under paragraph (b); or</p> <p>(ii) the <b>ICP</b> is a <b>point of connection</b> between a <b>network</b> and an <b>embedded network</b>:</p> <p>The participants network has multiple NSPs and multiple balancing areas. Each balancing area is examined as follows:  <b>ASYAREAMPOWG:</b> Balancing area has only one NSP and dedicated status may be either Y or N.  <b>SWCKMPOWG:</b> Balancing area has 5 NSPs and a mixture of dedicated status Y and N.  <b>KAI0111MPOWG:</b> Balancing area has 2 NSPs and a mixture of dedicated status Y and N.  We have discussed the allocation of dedicated status with MPOW and find there is no process in place to manage this information and a poor understanding of the requirement is evident.  There is no rationale for the allocation of dedicated status to any ICP on the MPOW network.  We identify 27,273 active ICPs (out of 36,900 not connected to ASY0111) with dedicated status set to Y, of these we believe all are incorrect. This is identified as an alleged non compliance the impact of which is difficult to assess but could well be material. We therefore consider the audit risk rating is high.</p>
(m): UNM details	One unmetered load was added during the audit period. The load was a Mainpower asset (substation), the load details were provided by Mainpower who know them.
(n): SUML list	<p>We have examined the registry and find 7 ICPs with reconciliation type SI.</p> <p>For 1 ICP (0000289206MPE99) we have confirmed that each ICP listed in the SI field is correctly configured as part of the shared group.</p>
(o): DG capacity and fuel type	From the audit data set we identify 589 ICPs having installation type B or G indicating the ICPs have generation. All ICPs with installation type B or G have generation capacity and fuel type on the registry.
(p): Date initially energised	<p>For the new connections sample we have examined the provision of the first energised date.</p> <p>The date of first energisation is determined from the electrical connection records which include the required certificate of compliance safety tests that are performed at the time of electrical connection and for which the installation must be energised. The date of initial energisation is therefore the date of electrical connection.</p> <p>In 18 of the 20 installations examined in the new connections sample we find the initial energisation date has been correctly recorded, for 2 of the 20 there is no initial energisation date recorded. Refer to section 3.5 of this audit report for the related non compliance allegation.</p>

#### Audit Observation

We examined the maintenance of ICP information on the registry for the entire audit data set as indicated above.

#### Audit commentary

We find alleged non compliance with the following.

1. 1 active ICP with installation type L has DG details.
2. 26,763 ICPs have dedicated status incorrectly set to Y.

### Audit outcome

#### Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.6</p> <p>With: Clause 7 (1) of schedule 11.1</p> <p>From: 03-Jan-16</p> <p>To: 13-Jul-17</p>	<p><i>Distributor maintains registry information.</i></p> <p>1. 27,273 ICPs have dedicated status incorrectly set to Y.</p> <p>Potential impact: Low</p> <p>Actual impact: None</p> <p>Audit history: Once</p> <p>Controls: None</p> <p>Breach risk rating: 8</p>		
Audit risk rating	Rationale for audit risk rating		
<b>Medium</b>	<p>The setting of dedicated status is incorrect for a large number of ICPs which under fault conditions could cause significant localised errors in reconciliation volume allocation. In normal circumstances this will not have any adverse effect.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
The dedicated status for all ICPs on the MainPower network (other than the Daiken MDF plant which is a direct feed and is not subject to this audit) will be set to N.		30 November 2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>We will review and update the back office process which populates the dedicated status field. MainPower will also adopt a policy that all ICPs should be set to N unless there are particular features of an ICP that require that its dedicated status flag be set to Y.</p> <p>The dedicated status flag for new ICPs will be monitored through the new connection process.</p>		30 November 2017	

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 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 audit data set was examined for the use of placeholders.

##### Audit commentary

MPOW have not used placeholders for any of price category code, chargeable capacity or distributor installation details. We find the participant compliant with this clause of the 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

We have examined the audit data set for the existence of GPS coordinates on the registry.

##### Audit commentary

MPOW have populated most ICP data with GPS coordinates which are correctly formatted. Compliance is confirmed.

##### 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**

We have discussed ready status with the participant, it is well understood. The audit data set has been examined for the correct use of ICP status. New connections are created in the new state and when the required information is available and provided they change to ready state.

