

**ELECTRICITY INDUSTRY PARTICIPATION CODE  
RECONCILIATION PARTICIPANT AUDIT REPORT**

For

**NGAWHA GENERATION LIMITED  
(NGAG)  
(NZBN #823831)**

Prepared by: Allan Borcoski of Borcoski Energy Services Ltd

Date audit commenced: 2 February 2024

Date audit report completed: 29 February 2024

Audit report due date: 30-Apr-24

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## EXECUTIVE SUMMARY

This reconciliation participant audit was performed at the request of Ngawha Generation Limited (NGAG) to support their application for certification, in accordance with clause 2A of Schedule 15.1 of The Code 2010. The relevant clause audited is as required by the Guidelines for Reconciliation Participants Audits V 7.2 issued by the Electricity Authority.

NGAG is currently certified as a half hour reconciliation generation participant responsible for 2 embedded generators. The company has no plans to trade any ICPs in the future. This audit covers those 2 generation ICPs only.

Ngawha Generation Limited (NGAG) is an embedded generator for ICP 0000003490TE5AE. This is a 25MW geothermal plant, embedded in the Top Energy network, which has been in operation for many years. In November 2020 NGAG commissioned a new 31.5MW embedded geothermal plant (0000010061TEFFC) which provides generation of 56.5MW.

NGAG contracts EMS as their agent to fulfil all relevant tasks under clause 15.38 of part 15 for which certification is required in accordance with the Code requirements.

NGAG provided a copy of the Data Service Agreement with EMS, which we reviewed. To assess NGAG compliance we reviewed the EMS Agent audit report dated 17/08/2023 and relevant registry files.

There were no non compliances found during this audit.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. Table 1 of the Guidelines for Reconciliation Participant audit provides some guidance on this matter. The Future Risk Rating score is 0 which results in an indicative audit frequency of 24 months as per clause 7 of Schedule 15.2 of the Code. We agree with the recommendation.

We thank Ngawha Generation Limited for their full and complete cooperation in this audit.

The audit period was 01/03/2022 to 31/12/2023.

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Nil	Nil	Nil	Nil	Nil	Nil	0	Nil
Future Risk Rating						0	

### RECOMMENDATIONS

Subject	Section	Description	Recommendation
Nil	Nil	Nil	Nil

### ISSUES

Subject	Section	Description	Issue
Nil	Nil	Nil	Nil

## 1. ADMINISTRATIVE

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

#### Code reference

*Section 11 of Electricity Industry Act 2010.*

#### Code related audit information

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

#### Audit observation

The Electricity Authority website was checked for exemptions and one Code dispensation under clause 6A.9(6) of Part 6A of the Electricity Industry Participation Code 2010 amending an exemption in connection with the expansion of Ngāwhā Springs Generation Plant was granted on 19 December 2023 as outlined below.

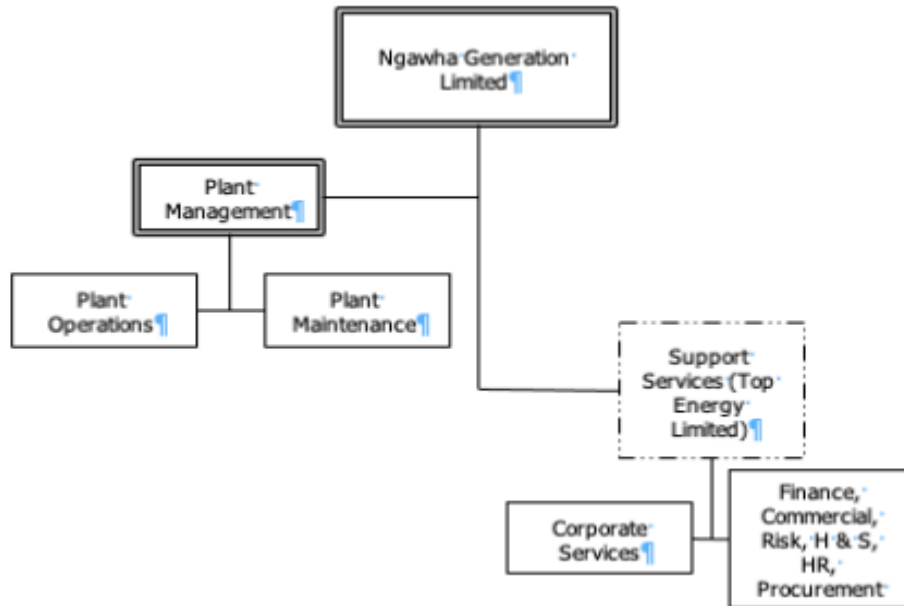
#### Audit commentary

The directors of Ngāwhā Generation Limited are granted a dispensation from the requirement in clause 6A.3(2) of the Code to comply with rules 9 and 10 in schedule 6A.1 of the Code. This dispensation is subject to the following conditions:

- a. This dispensation applies in relation to the expansion of Ngāwhā Springs Power Station for geothermal generation up to a nameplate capacity of 117MW.
- b. The dispensation from the requirement to comply with rule 10 only applies to the appointment of persons identified in clause 2(c) to (e) to positions of material influence over NGL.
- c. The dispensation only applies while TEL and NGL are wholly owned by the Top Energy Consumer Trust.
- d. The dispensation expires on the close of 31 July 2052 or the day that any additional generation (other than generation installed for the purpose of providing network support) owned by TEL, NGL any of TEL's subsidiaries, or any "connected generators" as defined in clause 6A.3 of the Code in relation to TEL, is connected to TEL's network, whichever date is earlier.



## 1.2. Structure of Organisation



## 1.3. Persons involved in this audit

Name	Title	Company
Simon Boccock	Commercial and Pricing Manager	Top Energy Group
Allan Borcoski	Electricity Authority Approved Auditor	Borcoski Energy Services Ltd

## 1.4. Use of Agents (Clause 15.34)

### Code reference

Clause 15.34

### Code related audit information

*A reconciliation participant who uses an agent*

- *remains responsible for the contractor's fulfilment of the participant's Code obligations*
- *cannot assert that it is not responsible or liable for the obligation due to something the agent has or has not done*

### Audit observation

This was discussed with NGAG. NGAG uses EMS as agent to provide all relevant requirements set out in clause 15.38 of the Code.

### Audit commentary

As a part of this audit the most recent EMS agent audit dated 17/08/2023 was reviewed to verify compliance. In addition, raw metering data from EMS was compared with files submitted to the reconciliation manager.

## 1.5. Hardware and Software

The EMS agent audit dated 17/08/2023 describes in detail hardware and software that supports the audited processes. NGAG uses a set of spreadsheets to compare reconciled volumes with their records.

