

**ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTOR AUDIT REPORT (MATERIAL CHANGE)**

For

**THE POWER COMPANY LIMITED,  
ELECTRICITY INVERCARGILL LIMITED,  
OTAGONET JOINT VENTURE,  
ELECTRICITY SOUTHLAND LIMITED  
(MANAGED BY POWERNET)**

Prepared by: Ewa Glowacka – TEG & Associates Ltd

Date audit commenced: 7 October 2019

Date audit report completed: 13 November 2019

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## EXECUTIVE SUMMARY

PowerNet intends to replace the existing ICP database with new software called PowerNet Connect. The software has been developed by Digital Stock Ltd (DS), in partnership with ACE Computer Consultants Ltd.

Clause 16A.11 of Part 16 requires that, if a reconciliation participant intends to make a “material” change to any certified facilities, processes or procedures, then the changes must be subject to an audit prior to the change taking place. This audit was therefore performed at the request of PowerNet so that it can be supplied to the Electricity Authority to satisfy the requirements of clause 16A.11(1).

The relevant rules audited are as required by the Distributor Auditor Guidelines V7.2, issued by the Electricity Authority.

The test plan and test results, along with the area we examined, demonstrate the compliance likely to be achieved when the PowerNet Connect system is implemented. We have made 4 recommendations. On the 25 October 2019 we had a video conference call during which PowerNet presented evidence to show that all the recommendations were implemented.

We thank the PowerNet staff for their 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
Future Risk Rating						0	

### RECOMMENDATIONS

Subject	Section	Description	Recommendation
Requirements to correct errors	2.2	Current compliance monitoring reports are “connected” to the ICP database	To test the compliance monitoring reports prior to-go live.
Monitoring of “new” & “ready” statuses	3.14	Current compliance monitoring reports are “connected” to the ICP database	To test reporting of ICPs at “new” or “ready” for 24 months
Changes to the registry information	4.1	Shortcomings of PowerNet Connect, which could lead to non-compliances when the registry information must be updated	<p>The following shortcomings of PowerNet Connect were identified which could lead to non-compliance if not addresses</p> <ul style="list-style-type: none"> <li>• Bulk updates of NSPs allows to use today’s date as the Event Date.</li> <li>• No option to change a flag of Installation Type from L to B, default flag is “L”</li> <li>• ICP decommissioning - only one option for a reason code. The registry specification allows for 3 reason codes</li> <li>• No option to change a proposed trader code for ICP with the status “ready” in the registry</li> <li>• Decommissioning of an ICP with the status “ready” – to achieve this the registry design requires it to be done in two steps, firstly the status needs to be changed to “new” by the removal of the proposed trader information or pricing or loss factor code from the registry, then the ICP can be decommissioned using the relevant status code, most likely it will be “set up in error”</li> </ul>
Distributors to provide ICP	4.7	Shortcomings of PowerNet Connect,	The following shortcomings of PowerNet Connect were identified which could lead to

information to the registry manager		which could lead to non-compliances when the registry information must be uploaded to the registry	<p>non-compliance if not addresses</p> <ul style="list-style-type: none"> <li>• The “unmetered load details- Distributor” field – the registry specification allows decimal places for the number of hours or wattage, which is supported by PowerNet Connect</li> <li>• The only option for Installation Type is “L”</li> <li>• The DG records update generates a registry error due to the naming of the fuel type. PowerNet Connect sends e.g. “Solar” instead “solar”. All DG types must be lower case</li> <li>• Not clear which date will be used for the Event Date for ICP being decommissioned. The currently used ICP database has it hard coded that an Event Date =Date of update</li> </ul>
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## 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.*