#### **Audit commentary**

Compliance is confirmed.

#### **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**

We have discussed status management with MPOW and it is well understood. We have examined the audit data set for the presence of any distributor status ICP and found 7 active ICPs with reconciliation type SI indicating shared unmetered load.

#### **Audit commentary**

The participant understands the requirement for distributor status ICPs, the ICPs identified are correctly configured.

Compliance is confirmed.

#### **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**

We examined the audit data set for ICPs that had been decommissioned during the period of audit.

#### **Audit commentary**

We identified and examined 136 decommissioning events recorded in the audit data set.

- 114 of these have been decommissioned on advice from the trader that the ICP has been deenergised ready for decommissioning.
- 22 were new ICPs created in error and decommissioned without becoming active.

Compliance is confirmed.

#### **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**

We examined the distributors pricing methodology and related disclosures. We have examined the registry price category code table.

#### **Audit commentary**

No price category codes were changed on the registry during the period of audit.

Compliance is confirmed.

#### **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

We have examined the loss category code table on the registry.

#### Audit commentary

There have not been any changes made in the period of audit, compliance is confirmed.

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

#### Audit Observation

We have examined the loss factor table on the registry.

#### Audit commentary

Each loss category code has a maximum of 2 loss factors per calendar month and each loss factor covers all trading periods in any month.

Compliance is confirmed.

#### 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 notify 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 notify 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 notify 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:*

- *notify the reconciliation manager*
- *notify the market administrator*
- *notify each affected reconciliation participant*
- *comply with Schedule 11.2.*

#### Audit Observation

The NSP table was examined to determine if any NSP has been created or decommissioned during the period of audit.

#### Audit commentary

No NSP has been created or decommissioned during the period of audit. Compliance is confirmed.

#### 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 calendar month before the NSP is electrically connected or the ICP is transferred.*

#### Audit Observation

The NSP table was examined to determine if any NSP has been created during the period of audit.

#### Audit commentary

No new NSP has been created during the period of audit, compliance is confirmed.

#### 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 notify 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 examined to determine if any participant has notified the creation of an NSP during the period of audit.

##### Audit commentary

We examined the NSP table and determined that no new NSP has been created during the period of audit, and no changes are required to balancing areas. Compliance is confirmed.

#### 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 notify the reconciliation manager at least 1 calendar month before the creation or transfer of:*

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

##### Audit Observation

The NSP table was examined for the creation of any embedded networks.

##### Audit commentary

No embedded networks have been created on the MPOW network during the period of audit, compliance is confirmed.

#### 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 notify 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**

MPOW network is supplied by 8 NSPs (GXPs) arranged in 3 balancing areas.

We have examined the NSP table for any change of balancing area during the audit period and found no changes.

**Balancing area allocation.**

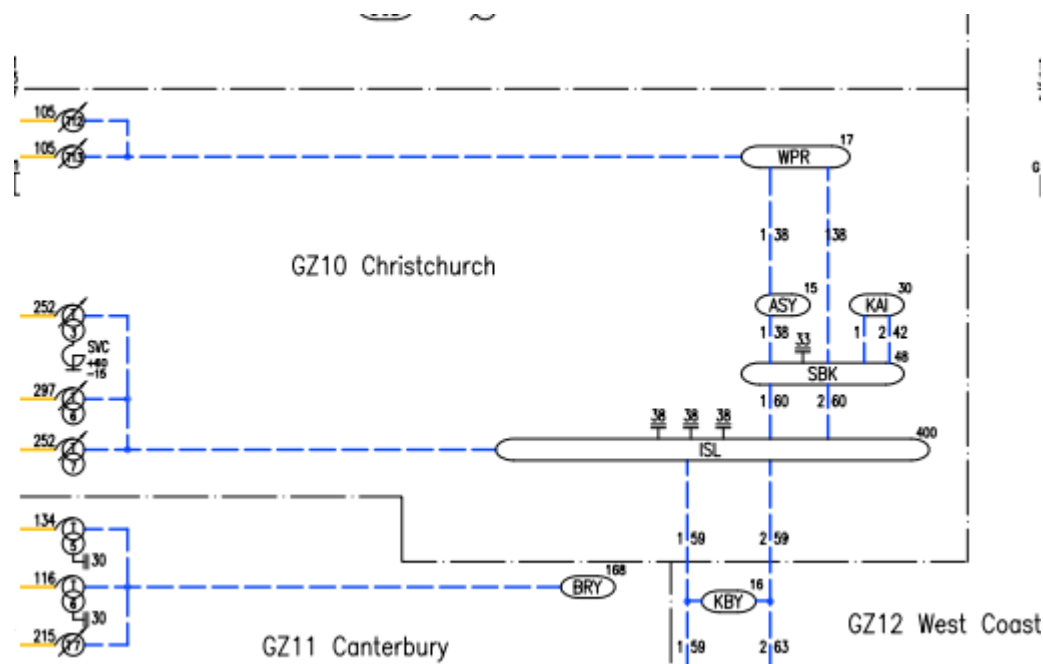
In the previous audit we reviewed the allocation of balancing areas. Changes were identified, advised to the Reconciliation Manager and the following notes were made:

Balancing Areas	NSP/GXPs
SWCKMPOWG	SBK0331 WPR0331 WPR0661 CUL0331 CUL0661
KAI0111MPOWG	KAI0111 SBK0661
ASY0111MPOWG	ASY0111 (MPOW GN)

The following notes may guide future evaluation:

1. ASY0111 has no connectivity under normal circumstances with nearby assets because of phase shift - this may change in the future and MainPower will update balancing area details if it does.
2. KAI0111 is also phase shifted from most of the network, however a special transformer allows interconnection under normal circumstances with SBK0661.
3. The remainder of the network has interconnectivity under normal circumstances.

We have again reviewed the allocations particularly with regard to ASY0111 which is in its own balancing area.



As illustrated by the Transpower network diagram ASY0111 has a single transmission feeder, it also has a single transformer available to MPOW customers.

During an complete outage of ASY0111 all 1,862 normally connected ICPs would be supplied by MPOW from SBK0661, however because this link is phase shifted, unusual switching is required. There are no circumstances under which ASY0111 would be used to supply any other part of the MPOW network.

In this case the allocation of balancing area decision is complex. We consider over all that having ASY0111 in its own isolated balancing area continues to best meet the requirements of the Code (normal circumstances) and adequately meets the requirements of the balancing regime.

#### **Audit commentary**

Based on the audit observation described above we find the participant compliant with this clause of the Code.

#### **Audit outcome**

#### **Compliant**

### **6.6. Notify 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 notify any trader trading at the ICP of the transfer at least 1 calendar month before the transfer.*

#### **Audit Observation**

We have examined the NSP table for the addition of any new NSP where an ICP has become the NSP.

#### **Audit commentary**

No new NSP has been created on the MPOW network during the period of audit, there has therefore not been any ICP becoming an NSP. Compliance is confirmed.

#### **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 notify the market administrator in the prescribed form, no later than 3 business days before the transfer takes effect.*

#### **Audit Observation**

We asked MPOW to identify any ICPs that have been transferred as per clause 1 to 4 of schedule 11.2.

#### **Audit commentary**

We are advised that no ICPs have been transferred, compliance is confirmed.

#### **Audit outcome**

#### **Compliant**

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

##### 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 notify the reconciliation manager of:*

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

##### Audit Observation

The NSP table was examined to determine if the participant is responsible for metering at any NSP. We have confirmed that MPOW are not responsible for metering at any NSP.

##### Audit commentary

Compliance is confirmed.

##### Audit outcome

**Compliant**

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

##### Code reference

*Clause 10.25(2)*

##### Code related audit information

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

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

##### Audit Observation

The NSP table was examined to determine if the participant has proposed any new NSP that is not a connection to the grid.

##### Audit commentary

MPOW have not proposed the creation of any new NSP during the period of audit. Compliance is confirmed.

##### Audit outcome

**Compliant**

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

##### Code reference

*Clause 29 Schedule 11.1*

##### Code related audit information

*If a network owner acquires all or part of a network, the network owner must notify:*

- *the previous network owner (Clause 29(1)(a) of Schedule 11.1)*
- *the reconciliation manager (Clause 29(1)(b) of Schedule 11.1)*
- *the market administrator (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 calendar 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

We have asked MPOW if they have acquired any part of any network during the period of audit, MPOW advise they have not acquired any part of any network during the period of audit.