## 1.6. Breaches or Breach Allegations

NGAG advised the Electricity Authority of three self-breach allegations during the audit period. No breach notices had been issued by the Electricity Authority at the time of writing this audit report.

Date	Code Reference	Code Description	Situation
14/01/2023	Part 8 8.25A	Fault ride through	OEC4 was disconnected from the Grid while within the 'No Trip Zone' for North Island Generation,
17/5/2023	13.82(2)	Dispatch instructions to be complied with	The generating unit went through a series of tripping's and resynchronisations. It was unclear at the time of one of the resynchronisations whether there was a dispatch instruction in place or not.
10/11/2023	13.17	Offers may be revised	Offer revised during gate closure period.

## 1.7. ICP Data

Metering Category	(02/2024)	(02/2022)	(09/2020)
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	2	2	1
9	0	0	0

Status	Number of ICPs (02/2024)	Number of ICPs (02/2022)	Number of ICPs (09/2020)
Active (2,0)	2	2	1
Inactive – new connection in progress (1,12)	0	0	1
Inactive – electrically disconnected vacant property (1,4)	0	0	0
Inactive – electrically disconnected remotely by AMI meter (1,7)	0	0	0
Inactive – electrically disconnected at pole fuse (1,8)	0	0	0
Inactive – electrically disconnected due to meter disconnected (1,9)	0	0	0
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	0	0	0
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	0	0	0

ICP	Description	Comment
0000003490TE5AE	25 MW Geothermal Generation Plant	<ul style="list-style-type: none"> <li>• MEP AMCI</li> <li>• AMS meter reading</li> <li>• EMS data collection and Reconciliation</li> </ul>
0000010061TEFFC	31.5 MW Geothermal Generation Plant	<ul style="list-style-type: none"> <li>• MEP AccuCal</li> <li>• AMS meter reading</li> <li>• EMS data collection and Reconciliation</li> </ul>

### 1.8. Authorisation Received

NGAG provided authorisation to Borcoski Energy Services Ltd permitting the collection of data from other parties for matters related to the audit.

## 1.9. Scope of Audit

This reconciliation participant audit was performed at the request of NGAG to support their application for certification. The audit was conducted by telecons between 2 February 2024 and 23 February 2024.

The table below shows the tasks under clause 15.38 of part 15 for which certification is required.

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Relevant to Audit	Agents Involved in Performance of Tasks
(a) - Maintaining registry information and performing customer and embedded generator switching	✓	EMS
(b) – Gathering and storing raw meter data	✓	EMS
(c)(i) - Creation and management of HHR volume information	✓	EMS
(d)(i) – Calculation and delivery of ICP days under clause 15.6	✓	EMS
(d)(ii) - delivery of electricity supplied information under clause 15.7	✓	EMS
(d)(iii) - delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8	✓	EMS
(e) – Provision of submission information for reconciliation	✓	EMS

## 1.10. Summary of previous audit

The previous audit was conducted by Ewa Glowacka of TEG & associates Ltd in April 2022. The following non-compliances were identified:

Subject	Section	Clause	Non Compliance	Comments
Provision of information	2.2	15.2	Incorrect information provided for March 2021 R3	Cleared
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHRAGGR files do not contain electricity supplied information	Not required. The Code change required a line up with RN file specification. Breach risk rating excluded from total



## 2. OPERATIONAL INFRASTRUCTURE

### 2.1. Relevant information (Clause 10.6, 11.2, 15.2)

#### Code reference

Clause 10.6, 11.2, 15.2

#### Code related audit information

*A participant must take all practicable steps to ensure that information that the participant is required to provide is:*

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

*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

This was discussed with NGAG. The LIS file, Registry and Submission files were checked. The EMS Agent audit report dated 17/08/2023 was reviewed along with the service agreement between NGAG and EMS.

#### Audit commentary

NGAG compliance depends on EMS as their agent for gathering and storing raw meter data, creation, and management of HHR volume information, provision of submission information for reconciliation and Provision of metering information to the grid owner in accordance with subpart 4 of part 13.

EMS provides a copy of submission files to NGAG for approval before they are uploaded to the RM portal. The NGAG generation team compare the volumes information with metering information recorded by check meters. If the validation process reveals any incomplete, inaccurate, or misleading information a correction will be processed.

Checks confirm NGAG has taken all practicable steps to ensure that information provided to others is complete and accurate.

The EMS Agent audit report also affirmed compliance with this clause.

#### Audit outcome

Compliant

### 2.2. Provision of information (Clause 15.35)

#### Code reference

Clause 15.35

#### Code related audit information

*If an obligation exists to provide information in accordance with Part 15, a participant must deliver that information to the required person within the timeframe specified in the Code, or, in the absence of any such timeframe, within any timeframe notified by the Authority. Such information must be delivered in the format determined from time to time by the Authority.*

#### Audit observation

The submission files were reviewed. The EMS agent audit dated 17/08/2023 was reviewed to verify compliance. This was also discussed with NGAG.

### Audit commentary

NGAG compliance depends on EMS as their agent for gathering and storing raw meter data, creation, and management of HHR volume information, provision of submission information for reconciliation and Provision of metering information to the grid owner in accordance with subpart 4 of part 13.

Checks of the EMS agent audit report dated 17/08/2023, submission data and NGAG advice that information provided to participants was complete and accurate, not misleading, or deceptive and not likely to mislead or deceive confirmed information was provided in accordance with this clause.

The EMS Agent audit report also affirmed compliance with this clause.

### Audit outcome

Compliant

## 2.3. Data transmission (Clause 20 Schedule 15.2)

### Code reference

*Clause 20 Schedule 15.2*

### Code related audit information

*Transmissions and transfers of data related to metering information between reconciliation participants or their agents, for the purposes of the Code, must be carried out electronically using systems that ensure the security and integrity of the data transmitted and received.*

### Audit observation

NGAG advised they engage EMS as the agent for the transmission of data to the reconciliation manager. The EMS Agent audit report dated 17/08/2023 was reviewed.

### Audit commentary

EMS as the NGAG agent for the transmission of data to the reconciliation manager carry out these functions using SFTP and the RM portal.

The EMS Agent audit report affirmed compliance with this clause.