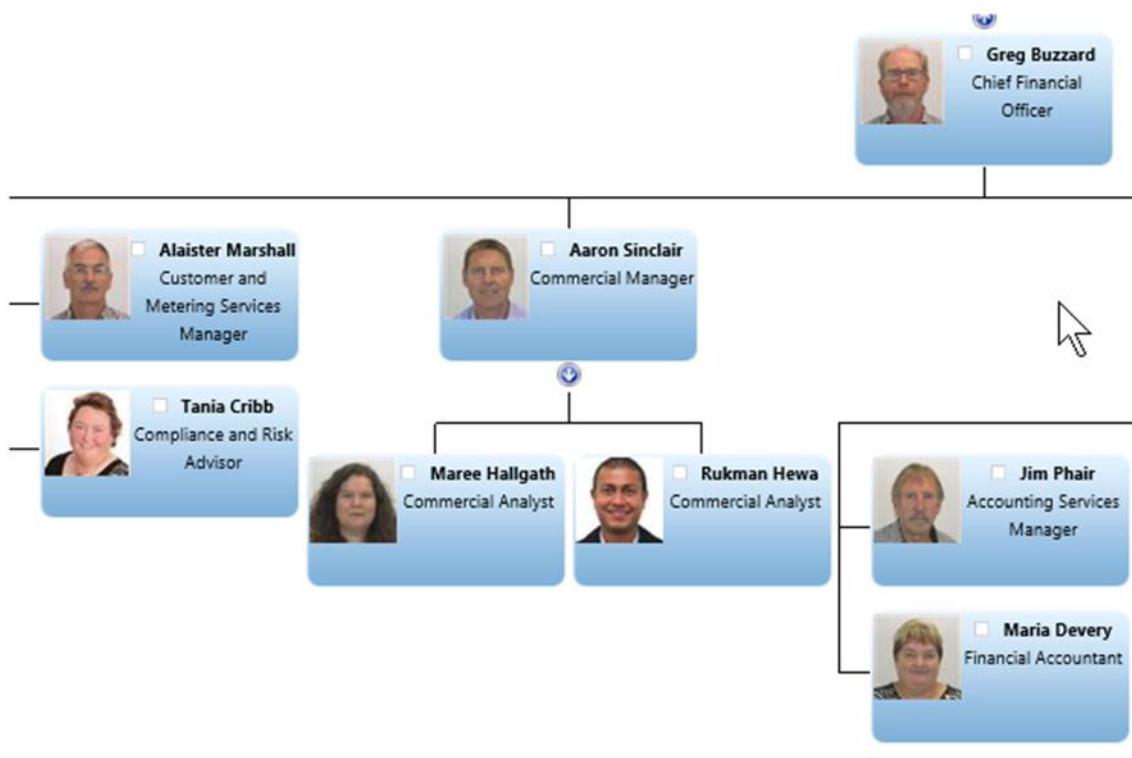
#### Audit observation

None of the networks audited have any exemptions in place that are relevant to the scope of this audit.

#### Audit commentary

Not applicable

### 1.2. Structure of Organisation



### 1.3. Persons involved in this audit

Name	Title	Company
Tony Corkill	Maximo Project Manager	PowerNet
Jim Dowling	Chief Executive Officer	Digital Stock

Name	Title	Company
Will Finlayson	Chief Technology Officer	Digital Stock
Grant Smith	Consultant	ACE Computer Consultants
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates 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 fulfilment of the participants Code obligations*
- *cannot assert that it is not responsible or liable for the obligation due to the action of a contractor*
- *must ensure that the contractor has at least the specified level of skill, expertise, experience, or qualification that the participant would be required to have if it were performing the obligation itself*

##### Audit observation

PowerNet asked Digital Stock in partnership with ACE Computer Consultants to write new software to replace the ICP database.

##### Audit commentary

The new software, PowerNet Connect, will replace the distributor functionality only. The existing ICP database will still be used for the MEP services.

#### 1.5. Supplier list

PowerNet does not subcontract any activities within the scope of this audit.

#### 1.6. ICP and NSP Data

The table below lists the relevant NSPs and their associated balancing areas. There have been no changes during the audit period.

##### TPCO

Distribu tor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
TPCO	BLF0111	Bluff	INV0331	TPCO	SOUTHLDTPCOG	I	1/05/08	0
TPCO	EDN0331	Edendale			SOUTHLDTPCOG	G	1/03/16	1,833
TPCO	ELL0111	Elles Rd	INV0331	TPCO	SOUTHLDTPCOG	I	1/05/08	0
TPCO	GOR0331	GORE			SOUTHLDTPCOG	G	1/03/16	8,708



TPCO	INV0331	Invercargill			SOUTHLDTPCOG	G	1/05/08	9,964
TPCO	LEV0331	Leven St	INV0331	TPCO	SOUTHLDTPCOG	I	1/05/08	0
TPCO	NMA0331	Nth Makarewa			SOUTHLDTPCOG	G	1/05/08	17,353
TPCO	OCB0111	CB46	INV0331	TPCO	SOUTHLDTPCOG	I	1/05/08	0
TPCO	SOU0331	Southern Sub	INV0331	TPCO	SOUTHLDTPCOG	I	1/05/08	0
TPCO	STD0111	Stead St	INV0331	TPCO	SOUTHLDTPCOG	I		0

Status	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017
New (999,0)	1	1	23
Ready (0,0)	84	47	84
Active (2,0)	36,229	35,886	35,643
Distributor (888,0)	1	1	1
Inactive – new connection in progress (1,12)	58	33	26
Inactive – electrically disconnected vacant property (1,4)	1,381	1,442	1,505
Inactive – electrically disconnected remotely by AMI meter (1,7)	57	48	27
Inactive – electrically disconnected at pole fuse (1,8)	17	11	4
Inactive – electrically disconnected due to meter disconnected (1,9)	7	6	2
Inactive – electrically disconnected at meter box fuse (1,10)	1	1	0
Inactive – electrically disconnected at meter box switch (1,11)	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	21	75	202
Inactive – reconciled elsewhere (1,5)	1	0	0
Decommissioned (3)	3,721	3,581	3,256

## ELIN

Distribu tor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
ELIN	BLF0111	Bluff	INV0331	ELIN	INVGILLELING	I	1/05/08	0
ELIN	ELL0111	Elles Rd	INV0331	ELIN	INVGILLELING	I	1/05/08	0
ELIN	INV0331	INVERCARGILL			INVGILLELING	G	1/05/08	17,839
ELIN	LEV0331	Leven St	INV0331	ELIN	INVGILLELING	I	1/05/08	0
ELIN	OCB0111	IVC_CB13	INV0331	ELIN	INVGILLELING	I	1/05/08	0