##### Audit commentary

Based on the audit observation described above we find the participant compliant with this clause of the Code.

##### Audit outcome

##### Compliant

#### 6.11. Electrically connecting NSP that is not point of connection to grid (Clause 10.30(1))

##### Code reference

*Clause 10.30(1)*

##### Code related audit information

*A distributor must not electrically connect an NSP that is not a point of connection to the grid unless:*

- *a reconciliation participation has requested the electrical connection (Clause 10.30(1)(a)); or*
- *a metering equipment provider (authorised by the trader) has requested the electrical connection for a temporary energisation of the ICP (Clause 10.30(1)(b)).*

##### Audit Observation

The NSP table was examined to determine if any new NSP has been connected during the period of audit.

##### Audit commentary

No new NSP has been connected during the period of audit, compliance is confirmed.

##### Audit outcome

##### Compliant

#### 6.12. 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 notify the reconciliation manager and the gaining MEP.*

#### **Audit Observation**

The NSP table was examined to determine if the participant is responsible for any embedded network.

#### **Audit commentary**

MPOW are not responsible for any embedded network gateway metering, compliance is confirmed.

#### **Audit outcome**

**Compliant**

### **6.13. 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 market administrator 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**

MPOW advised there has not been any ICP transfer during the period of audit.

#### **Audit commentary**

Compliance is confirmed.

#### **Audit outcome**

**Compliant**

### **6.14. 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**

We ask the participant if any ICP transfer has taken place.

#### **Audit commentary**

We are advised no ICP transfer has taken place, compliance is confirmed.

#### **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 notify the registry 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 notify the registry 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 participant has SUML on their network. The registry was examined to identify SUML change events, three were identified. In all cases the trader affected was notified of the change by the registry.

#### Audit commentary

Compliance is confirmed.

#### Audit outcome

**Compliant**

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

#### Code reference

*Clause 11.14(5)*

#### Code related audit information

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

#### Audit Observation

See section 7.1 of this audit report.

#### Audit commentary

Compliance is confirmed.

#### Audit outcome

**Compliant**

## 8. CALCULATION OF LOSS FACTORS

### 8.1. Creation of loss factors (Clause 11.2)

#### Code reference

*Clause 11.2*

#### Code related audit information

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

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

#### Audit Observation

The Code requires that participants provide complete and accurate information as specified in the Code. The Code does not specify what constitutes complete and accurate information regarding the calculation of loss factors.

Clause 16A.23 identifies additional requirements for distributor audits, including (c) The creation of loss factors.

Distributors are required to provide and update loss factors for loss category codes (clause 22 of schedule 11.1)

In the absence of any standard against which we may evaluate the creation of loss factors, we compare the loss factors provided by MPOW with those provided by similar distributors and at 1.03 for low voltage and 1.0733 for high voltage we find these consistent with the network structure which supplies a mixture of urban and widely dispersed rural load.

#### Audit commentary

Based on the audit observation described above we find the participant compliant with this clause of the Code.

#### Audit outcome

**Compliant**

## CONCLUSION

The audit has identified 6 matters of alleged non compliance, 2 of which have the potential to cause notable reconciliation errors. We understand that MPOW have been through staff and structural changes over the past 2 years and that the performance of some regulated functions may have been overlooked during these changes.

This audit has clearly identified those functions that need to be reinstated.

### Analysis of next audit due date.

Audit Section	Subject	Breach risk rating
2.1	Provision of complete and accurate information	8
3.5	Provision of initial energised date	3
4.1	Timely changes of registry information	3
4.2	Allocation of NSP to ICP	8
4.4	ICP location address	3
4.6	Provision of ICP information	8
Total		33

From the audit frequency table in the distributor audit guideline we determine the indicative next audit due date would be in 3 months time. Noting that a score below 30 would indicate 6 months, and in order for MPOW to have time to implement process changes and tidy up processes we recommend the next audit should be conducted in 6 months time.

MPOW have cooperated fully with this audit providing all information requested in a timely manner.

## PARTICIPANT RESPONSE

Our responses have been provided in the relevant section of the report. We support the auditor's suggestion of a further audit in 6 months to allow information to be updated and processes to be improved.