### Audit outcome

Compliant

## 2.4. Audit trails (Clause 21 Schedule 15.2)

### Code reference

*Clause 21 Schedule 15.2*

### Code related audit information

*Each reconciliation participant must ensure that a complete audit trail exists for all data gathering, validation, and processing functions of the reconciliation participant.*

*The audit trail must include details of information:*

- *provided to and received from the registry manager*
- *provided to and received from the reconciliation manager*
- *provided and received from other reconciliation participants and their agents.*

*The audit trail must cover all archived data in accordance with clause 18.*

*The logs of communications and processing activities must form part of the audit trail, including if automated processes are in operation.*

*Logs must be printed and filed as hard copy or maintained as data files in a secure form, along with other archived information.*

*The logs must include (at a minimum) the following:*

- *an activity identifier (clause 21(4)(a))*
- *the date and time of the activity (clause 21(4)(b))*
- *the operator identifier for the person who performed the activity (clause 21(4)(c)).*

### **Audit observation**

NGAG advised they engage EMS as the agent for the transmission of data to the reconciliation manager. The EMS Agent audit report dated 17/08/2023 was reviewed.

### **Audit commentary**

The EMS audit confirmed that a complete audit trail was viewed for all data gathering, validation and processing functions. The log of these activities include the activity identifier, date and time and operator identifier. During the EMS audit, trails for a small sample were reviewed where estimation or corrections had occurred.

NGAG stated that EMS did not conduct any corrections or estimations for NGAG.

The EMS Agent audit report affirmed compliance with this clause.

### **Audit outcome**

Compliant

## **2.5. Retailer responsibility for electricity conveyed - participant obligations (Clause 10.4)**

### **Code reference**

*Clause 10.4*

### **Code related audit information**

*If a participant must obtain a consumer's consent, approval, or authorisation, the participant must ensure it:*

- *extends to the full term of the arrangement*
- *covers any participants who may need to rely on that consent.*

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

This clause is not applicable. Compliance was not assessed.

### **Audit outcome**

Not applicable

## **2.6. Retailer responsibility for electricity conveyed - access to metering installations (Clause 10.7(2),(4),(5) and (6))**

### **Code reference**

*Clause 10.7(2),(4),(5) and (6)*



### Code related audit information

*The responsible reconciliation participant must, if requested, arrange access for the metering installation to the following parties:*

- *the Authority*
- *an ATH*
- *an auditor*
- *an MEP*
- *a gaining metering equipment provider.*

*The trader must use its best endeavours to provide access:*

- *in accordance with any agreements in place*
- *in a manner and timeframe which is appropriate in the circumstances.*

*If the trader has a consumer, the trader must obtain authorisation from the customer for access to the metering installation, otherwise it must arrange access to the metering installation.*

*The reconciliation participant must provide any necessary facilities, codes, keys or other means to enable the party to obtain access to the metering installation by the most practicable means.*

### Audit observation

This was discussed with NGAG. The Registry was also checked.

### Audit commentary

During this audit period NGAG confirms it provided access to :

- ICP 0000003490TE5AE in November 2022 for MEP (AMCI) and ATH (ACCL) to carry out certification work on the metering
- ICP 0000010061TEFFC in October 2023 for MEP (ACCM) and ATH (ACCL) to carry out certification work on the metering

NGAG advises in all situations it would use its best endeavours under all circumstances to provide physical access to a metering installation as required by this clause, subject to health and safety requirements.

### Audit outcome

Compliant

## 2.7. Physical location of metering installations (Clause 10.35(1)&(2))

### Code reference

*Clause 10.35(1)&(2)*

### Code related audit information

*A reconciliation participant responsible for ensuring there is a category 1 metering installation or category 2 metering installation must ensure that the metering installation is located as physically close to a point of connection as practical in the circumstances.*

*A reconciliation participant responsible for ensuring there is a category 3 or higher metering installation must:*

- a) if practical in the circumstances, ensure that the metering installation is located at a point of connection; or*
- b) if it is not practical in the circumstances to locate the metering installation at the point of connection, calculate the quantity of electricity conveyed through the point of connection using a loss compensation process approved by the certifying ATH.*

### Audit observation

This was discussed with NGAG. The MEP agreements with AccuCal and AMS were reviewed. The EMS Agent audit report dated 17/08/2023 was reviewed.

### Audit commentary

The metering installations are located at the point of connection, situated within the substations associated with the generators. Access is restricted to authorised personnel.

EMS confirmed it gathers and stores the raw metering information and is not required to apply any loss compensation factors. This is verified by their agent audit report.

### Audit outcome

Compliant

## 2.8. Trader contracts to permit assignment by the Authority (Clause 11.15B)

### Code reference

Clause 11.15B

### Code related audit information

*A trader must at all times ensure that the terms of each contract between a customer and a trader permit:*

- *the Authority to assign the rights and obligations of the trader under the contract to another trader if the trader commits an event of default under paragraph (a) or (b) or (f) or (h) of clause 14.41 (clause 11.15B(1)(a)); and*
- *the terms of the assigned contract to be amended on such an assignment to—*
- *the standard terms that the recipient trader would normally have offered to the customer immediately before the event of default occurred (clause 11.15B(1)(b)(i)); or*
- *such other terms that are more advantageous to the customer than the standard terms, as the recipient trader and the Authority agree (clause 11.15B(1)(b)(ii)); and*
- *the terms of the assigned contract to be amended on such an assignment to include a minimum term in respect of which the customer must pay an amount for cancelling the contract before the expiry of the minimum term (clause 11.15B(1)(c)); and*
- *the trader to provide information about the customer to the Authority and for the Authority to provide the information to another trader if required under Schedule 11.5 (clause 11.15B(1)(d)); and*
- *the trader to assign the rights and obligations of the trader to another trader (clause 11.15B(1)(e)).*

*The terms specified in subclause (1) must be expressed to be for the benefit of the Authority for the purposes of the Contracts (Privacy) Act 1982, and not be able to be amended without the consent of the Authority (clause 11.15B(2)).*

### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

### Audit commentary

NGAG is responsible for two generation ICPs only.

This clause is not applicable. Compliance was not assessed.

### Audit outcome

Not applicable

## 2.9. Connection of an ICP (Clause 10.32)

### Code reference

Clause 10.32

### Code related audit information

*A reconciliation participant must only request the connection of a point of connection if they:*

- *accept responsibility for their obligations in Parts 10, 11 and 15 for the point of connection; and*
- *have an arrangement with an MEP to provide 1 or more metering installations for the point of connection.*

### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

### Audit commentary

NGAG is responsible for two generation ICPs only.

NGAG are aware of their obligations under this clause and will connect any future generation according to industry and Code requirements.