ELIN	SOU0331	Southern Sub	INV0331	ELIN	INVGILLELING	I	1/05/08	0
ELIN	STD0111	Stead St	INV0331	ELIN	INVGILLELING	I	1/05/08	0
ELIN	BLF0111	Bluff	INV0331	ELIN	INVGILLELING	I	1/05/08	0

Status	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017
New (999,0)	1	1	9
Ready (0,0)	20	8	14
Active (2,0)	17,416	17,421	17,380
Distributor (888,0)	0	0	0
Inactive – new connection in progress (1,12)	15	0	7
Inactive – electrically disconnected vacant property (1,4)	321	320	360
Inactive – electrically disconnected remotely by AMI meter (1,7)	47	30	22
Inactive – electrically disconnected at pole fuse (1,8)	8	10	8
Inactive – electrically disconnected due to meter disconnected (1,9)	3	1	1
Inactive – electrically disconnected at meter box fuse (1,10)	3	1	1
Inactive – electrically disconnected at meter box switch (1,11)	1	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	4	17	93
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	1,350	1,286	1,161

## OTPO

Distribu tor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
OTPO	BAL0331	BALCLUTHA			BALCTHAOTPOG	G	1/01/12	9,731
OTPO	HWB0331	HALFWAY BUSH			PALMSBYOTPOG	G	7/11/14	0
OTPO	HWB1101	HALF WAY BUSH			PALMSBYOTPOG	G	1/11/14	3,553
OTPO	NSY0331	NASEBY			PALMSBYOTPOG	G	1/05/08	2,618

Status	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017
New (999,0)	0	0	11
Ready (0,0)	23	11	13

Active (2,0)	15,103	14,973	14,888
Distributor (888,0)	0	0	0
Inactive – new connection in progress (1,12)	22	15	12
Inactive – electrically disconnected vacant property (1,4)	661	695	713
Inactive – electrically disconnected remotely by AMI meter (1,7)	39	32	35
Inactive – electrically disconnected at pole fuse (1,8)	7	6	2
Inactive – electrically disconnected due to meter disconnected (1,9)	5	4	0
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	0	0	1
Inactive – electrically disconnected ready for decommissioning (1,6)	43	51	40
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	1,860	1,816	1,776

## LLNW

Distribu tor	NSP POC	Description	Parent POC	Parent Network	Balancing Area	Network type	Start date	No of ICPs
LLNW	FKN0331	Frankton			LAKELNDLLNWG	G	1/10/08	1,899
LLNW	NLK0111	OUTLET ROAD WANAKA	CML0331	DUNE	NLK0111LLNWE	E	12/07/17	209

Status	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017
New (999,0)	1	1	14
Ready (0,0)	15	15	10
Active (2,0)	2,025	1,465	959
Distributor (888,0)	0	0	0
Inactive – new connection in progress (1,12)	45	91	25
Inactive – electrically disconnected vacant property (1,4)	7	12	5
Inactive – electrically disconnected remotely by AMI meter (1,7)	2	6	0
Inactive – electrically disconnected at pole fuse (1,8)	0	0	0
Inactive – electrically disconnected due to meter disconnected (1,9)	4	3	0
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0
Inactive – electrically disconnected at meter box	0	0	0

switch (1,11)			
Inactive – electrically disconnected ready for decommissioning (1,6)	9	7	1
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	89	74	0

### 1.7. Hardware and Software

PowerNet Connect is a new piece of software being developed by Digital Stock Ltd (DS), in partnership with ACE Computer Consultants Ltd.

### 1.8. Breaches or Breach Allegations

No breaches or alleged breaches were recorded that relate to this audit.

### 1.9. Authorisation Received

Letter of authorisation was not required.

### 1.10. Scope of Audit

PowerNet intends to replace the existing ICP database with new software called PowerNet Connect. The new software PowerNet Connect will replace the distributor functionality only. The ICP database will still be used for the MEP services.

Clause 16A.11, of Part 16, requires that if a reconciliation participant intends to make a “material” change to any certified facilities, processes or procedures then the changes must be subject to an audit prior to the change taking place. This audit was therefore performed at the request of PowerNet so that it can be supplied to the Electricity Authority to satisfy the requirements of clause 16A.11(1).

The relevant rules audited are as required by the Distributor Auditor Guidelines V7.2, issued by the Electricity Authority.

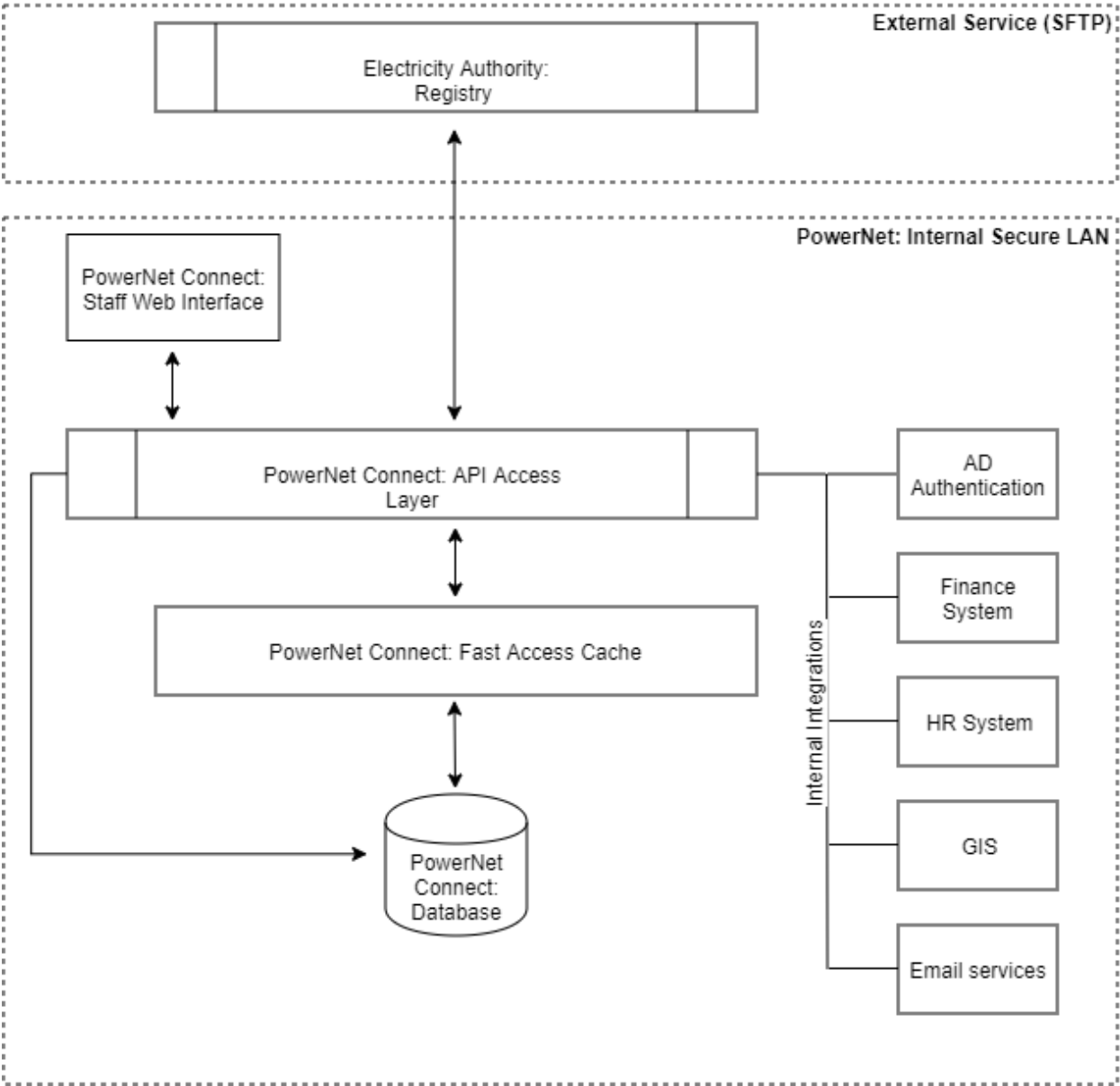
The table below shows the areas within the scope of the audit which will be affected by implementing PowerNet Connect. The audit was carried out on the PowerNet premises at 251 Racecourse Road in Invercargill, on the 7 October 2019.

Area	Within audit scope
Creation of ICPs	✓
Maintenance of registry information	✓
Creation and maintenance of loss factors	✗
Creation and maintenance of NSPs	✓
Maintenance of shared unmetered load	✗

Calculations of loss factor	✗
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The schematic below shows PowerNet Connect and it’s integration with other systems used by PowerNet.

**PowerNet Connect: System Topology & Integrations**



**1.11. Summary of previous audit**

The previous audit was conducted in August 2019 by Ewa Glowacka of TEG Associates Ltd. The following non-compliances were identified:

**TPCO**

Subject	Section	Clause	Non Compliance	Status
Requirement to provide	2.1	11.1(1)	The Effective Date of	Identified

complete information			changing ICPs status to “decommissioned” is incorrect. Incomplete information for a small number of ICPs.	
Timeliness of information provided to the registry	3.4	7(2) of Schedule 11.1	5 ICPs were electrically connected without an ICP recorded in the registry	Identified
Timeliness of provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late update of Initial Electrical Connection Date for 15 ICPs	Identified
Connection of ICP that is not an NSP	3.6	11.17	For 5 ICPs the connection process set out in clause 10.31 was not followed	Identified
Monitoring of “new” and “ready” statuses	3.14	15 of Schedule 11.1	The process for asking the trader who intends to trade at the ICP whether the ICP should continue to have that status was not followed. Number of ICPs with the status “new” and “ready” increased	Identified
Changes to the registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Identified
Distributor to provide information to the registry	4.6	7 (1) of Schedule 11.1	Lack of information in the registry for a small number of ICPs	Identified
Management of “decommissioned” status	4.11	20 of Schedule 11.1	Effective Date for ICPs being decommissioned is the same as the date of update of the registry	Identified