### Audit outcome

Compliant

## 2.10. Temporary Electrical Connection of an ICP (Clause 10.33)

### Code reference

Clause 10.33(1)

### Code related audit information

*A trader may temporarily electrically connect a point of connection, or authorise a MEP to temporarily electrically connect a point of connection, only if:*

- *for a point of connection to the grid – the grid owner has approved the connection*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection.*
- *for a point of connection that is an ICP, but is not as NSP:*
  - o *the trader is recorded in the registry as the trader responsible for the ICP or has an arrangement with the customer and initiates a switch within 2 business days of electrical connection*
  - o *if the ICP has metered load, 1 or more certified metering installations are in place*
  - o *if the ICP has not previously been electrically connected, the relevant distributor has given written approval of the temporary electrical connection.*

### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

### Audit commentary

NGAG is responsible for two generation ICPs only.

NGAG are aware of their obligations under this clause and will connect any future generation according to industry and Code requirements.

### Audit outcome

Compliant

## 2.11. Electrical Connection of Point of Connection (Clause 10.33A)

### Code reference

Clause 10.33A(1)

### Code related audit information

*A reconciliation participant may electrically connect or authorise the electrical connection of a point of connection only if:*

- *for a point of connection to the grid – the grid owner has approved the connection*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection.*
- *for a point of connection that is an ICP, but is not as NSP:*
  - o *the trader is recorded in the registry as the trader responsible for the ICP or has an arrangement with the customer and initiates a switch within 2 business days of electrical connection*
  - o *if the ICP has metered load, 1 or more certified metering installations are in place*
  - o *if the ICP has not previously been electrically connected, the relevant distributor has given written approval of the electrical connection.*

### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

### Audit commentary

NGAG is responsible for two generation ICPs only.

NGAG are aware of their obligations under this clause and will connect any future generation according to industry and Code requirements.

### Audit outcome

Compliant

## 2.12. Arrangements for line function services (Clause 11.16)

### Code reference

Clause 11.16

### Code related audit information

*Before providing the registry manager with any information in accordance with clause 11.7(2) or clause 11.18(4), a trader must ensure that it, or its customer, has made any necessary arrangements for the provision of line function services in relation to the relevant ICP*

*Before providing the registry manager with any information in accordance with clause 11.7(2) or clause 11.18(4), a trader must have entered into an arrangement with an MEP for each metering installation at the ICP.*

### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked. The Connection Agreement with Top Energy Ltd was reviewed.

### Audit commentary

NGAG is an embedded generator, connected to the Top Energy Network, and is part of the Top Energy Group.

Checks confirmed NGAG has an appropriate Use of System Agreement between Ngawha Generation Ltd and the network Top Energy limited.

Checks confirm NGAG engages the following MEPs:

ICP	Description	Comment
0000003490TE5AE	25 MW Geothermal Generation Plant	• MEP AMCI
0000010061TEFFC	31.5 MW Geothermal Generation Plant	• MEP AccuCal

### Audit outcome

Compliant

## 2.13. Arrangements for metering equipment provision (Clause 10.36)

### Code reference

Clause 10.36

### Code related audit information

*A reconciliation participant must ensure it has an arrangement with the relevant MEP prior to accepting responsibility for an installation.*

### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked. The MEP agreements with AccuCal and AMS were reviewed. The EMS Agent audit report dated 17/08/2023 was reviewed.

### Audit commentary

NGAG is responsible for two generation ICPs only

Checks confirm NGAG engages the following MEPs:

ICP	Description	Comment
0000003490TE5AE	25 MW Geothermal Generation Plant	• MEP AMCI
0000010061TEFFC	31.5 MW Geothermal Generation Plant	• MEP AccuCal

### Audit outcome

Compliant

## 2.14. Connecting ICPs then withdrawing switch (Clause 10.33A(5))

### Code reference

Clause 10.33B

### Code related audit information

*If a trader connects an ICP it is in the process of switching and the switch does not proceed or is withdrawn the trader must:*

- *restore the disconnection, including removing any bypass and disconnecting using the same method the losing trader used*
- *reimburse the losing trader for any direct costs incurred*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### **2.15. Electrical disconnection of ICPs (Clause 10.33B)**

#### **Code reference**

*Clause 10.33B*

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

*Unless the trader is recorded in the registry or is meeting its obligation under 10.33A(5) it must not disconnect or electrically disconnect the ICP, or authorise the metering equipment provider to disconnect or electrically disconnect the ICP.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### **2.16. Removal or breakage of seals (Clause 48(1C), 48 (1D), 48 (1E), 48 (1F) of Schedule 10.7)**

#### **Code reference**

*Clause 48(1C), 48 (1D), 48 (1E), 48 (1F) of Schedule 10.7*

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

*A trader can remove or break a seal without authorisation from the MEP to:*

- *reset a load control switch, bridge or unbridge a load control switch – if the load control switch does not control a time block meter channel*
- *electrically connect load or generation, of the load or generation has been disconnected at the meter*
- *electrically disconnect load or generation, if the trader has exhausted all other appropriate methods of electrical disconnection*
- *bridge the meter*

*A trader that removes or breaks a seal in this way must:*

- *ensure personnel are qualified to remove the seal and perform the permitted work and they replace the seal in accordance with the Code*
- *replace the seal with its own seal*
- *have a process for tracing the new seal to the personnel*
- *update the registry (if the profile code has changed)*
- *notify the metering equipment provider*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG Staff stated that during the audit period no seals were broken relating to this Code requirement.

#### **Audit outcome**

Compliant

## **2.17. Meter bridging (Clause 10.33C and 2A of Schedule 15.2**

#### **Code reference**

*Clause 10.33C and 2A of Schedule 15.2*

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

*A trader, or a distributor or MEP which has been authorised by the trader, may only electrically connect an ICP in a way that bypasses a meter that is in place (“bridging”) if, despite best endeavours:*

- *the MEP is unable to remotely electrically connect the ICP*
- *the MEP cannot repair a fault with the meter due to safety concerns*
- *the consumer will likely be without electricity for a period which would cause significant disadvantage to the consumer*

*If the trader bridges a meter, the trader must:*

- *determine the quantity of electricity conveyed through the ICP for the period of time the meter was bridged*
- *submit that estimated quantity of electricity to the reconciliation manager*
- *within 1 business day of being advised that the meter is bridged, notify the MEP that they are required to reinstate the meter so that all electricity flows through a certified metering installation.*

*The trader must determine meter readings as follows:*

- *by substituting data from an installed check meter or data storage device*
- *if a check meter or data storage device is not installed, by using half hour data from another period where the trader considers the pattern of consumption is materially similar to the period during which the meter was bridged*
- *if half hour data is not available, a non-half hour estimated reading that the trader considers is the best estimate during the bridging period must be used.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG Staff stated that during the audit period no meter bridging events occurred relating to this Code requirement.