Subject	Section	Recommendation	Status
Requirement to provide complete information	2.1	To implement some detective controls and regularly download LIS files to check accuracy and correctness of ICP information.	Identified
A small number of new connections are electrically connected without an ICP recorded in the registry	3.4	To have an acceptance of the ICP from traders “delivered” to a single email address, which is monitored by the administration team.  Implement detective controls, which will identify new ICPs for which acceptance was not received or not actioned.	Identified

## ELIN

Subject	Section	Clause	Non Compliance	Status
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Requirement to provide complete information	2.1	11.1(1)	The Effective Date of changing ICPs status to “decommissioned” is incorrect. Incomplete information for a small number of ICPs.	Identified
Timeliness of provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late update of Initial Electrical Connection Date for 1 ICP	Identified
Monitoring of “new” and “ready” statuses	3.14	15 of Schedule 11.1	The process for asking the trader who intends to trade at the ICP whether the ICP should continue to have that status was not followed. Number of ICPs with the status “new” and “ready” increased	Identified
Changes to the registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Identified
Distributor to provide information to the registry	4.6	7 (1) of Schedule 11.1	Lack of information in the registry for a small number of ICPs	Identified
Management of “decommissioned” status	4.11	20 of Schedule 11.1	Effective date for ICPs being decommissioned is the same as the date of update of the registry	Identified

Subject	Section	Recommendation	Status
Requirement to provide complete information	2.1	To implement some detective controls and regularly download LIS files to check accuracy and correctness of ICP information	Identified
Creation of loss factors	6.1	We recommend investigating reasons why the UFE on Electricity Invercargill is higher than on other networks	Identified

#### OTPO

Subject	Section	Clause	Non Compliance	Status
Requirement to provide complete information	2.1	11.1(1)	The Effective Date of changing ICPs status to “decommissioned” is incorrect. Incomplete information for a small	Identified

			number of ICPs.	
Timeliness of provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late update of Initial Electrical Connection Date for 15 ICPs	Identified
Monitoring of “new” and “ready” statuses	3.14	15 of Schedule 11.1	The process for asking the trader who intends to trade at the ICP whether the ICP should continue to have that status was not followed. Number of ICPs with the status “new” and “ready” increased	Identified
Changes to the registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Identified
Distributor to provide information to the registry	4.6	7 (1) of Schedule 11.1	Lack of information in the registry for a small number of ICPs	Identified
Management of “decommissioned” status	4.11	20 of Schedule 11.1	Effective date for ICPs being decommissioned is the same as the date of update of the registry	Identified

Subject	Section	Recommendation	Status
Requirement to provide complete information	2.1	To implement some detective controls and regularly download LIS files to check accuracy and correctness of ICP information	Identified

#### LLNW

Subject	Section	Clause	Non Compliance	Status
Requirement to provide complete information	2.1	11.1(1)	The Effective Date of changing ICPs status to “decommissioned” is incorrect. Incomplete information for a small number of ICPs.	Identified
Timeliness of information provided to the registry	3.4	7(2) of Schedule 11.1	2 ICPs were electrically connected without an ICP recorded in the registry	Identified
Timeliness of provision of Initial Electrical Connection Date	3.5	7(2A) of Schedule 11.1	Late update of Initial Electrical Connection Date for 19 ICPs	Identified
Connection of ICP that is not an NSP	3.6	11.17	For 2 ICPs the connection process set out in clause 10.31 was not followed	Identified
Monitoring of “new” and	3.14	15 of Schedule	The process for asking the	Identified



"ready" statuses		11.1	trader who intends to trade at the ICP whether the ICP should continue to have that status was not followed. Number of ICPs with the status "new" and "ready" increased	
Changes to the registry information	4.1	8 of Schedule 11.1	Registry information not updated within 3 business days	Identified
Distributor to provide information to the registry	4.6	7 (1) of Schedule 11.1	Lack of information in the registry for a small number of ICPs	Identified
Management of "decommissioned" status	4.11	20 of Schedule 11.1	Effective date for ICPs being decommissioned is the same as the date of update of the registry	Identified
Updating table of loss category codes	5.1	21 of Schedule 11.1	New Loss Factor Code was recorded in the registry late by 19 days	Identified

Subject	Section	Recommendation	Status
Requirement to provide complete information	2.1	To implement some detective controls and regularly download LIS files to check accuracy and correctness of ICP information	Identified
Timeliness of information provided to the registry	3.4	To have an acceptance of the ICP from traders "delivered" to a single email address, which is monitored by the administration team.  Implement detective controls, which will identify new ICPs for which acceptance was not received or not actioned	Identified

## 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

During the audit we reviewed whether the implementation of PowerNet Connect was likely to cause non-compliance with this clause.

#### Audit commentary

In our opinion the implementation of PowerNet Connect will improve compliance with this clause. The software will utilise already existing reports to monitor compliance. We did not identify examples of misleading or deceptive information.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 11.2(2) and 10.6(2)*

#### Code related audit information

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

#### Audit observation

We reviewed proposed validation (reports) in PowerNet to confirm compliance

#### Audit commentary

The reports already used by PowerNet “looking” into the ICP database will be transferred to PowerNet Connect. Our recommendation is to test the reporting processes prior to going live.

#### Audit outcome

Compliant

Recommendation	Description	Audited party comment	Remedial action
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11.2(2)	To test the compliance monitoring reports prior to-go live.	The Compliance Monitoring Reports have been created to PowerNet Connect database. They will be tested prior to go-live.	Identified
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### 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

ICPs will be created in PowerNet Connect.

##### Audit commentary

During the audit we were shown evidence of ICP identifier creation in the compliant format.

##### 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

ICP identifiers are not requested by a participant, requests come from the customer or their representative.

##### Audit commentary

The implementation of PowerNet Connect will not change the process used by PowerNet.

##### 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

PowerNet Connect will interface with the registry. We checked the file formats and checked uploading information to the test registry. We also reviewed information coming back from the registry to PowerNet Connect.

#### **Audit commentary**

During the audit, we tested the creation of an ICP identifier based on information provided by a customer on an Installation Connection Application form. The process is straight forward and simple to follow. As per current process, an ICP is not uploaded to the registry until a retailer requests a connection.

#### **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 timeliness of the provision of ICP information to the registry is not reliant on the system. The current process will not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

The timeliness of the provision of ICP information to the registry is not reliant on the system. The current process will not change as a result of the PowerNet Connect implementation.

#### **Audit outcome**

Not applicable

### **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 timeliness of the provision of the Initial Electrical Connection Date to the registry is not reliant on the system. The current process will not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

The timeliness of the provision of the Initial Electrical Connection Date to the registry is not reliant on the system. The current process will not change as a result of the PowerNet Connect implementation.

#### **Audit outcome**

Not applicable

### 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

This process does not change as a result of the PowerNet Connect implementation.

#### Audit commentary

This process does not change as a result of the PowerNet Connect implementation.

#### Audit outcome

Not applicable

### 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

This process does not change as a result of the PowerNet Connect implementation.

#### Audit commentary

This process does not change as a result of the PowerNet Connect implementation.

#### Audit outcome

Not applicable

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

#### Code reference

*Clause 10.31A*

#### Code related audit information

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

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

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

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

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

#### **Audit observation**

This process does not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process does not change as a result of the PowerNet Connect implementation.

#### **Audit outcome**

Not applicable

### **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**

This process does not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process does not change as a result of the PowerNet Connect implementation.

#### **Audit outcome**

Not applicable

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

#### **Code reference**

Clause 10.30(A)

#### Code related audit information

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

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

#### Audit observation

This process does not change as a result of the PowerNet Connect implementation.

#### Audit commentary

This process does not change as a result of the PowerNet Connect implementation.

#### Audit outcome

Not applicable

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

#### Code reference

Clause 1(1) Schedule 11.1

#### Code related audit information

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

*xxxxxxxxxxccc where:*

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

#### Audit observation

ICP identifiers will be created in PowerNet Connect.

#### Audit commentary

The test result provided, and tests conducted during the audit, confirmed that ICPs are created in a compliant manner.

#### 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



This process does not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process does not change as a result of the PowerNet Connect implementation.

#### **Audit outcome**

Not applicable

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

#### **Code reference**

*Clause 13 Schedule 11.1*

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

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

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

#### **Audit observation**

The new connection process was examined.

#### **Audit commentary**

According to the new connections process the status “new” is not used by PowerNet. All ICPs are uploaded to the registry with all information necessary and the registry assigns the status “ready”.

#### **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**

Compliance with this clause was examined.

#### **Audit commentary**

Currently a monthly report is run to check for ICPs which have had the status “ready” for 12/24 months using data stored in the ICP database. The report will be “transferred” to PowerNet Connect.

PowerNet uses Maximo to manage all new connections. The Implementation of new software will allow it to link the status of each new connection (project) recorded in Maximo to PowerNet Connect. It has been a weak point of the current system that when a project was cancelled, after an ICP was loaded to

the registry, in most cases people responsible for maintaining the correct information in the registry were not notified.

#### Audit outcome

Compliant

Recommendation	Description	Audited party comment	Remedial action
Clause 15 of Schedule 11.1	To test reporting of ICPs at “new” or “ready” for 24 months	Reports created and tested. This report will be generated regularly to monitor ICP’s becoming aged.	Identified

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

#### Code reference

*Clause 7(6) Schedule 11.1*

#### Code related audit information

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

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

#### Audit observation

This process does not change as a result of the PowerNet Connect implementation.

#### Audit commentary

This process does not change as a result of the PowerNet Connect implementation.

#### Audit outcome

Not applicable

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

#### Code reference

*Clause 10.33A(4)*

#### Code related audit information

*No participant may electrically connect a point of connection or authorise the electrical connection of a point of connection, other than a reconciliation participant.*

#### Audit observation

This process does not change as a result of the PowerNet Connect implementation.

**Audit commentary**

This process does not change as a result of the PowerNet Connect implementation.

**Audit outcome**

Not applicable

## 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

PowerNet Connect will interface with the registry. We reviewed the process documentation and test results.

During the audit we checked the file format sent to the test registry and reviewed files coming back from the registry and how they are handled.

#### Audit commentary

Changes to any data in PowerNet Connect will be sent automatically, overnight, to the registry. The changes can also be sent manually.