#### **Audit outcome**

Compliant

### **2.18. Use of ICP identifiers on invoices (Clause 11.30)**

#### **Code reference**

*Clause 11.30*

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

*Each trader must ensure the relevant ICP identifier is printed on every invoice or document relating to the sale of electricity.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### **2.19. Provision of information on dispute resolution scheme (Clause 11.30A)**

#### **Code reference**

*Clause 11.30A*

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

*A retailer must provide clear and prominent information about Utilities Disputes:*

- *on their website*
- *when responding to queries from consumers*
- *in directed outbound communications to consumers about electricity services and bills.*

*If there are a series of related communications between the retailer and consumer, the retailer needs to provide this information in at least one communication in that series.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable



## 2.20. Provision of information on electricity plan comparison site (Clause 11.30B)

### Code reference

Clause 11.30B

### Code related audit information

*A retailer that trades at an ICP recorded on the registry must provide clear and prominent information about Powerswitch:*

- *on their website*
- *in outbound communications to residential consumers about price and service changes*
- *to residential consumers on an annual basis*
- *in directed outbound communications about the consumer's bill.*

*If there are a series of related communications between the retailer and consumer, the retailer needs to provide this information in at least one communication in that series.*

### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

### Audit commentary

NGAG is responsible for two generation ICPs only.

This clause is not applicable. Compliance was not assessed

### Audit outcome

Not applicable

### 3. MAINTAINING REGISTRY INFORMATION

#### 3.1. Obtaining ICP identifiers (Clause 11.3)

##### Code reference

Clause 11.3

##### Code related audit information

*The following participants must, before assuming responsibility for certain points of connection on a local network or embedded network, obtain an ICP identifier for the point of connection:*

- a) a trader who has agreed to purchase electricity from an embedded generator or sell electricity to a consumer*
- b) an embedded generator who sells electricity directly to the clearing manager*
- c) a direct purchaser connected to a local network or an embedded network*
- d) an embedded network owner in relation to a point of connection on an embedded network that is settled by differencing*
- e) a network owner in relation to a shared unmetered load point of connection to the network owner's network*
- f) a network owner in relation to a point of connection between the network owner's network and an embedded network.*

*ICP identifiers must be obtained for points of connection at which any of the following occur:*

- a consumer purchases electricity from a trader 11.3(3)(a)*
- a trader purchases electricity from an embedded generator 11.3(3)(b)*
- a direct purchaser purchases electricity from the clearing manager 11.3(3)(c)*
- an embedded generator sells electricity directly to the clearing manager 11.3(3)(d)*
- a network is settled by differencing 11.3(3)(e)*
- there is a distributor status ICP on the parent network point of connection of an embedded network or at the point of connection of shared unmetered load. 11.3(3)(f)*

##### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

##### Audit commentary

NGAG is responsible for two generation ICPs only.

NGAG did not connect any retail ICP customers during the audit period and do not intend to in the future. NGAG are aware of their obligations under this clause and will connect any future generation equipment according to industry and Code requirements.

##### Audit outcome

Compliant

#### 3.2. Providing registry information (Clause 11.7(2))

##### Code reference

Clause 11.7(2)

##### Code related audit information

*Each trader must provide information to the registry manager about each ICP at which it trades electricity in accordance with Schedule 11.1.*

##### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

Registry checks showed the ICP information met code requirements.

### **Audit outcome**

Compliant

## **3.3. Changes to registry information (Clause 10 Schedule 11.1)**

### **Code reference**

*Clause 10 Schedule 11.1*

### **Code related audit information**

*If information provided by a trader to the registry manager about an ICP changes, the trader must provide written notice to the registry manager of the change no later than 5 business days after the change.*

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

Registry checks confirmed there were no ICP information changes in the Registry made by NGAG during the audit period.

### **Audit outcome**

Compliant

## **3.4. Trader responsibility for an ICP (Clause 11.18)**

### **Code reference**

*Clause 11.18*

### **Code related audit information**

*A trader becomes responsible for an ICP when the trader is recorded in the registry as being responsible for the ICP.*

*A trader ceases to be responsible for an ICP if:*

- *another trader is recorded in the registry as accepting responsibility for the ICP (clause 11.18(2)(a)); or*
- *the ICP is decommissioned in accordance with clause 20 of Schedule 11.1 (clause 11.18(2)(b)).*
- *if an ICP is to be decommissioned, the trader who is responsible for the ICP must (clause 11.18(3)):*
  - o *arrange for a final interrogation to take place prior to or upon meter removal (clause 11.18(3)(a)); and*
  - o *advise the MEP responsible for the metering installation of the decommissioning (clause 11.18(3)(b)).*

*A trader who is responsible for an ICP (excluding UML) must ensure that an MEP is recorded in the registry for that ICP (clause 11.18(4)).*

A trader must not trade at an ICP (excluding UML) unless an MEP is recorded in the registry for that ICP (clause 11.18(5)).

### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

### Audit commentary

NGAG did not connect any ICP customers or UML during the audit period.

Checks confirm NGAG engages the following MEPs:

ICP	Description	Comment
0000003490TE5AE	25 MW Geothermal Generation Plant	• MEP AMCI
0000010061TEFFC	31.5 MW Geothermal Generation Plant	• MEP AccuCal

Registry checks confirm NGAG are not responsible for any ICPs with the status “decommissioned.” NGAG Staff state that they are aware of the obligations of this Code requirement

### Audit outcome

Compliant

## 3.5. Provision of information to the registry manager (Clause 9 Schedule 11.1)

### Code reference

Clause 9 Schedule 11.1

### Code related audit information

Each trader must provide the following information to the registry manager for each ICP for which it is recorded in the registry as having responsibility:

- a) the participant identifier of the trader, as approved by the Authority (clause 9(1)(a))
- b) the profile code for each profile at that ICP, as approved by the Authority (clause 9(1)(b))
- c) the metering equipment provider for each category 1 metering or higher (clause 9(1)(c))
- d) the type of submission information the trader will provide to the RM for the ICP (clause 9(1)(ea))
- e) if a settlement type of UNM is assigned to that ICP, either:
  - the code ENG if the load is profiled through an engineering profile in accordance with profile class 2.1 (clause 9(1)(f)(i)); or
  - in all other cases, the daily average kWh of unmetered load at the ICP (clause 9(1)(f)(ii)).
  - the type and capacity of any unmetered load at each ICP (clause 9(1)(g))
  - the status of the ICP, as defined in clauses 12 to 20 (clause 9(1)(j))
  - except if the ICP exists for the purposes of reconciling an embedded network or the ICP has distributor status, the trader must provide the relevant business classification code applicable to the customer (clause 9(1)(k)).

The trader must provide information specified in (a) to (j) above within 5 business days of trading (clause 9(2)).

The trader must provide information specified in 9(1)(k) no later than 20 business days of trading (clause 9(3))

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

### **Audit commentary**

NGAG did not connect any retail ICP customers or UML during the audit period and do not intend to in the future.

Registry checks confirmed NGAG ICP information recorded in the Registry was recorded correctly.

### **Audit outcome**

Compliant

## **3.6. ANZSIC codes (Clause 9 (1(k) of Schedule 11.1)**

### **Code reference**

*Clause 9 (1(k) of Schedule 11.1*

### **Code related audit information**

*Traders are responsible to populate the relevant ANZSIC code for all ICPs for which they are responsible.*

### **Audit observation**

The LIS file and Registry were checked.

### **Audit commentary**

Registry checks confirmed the ICPs NGAG are responsible for have the correct ANZSIC code assigned.

### **Audit outcome**

Compliant

## **3.7. Changes to unmetered load (Clause 9(1)(f) of Schedule 11.1)**

### **Code reference**

*Clause 9(1)(f) of Schedule 11.1*

### **Code related audit information**

*if a settlement type of UNM is assigned to that ICP, the trader must populate:*

*the code ENG - if the load is profiled through an engineering profile in accordance with profile class 2.1 (clause 9(1)(f)(i)); or*

*the daily average kWh of unmetered load at the ICP - in all other cases (clause 9(1)(f)(ii)).*

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG did not connect any ICPs or UML during the audit period, are not currently responsible for any UML ICPs and do not intend to in the future.

This clause is not applicable. Compliance was not assessed

## Audit outcome

Not applicable

### 3.8. Management of “active” status (Clause 17 Schedule 11.1)

#### Code reference

Clause 17 Schedule 11.1

#### Code related audit information

*The ICP status of “active” is be managed by the relevant trader and indicates that:*

- *the associated electrical installations are electrically connected (clause 17(1)(a))*
- *the trader must provide information related to the ICP in accordance with Part 15, to the reconciliation manager for the purpose of compiling reconciliation information (clause 17(1)(b)).*

*Before an ICP is given the “active” status, the trader must ensure that:*

- *the ICP has only 1 customer, embedded generator, or direct purchaser (clause 17(2)(a))*
- *the electricity consumed is quantified by a metering installation or a method of calculation approved by the Authority (clause 17(2)(b)).*

#### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

#### Audit commentary

NGAG is responsible for two generation ICPs only.

Registry checks confirmed each ICP NGAG are responsible for have the status “active” assigned in the Registry, is quantified by a single metering installation and each ICP is assigned to only one embedded generator.

#### Audit outcome

Compliant

### 3.9. Management of “inactive” status (Clause 19 Schedule 11.1)

#### Code reference

Clause 19 Schedule 11.1

#### Code related audit information

*The ICP status of “inactive” must be managed by the relevant trader and indicates that:*

- *electricity cannot flow at that ICP (clause 19(a)); or*
- *submission information related to the ICP is not required by the reconciliation manager for the purpose of compiling reconciliation information (clause 19(b)).*

#### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

#### Audit commentary

NGAG is responsible for two generation ICPs only.

Registry checks confirmed all ICPs NGAG are responsible for have the status “active.” No status “inactive” has been used during the audit period.

NGAG stated that the status of generators would be updated in the event a generator was shut down for any reason. NGAG Staff state that they are aware of the obligations of this Code requirement

#### **Audit outcome**

Compliant

### 3.10. ICPs at new or ready status for 24 months (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 "Ready" for 24 calendar months or more, the distributor must ask the trader whether it should continue to have that status, and must decommission the ICP if the trader advises the ICP should not continue to have that status.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

Registry checks confirmed NGAG have not accepted any new ICPs or have any ICPs with the status “New” or “Ready” for 24 calendar months or more.

NGAG have not been asked by a distributor whether an ICP should continue to have “New” or “Ready” status.

#### **Audit outcome**

Compliant

## 4. PERFORMING CUSTOMER AND EMBEDDED GENERATOR SWITCHING

- 4.1. Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3)
- 4.2. Losing trader response to switch request and event dates - standard switch (Clauses 3 and 4 Schedule 11.3)
- 4.3. Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3)
- 4.4. Retailers must use same reading - standard switch (Clause 6(1) and 6A Schedule 11.3)
- 4.5. Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3)
- 4.6. Disputes - standard switch (Clause 7 Schedule 11.3)
- 4.7. Gaining trader informs registry of switch request - switch move (Clause 9 Schedule 11.3)
- 4.8. Losing trader provides information - switch move (Clause 10(1) Schedule 11.3)
- 4.9. Losing trader determines a different date - switch move (Clause 10(2) Schedule 11.3)
- 4.10. Losing trader must provide final information - switch move (Clause 11 Schedule 11.3)
- 4.11. Gaining trader changes to switch meter reading - switch move (Clause 12 Schedule 11.3)
- 4.12. Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3)
- 4.13. Losing trader provision of information - gaining trader switch (Clause 15 Schedule 11.3)
- 4.14. Gaining trader to advise the registry manager - gaining trader switch (Clause 16 Schedule 11.3)
- 4.15. Withdrawal of switch requests (Clauses 17 and 18 Schedule 11.3)
- 4.16. Metering information (Clause 21 Schedule 11.3)
- 4.17. Switch protection (Clause 11.15AA to 11.15AB)

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG stated that they did not switch any ICPs during the audit period. Registry checks confirmed this.



This clause is not applicable. Compliance was not assessed

**Audit outcome**

Not applicable

## 5. MAINTENANCE OF UNMETERED LOAD

- 5.1. Maintaining shared unmetered load (Clause 11.14)
- 5.2. Unmetered threshold (Clause 10.14 (2)(b))
- 5.3. Unmetered threshold exceeded (Clause 10.14 (5))
- 5.4. Distributed unmetered load (Clause 11 Schedule 15.3, Clause 15.37B)

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG stated that NGAG did not have any UML or shared UML ICPs and did not intend to in future. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

### **Audit outcome**

Not applicable

## 6. GATHERING RAW METER DATA

### 6.1. Electricity conveyed & notification by embedded generators(Clause 10.13, Clause 10.24 and 15.13)

#### Code reference

Clause 10.13, Clause 10.24 and Clause 15.13

#### Code related audit information

*A participant must use the quantity of electricity measured by a metering installation as the raw meter data for the quantity of electricity conveyed through the point of connection.*

*This does not apply if data is estimated or gifted in the case of embedded generation under clause 15.13.*

*A trader must, for each electrically connected ICP that is not also an NSP, and for which it is recorded in the registry as being responsible, ensure that:*

- *there is 1 or more metering installations*
- *all electricity conveyed is quantified in accordance with the Code*
- *it does not use subtraction to determine submission information for the purposes of Part 15.*

*An embedded generator must give notification to the reconciliation manager for an embedded generating station, if the intention is that the embedded generator will not be receiving payment from the clearing manager or any other person through the point of connection to which the notification relates.*

#### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

#### Audit commentary

NGAG is responsible for two generation ICPs only.