We identified issues that required fixing which, if not addressed, will lead to non-compliance with clause 11.2

- Bulk updates of NSPs allows the use of today's date as the Event Date only.
- No option to change a flag of Installation Type from L to B, default flag is "L"
- ICP decommissioning - only one option for a reason code. The registry specification allows for 3 reason codes
- No option to change a proposed trader code for ICP with the status "ready" in the registry
- Decommissioning of an ICP with the status "ready" – to achieve this the registry design requires it to be done in two steps, firstly the status needs to be changed to "new" by the removal of the proposed trader information or pricing or loss factor code from the registry, then the ICP can be decommissioned using the relevant status code, most likely it will be "set up in error"

Description	Recommendation	Audited party comment	Remedial action
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Changes to the registry information	<p>The following shortcomings of PowerNet Connect were identified which could lead to non-compliance if not addressed</p> <ul style="list-style-type: none"> <li>• Bulk updates of NSPs allows to use today's date as the Event Date.</li> <li>• No option to change a flag of Installation Type from L to B, default flag is "L"</li> <li>• ICP decommissioning - only one option for a reason code. The registry specification allows for 3 reason codes</li> <li>• No option to change a proposed trader code for ICP with the status "ready" in the registry</li> <li>• Decommissioning of an ICP with the status "ready" – to achieve this the registry design requires it to be done in two steps, firstly the status needs to be changed to "new" by the removal of the proposed trader information or pricing or loss factor code from the registry, then the ICP can be decommissioned using the relevant status code, most likely it will be "set up in error"</li> </ul>	<p>All of the recommendations listed were actioned after the audit on 7<sup>th</sup> October 2019.</p> <p>All actions were demonstrated via a video conference on 15<sup>th</sup> October 2019.</p>	
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### Audit outcome

Compliant

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

### Code reference

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

### Code related audit information

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

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

### Audit observation

Each ICP created in the ICP database and loaded into the registry had the NSP identifier assigned. It is a mandatory field in the ICP Database. The process of assigning the NSP to the ICPs will not be changed as a result of the PowerNet Connect implementation.

### Audit commentary

PowerNet Connect handles the ICP/NSP link well, in that it is handled by the link between a transformer site and the NSP. If the NSP associated with the transformer site changes, all linked ICP's are tagged for a Registry Network Update, with the new NSP. It will result in more accurate information in the registry and less backdating.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 11.31*

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

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

#### **Audit observation**

This process does not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process does not change as a result of the PowerNet Connect implementation.

#### **Audit outcome**

Not applicable

### 4.4. ICP location address (Clause 2 Schedule 11.1)

#### **Code reference**

*Clause 2 Schedule 11.1*

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

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

#### **Audit observation**

The process of assigning an ICP identifier to a new connection will not change.

#### **Audit commentary**

PowerNet Connect has built-in functionality, which will not allow the assigning of an address which won't allow the ICP to be readily located.

When a user first goes to create an ICP, PowerNet Connect will ask for a valid project number that has been created in Maximo. The address created in Maximo will be displayed and the user will be prompted to check it. When the user inputs address information, PowerNet Connect will validate the address entered against existing ICPs in the system. If there is a matching address on an already created ICP PowerNet Connect will disallow progressing with the ICP create process

#### **Audit outcome**

Compliant

#### 4.5. Electrically disconnecting an ICP (Clause 3 Schedule 11.1)

##### Code reference

Clause 3 Schedule 11.1

##### Code related audit information

*Each ICP created after 7 October 2002 must be able to be electrically disconnected without electrically disconnecting another ICP, except for ICPs that are the point of connection between a network and an embedded network, or ICPs that represent the consumption calculated by the difference between the total consumption for the embedded network and all other ICPs on the embedded network.*

##### Audit observation

This process does not change as a result of the PowerNet Connect implementation.

##### Audit commentary

This process does not change as a result of the PowerNet Connect implementation.

##### Audit outcome

Not applicable

#### 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**

PowerNet Connect will interface with the registry. We reviewed process documentation and test results. During the audit we checked file formats sent to the test registry and reviewed files coming back from the registry and how they are handled.

Changes to any data in PowerNet Connect will be sent automatically, overnight to the registry.

#### **Audit commentary**



During the audit we checked file formats sent to the test registry and reviewed files coming back from the registry and how they are handled.

We identified issues which required fixing:

- The “unmetered load details- Distributor” field – the registry specification allows decimal places for the number of hours or wattage, which is supported by PowerNet Connect.
- The only option for Installation Type is “L”.
- The DG records update generates a registry error due to the naming of the fuel type. PowerNet Connect sends e.g. “Solar” instead “solar”. All DG types must be lower case
- Not clear which date will be used for the Event Date for ICPs being decommissioned. The currently used ICP database has it hard coded that the Event Date =Date of update.