AMS are NGAG's agent for collection of raw meter data and EMS are agent for the calculation of submission data and the transmission of data to the reconciliation manager.

Registry checks confirmed for each ICP NGAG is responsible the electricity conveyed is quantified by a HHR metering installation in accordance with the Code.

NGAG confirmed NGAG does not use subtraction to determine submission information.

The EMS Agent audit report also affirmed compliance with this clause.

#### Audit outcome

Compliant

### 6.2. Responsibility for metering at GIP(Clause 10.26 (6), (7) and (8))

#### Code reference

Clause 10.26 (6), (7) and (8)

#### Code related audit information

*For each proposed metering installation or change to a metering installation that is a connection to the grid, the participant, must:*

- *provide to the grid owner a copy of the metering installation design (before ordering the equipment)*
- *provide at least 3 months for the grid owner to review and comment on the design*

- *respond within 3 business days of receipt to any request from the grid owner for additional details or changes to the design*
- *ensure any reasonable changes from the grid owner are carried out.*

*The participant responsible for the metering installation must:*

- *advise the reconciliation manager of the certification expiry date not later than 10 business days after certification of the metering installation*
- *become the MEP or contract with a person to be the MEP*
- *advise the reconciliation manager of the MEP identifier no later than 20 days after entering into a contract or assuming responsibility to be the MEP.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry Network Supply Point Table were checked.

#### **Audit commentary**

NGAG stated NGAG does not have any connections to the grid. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed.

#### **Audit outcome**

Not applicable

### 6.3. Certification of control devices (Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3)

#### **Code reference**

*Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3*

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

*The reconciliation participant must advise the metering equipment provider if a control device is used to control load or switch meter registers.*

*The reconciliation participant must ensure the control device is certified prior to using it for reconciliation purposes.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG trades ICPs using the HHR profile for reconciliation purposes. This profile does not require a switch of meter registers. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 6.4. Reporting of defective metering installations (Clause 10.43(2) and (3))

#### **Code reference**

*Clause 10.43(2) and (3)*

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

*If a participant becomes aware of an event or circumstance that lead it to believe a metering installation could be inaccurate, defective, or not fit for purpose they must:*

- *advise the MEP*
- *include in the advice all relevant details.*

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

The agreement between NGAG and EMS requires EMS to check and validate metering data for errors and anomalies. EMS will advise NGAG of any metering issues, potential or actual errors and anomalies.

No events or circumstances which lead EMS to believe that any NGAG metering installations were defective were advised during the audit period.

### **Audit outcome**

Compliant

## **6.5. Collection of information by certified reconciliation participant (Clause 2 Schedule 15.2)**

### **Code reference**

*Clause 2 Schedule 15.2*

### **Code related audit information**

*Only a certified reconciliation participant may collect raw meter data, unless only the MEP can interrogate the meter, or the MEP has an arrangement which prevents the reconciliation participant from electronically interrogating the meter:*

*2(2) - The reconciliation participant must collect raw meter data used to determine volume information from the services interface or the metering installation or from the MEP.*

*2(3) - The reconciliation participant must ensure the interrogation cycle is such that it does not exceed the maximum interrogation cycle in the registry .*

*2(4) - The reconciliation participant must interrogate the meter at least once every maximum interrogation cycle.*

*2(5) - When electronically interrogating the meter the participant must:*

- a) ensure the system is to within +/- 5 seconds of NZST or NZDST*
- b) compare the meter time to the system time*
- c) determine the time error of the metering installation*
- d) if the error is less than the maximum permitted error, correct the meter's clock*
- e) if the time error is greater than the maximum permitted error then:
  - i) correct the metering installation's clock*
  - ii) compare the metering installation's time with the system time*
  - iii) correct any affected raw meter data.**
- f) download the event log.*

*2(6) – The interrogation systems must record:*

- *the time*
- *the date*

- *the extent of any change made to the meter clock.*

### **Audit observation**

This was discussed with NGAG. The LIS file, Registry and Su were checked. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreements between NGAG and EMS.

### **Audit commentary**

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

The agreement between NGAG and EMS requires EMS to check and validate metering data for errors and anomalies. EMS will advise NGAG of any metering issues, potential or actual errors and anomalies.

The EMS Agent audit report dated 17/08/2023 did not identify any no non-compliance related to the above clause.

### **Audit outcome**

Compliant

## **6.6. Derivation of meter readings (Clause 3(1), 3(2) and 5 Schedule 15.2)**

### **Code reference**

*Clause 3(1), 3(2) and 5 Schedule 15.2*

### **Code related audit information**

*All meter readings must in accordance with the participants certified processes and procedures and using its certified facilities be sourced directly from raw meter data and, if appropriate, be derived and calculated from financial records.*

*All validated meter readings must be derived from meter readings.*

*A meter reading provided by a consumer may be used as a validated meter reading only if another set of validated meter readings not provided by the consumer are used during the validation process.*

*During the manual interrogation of each NHH metering installation the reconciliation participant must:*

- a) obtain the meter register*
- b) ensure seals are present and intact*
- c) check for phase failure (if supported by the meter)*
- d) check for signs of tampering and damage*
- e) check for electrically unsafe situations.*

*If the relevant parts of the metering installation are visible and it is safe to do so.*

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The EMS Agent audit report dated 17/08/2023 did not identify any no non-compliance related to the above clause.