Description	Recommendation	Audited party comment	Remedial action
Provision of data to the registry	<p>The following shortcomings of PowerNet Connect were identified which could lead to non-compliance if not addresses</p> <ul style="list-style-type: none"> <li>• The “unmetered load details- Distributor” field – the registry specification allows decimal places for the number of hours or wattage, which is supported by PowerNet Connect</li> <li>• The only option for Installation Type is “L”</li> <li>• The DG records update generates a registry error due to the naming of the fuel type. PowerNet Connect sends e.g. “Solar” instead “solar”. All DG types must be lower case</li> <li>• Not clear which date will be used for the Event Date for ICP being decommissioned. The currently used ICP database has it hard coded that an Event Date =Date of update</li> </ul>	<p>All of the recommendations listed were actioned after the audit on 7<sup>th</sup> October 2019.</p> <p>All actions were demonstrated via a video conference on 15<sup>th</sup> October 2019.</p>	

#### Audit outcome

Compliant

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

**Code reference**

*Clause 7(3) Schedule 11.1*

**Code related audit information**

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

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

**Audit observation**

The new connection process was examined. This process does not change as a result of the PowerNet Connect implementation.

**Audit commentary**

This process does not change as a result of the PowerNet Connect implementation.

**Audit outcome**

Compliant

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

**Code reference**

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

**Code related audit information**

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

**Audit observation**

This process does not change as a result of the PowerNet Connect implementation.

**Audit commentary**

This process does not change as a result of the PowerNet Connect implementation.

**Audit outcome**

Not applicable

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

**Code reference**

*Clause 14 Schedule 11.1*

**Code related audit information**

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

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

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

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

#### **Audit observation**

This process does not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process does not change as a result of the PowerNet Connect implementation. All ICPs will be uploaded to the registry after receiving acceptance and request to connect from a retailer. All ICPs are uploaded to the registry with all information necessary and the registry assigns the status "ready".

#### **Audit outcome**

Not applicable

### **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**

This process does not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process does not change as a result of the PowerNet Connect implementation.

#### **Audit outcome**

Not applicable

### **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**

This process does not change as a result of the PowerNet Connect implementation.

**Audit commentary**

This process does not change as a result of the PowerNet Connect implementation.

**Audit outcome**

Compliant

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

**Code reference**

*Clause 23 Schedule 11.1*

**Code related audit information**

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

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

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

**Audit observation**

This process does not change as a result of the PowerNet Connect implementation.

**Audit commentary**

This process does not change as a result of the PowerNet Connect implementation.

**Audit outcome**

Not applicable

## 5. CREATION AND MAINTENANCE OF LOSS FACTORS

### 5.1. Updating table of loss category codes (Clause 21 Schedule 11.1)

#### Code reference

*Clause 21 Schedule 11.1*

#### Code related audit information

*The distributor must keep the registry up to date with the loss category codes that may be assigned to ICPs on the distributor's network.*

*The distributor must specify the date on which each loss category code takes effect.*

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

#### Audit observation

This process will not change as a result of the PowerNet Connect implementation.

#### Audit commentary

This process will not change as a result of the PowerNet Connect implementation.

#### Audit outcome

Not applicable

### 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

This process will not change as a result of the PowerNet Connect implementation.

#### Audit commentary

This process will not change as a result of the PowerNet Connect implementation.

#### Audit outcome

Not applicable

## 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

This process will not change as a result of the PowerNet Connect implementation.

#### Audit commentary

This process will not change as a result of the PowerNet Connect implementation.

#### Audit outcome

Not applicable

### 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

This process will not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process will not change as a result of the PowerNet Connect implementation.

#### **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**

This process will not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process will not change as a result of the PowerNet Connect implementation.

#### **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**

This process will not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process will not change as a result of the PowerNet Connect implementation.

#### **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

This process will not change as a result of the PowerNet Connect implementation.

##### Audit commentary

This process will not change as a result of the PowerNet Connect implementation.

##### Audit outcome

Not applicable

#### 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

This process will not change as a result of the PowerNet Connect implementation.

##### Audit commentary

This process will not change as a result of the PowerNet Connect implementation.

##### 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

This process will not change as a result of the PowerNet Connect implementation.



### Audit commentary

This process will not change as a result of the PowerNet Connect implementation.

### 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

This process will not change as a result of the PowerNet Connect implementation.

### Audit commentary

This process will not change as a result of the PowerNet Connect implementation.

### 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 date 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**

This process will not change as a result of the PowerNet Connect implementation.

**Audit commentary**

This process will not change as a result of the PowerNet Connect implementation.

**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**

This process will not change as a result of the PowerNet Connect implementation.

**Audit commentary**

This process will not change as a result of the PowerNet Connect implementation.

**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**

This process will not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process will not change as a result of the PowerNet Connect implementation.

#### **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**

This process will not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process will not change as a result of the PowerNet Connect implementation.

#### **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**

This process will not change as a result of the PowerNet Connect implementation.

#### **Audit commentary**

This process will not change as a result of the PowerNet Connect implementation.

#### **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

This process will not change as a result of the PowerNet Connect implementation.

#### Audit commentary

This process will not change as a result of the PowerNet Connect implementation.

#### 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

This process will not change as a result of the PowerNet Connect implementation.

#### Audit commentary

This process will not change as a result of the PowerNet Connect implementation.

#### 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

This process will not change as a result of the PowerNet Connect implementation.

#### Audit commentary

This process will not change as a result of the PowerNet Connect implementation.

#### Audit outcome

Not applicable

## CONCLUSION

## PARTICIPANT RESPONSE