#### **Audit outcome**

Compliant

### 6.7. NHH meter reading application (Clause 6 Schedule 15.2)

#### **Code reference**

*Clause 6 Schedule 15.2*

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

*For NHH switch event meter reads, for the gaining trader the reading applies from 0000 hours on the day of the relevant event date and for the losing trader at 2400 hours at the end of the day before the relevant event date.*

*In all other cases, All NHH readings apply from 0000hrs on the day after the last meter interrogation up to and including 2400hrs on the day of the meter interrogation.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 6.8. Interrogate meters once (Clause 7(1) and (2) Schedule 15.2)

#### **Code reference**

*Clause 7(1) and (2) Schedule 15.2*

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

*Each reconciliation participant must ensure that a validated meter reading is obtained in respect of every meter register for every non half hour metered ICP for which the participant is responsible, at least once during the period of supply to the ICP by the reconciliation participant, and used to create volume information.*

*This may be a validated meter reading at the time the ICP is switched to, or from, the reconciliation participant.*

*If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 7(1).*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 6.9. NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2)

#### **Code reference**

*Clause 8(1) and (2) Schedule 15.2*

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

*At least once every 12 months, each reconciliation participant must obtain a validated meter reading for every meter register for non-half hour metered ICPs, at which the reconciliation participant trades continuously for each 12 month period.*

*If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 8(1).*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 6.10. NHH meters 90% read rate (Clause 9(1) and (2) Schedule 15.2)

#### **Code reference**

*Clause 9(1) and (2) Schedule 15.2*

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

*In relation to each NSP, each reconciliation participant must ensure that for each NHH ICP at which the reconciliation participant trades continuously for each 4 months, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every 4 months for 90% of the non-half hour metered ICPs.*

*A report is to be sent to the Authority providing the percentage, in relation to each NSP, for which consumption information has been collected no later than 20 business days after the end of each month.*

*If exceptional circumstances prevent a reconciliation participant from obtaining the validated meter reading, the reconciliation participant is not required to comply with clause 9(1).*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.



### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

### **Audit outcome**

Not applicable

## **6.11. NHH meter interrogation log (Clause 10 Schedule 15.2)**

### **Code reference**

*Clause 10 Schedule 15.2*

### **Code related audit information**

*The following information must be logged as the result of each interrogation of the NHH metering:*

*10(a) - the means to establish the identity of the individual meter reader*

*10(b) - the ICP identifier of the ICP, and the meter and register identification*

*10(c) - the method being used for the interrogation and the device ID of equipment being used for interrogation of the meter.*

*10(d) - the date and time of the meter interrogation.*

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

### **Audit outcome**

Not applicable

## **6.12. HHR data collection (Clause 11(1) Schedule 15.2)**

### **Code reference**

*Clause 11(1) Schedule 15.2*

### **Code related audit information**

*Raw meter data from all electronically interrogated metering installations must be obtained via the services access interface.*

*This may be carried out by a portable device or remotely.*

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS.

#### **Audit commentary**

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The agreement between NGAG and EMS requires EMS to check and validate metering data for errors and anomalies. EMS will advise NGAG of any metering issues, potential or actual errors and anomalies.

The EMS Agent audit report dated 17/08/2023 did not identify any no non-compliance related to the above clause.

#### **Audit outcome**

Compliant

### 6.13. HHR interrogation data requirement (Clause 11(2) Schedule 15.2)

#### **Code reference**

*Clause 11(2) Schedule 15.2*

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

*The following information is collected during each interrogation:*

*11(2)(a) - the unique identifier of the data storage device*

*11(2)(b) - the time from the data storage device at the commencement of the download unless the time is within specification and the interrogation log automatically records the time of interrogation*

*11(2)(c) - the metering information, which represents the quantity of electricity conveyed at the point of connection, including the date and time stamp or index marker for each half hour period. This may be limited to the metering information accumulated since the last interrogation*

*11(2)(d) - the event log, which may be limited to the events information accumulated since the last interrogation*

*11(2)(e) - an interrogation log generated by the interrogation software to record details of all interrogations.*

*The interrogation log must be examined by the reconciliation participant responsible for collecting the data and appropriate action must be taken if problems are apparent or an automated software function flags exceptions.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS.

#### **Audit commentary**

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The agreement between NGAG and EMS requires EMS to check and validate metering data for errors and anomalies. EMS will advise NGAG of any metering issues, potential or actual errors and anomalies.

The EMS Agent audit report dated 17/08/2023 did not identify any no non-compliance related to the above clause.

#### **Audit outcome**

Compliant

### 6.14. HHR interrogation log requirements (Clause 11(3) Schedule 15.2)

#### **Code reference**

*Clause 11(3) Schedule 15.2*

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

*The interrogation log forms part of the interrogation audit trail and, as a minimum, must contain the following information:*

*11(3)(a)- the date of interrogation*

*11(3)(b)- the time of commencement of interrogation*

*11(3)(c)- the operator identification (if available)*

*11(3)(d)- the unique identifier of the meter or data storage device*

*11(3)(e)- the clock errors outside the range specified in Table 1 of clause 2*

*11(3)(f)- the method of interrogation*

*11(3)(g)- the identifier of the reading device used for interrogation (if applicable).*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS.

#### **Audit commentary**

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The agreement between NGAG and EMS requires EMS to check and validate metering data for errors and anomalies. EMS will advise NGAG of any metering issues, potential or actual errors and anomalies.

The EMS Agent audit report dated 17/08/2023 did not identify any no non-compliance related to the above clause.

#### **Audit outcome**

Compliant

## 7. STORING RAW METER DATA

### 7.1. Trading period duration (Clause 13 Schedule 15.2)

#### Code reference

*Clause 13 Schedule 15.2*

#### Code related audit information

*The trading period duration, normally 30 minutes, must be within  $\pm 0.1\%$  ( $\pm 2$  seconds).*

#### Audit observation

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed.

#### Audit commentary

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The EMS Agent audit report confirms compliance with this clause and outlines the process to ensure that the trading period duration is accurate. It states that the trading period duration, normally 30 minutes, is kept within  $\pm 10$  seconds managed through the clock synchronisation process.

#### Audit outcome

Compliant

### 7.2. Archiving and storage of raw meter data (Clause 18 Schedule 15.2)

#### Code reference

*Clause 18 Schedule 15.2*

#### Code related audit information

*A reconciliation participant who is responsible for interrogating a metering installation must archive all raw meter data and any changes to the raw meter data for at least 48 months, in accordance with clause 8(6) of Schedule 10.6.*

*Procedures must be in place to ensure that raw meter data cannot be accessed by unauthorised personnel.*

*Meter readings cannot be modified without an audit trail being created.*

#### Audit observation

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed.

#### Audit commentary

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The EMS Agent audit report states all data is archived in accordance with this clause for a period of more than 48 months. This was verified by viewing raw meter data from a prior period as part of the EMS audit.

The EMS Agent audit reports stated password protection was in place to ensure raw meter data could not be accessed by unauthorised personnel within systems used to retrieve and store raw meter data.

Audit trails would be created by EMS in their system if raw meter data were modified.

NGAG confirmed no data was modified during this audit period.

The EMS Agent Report confirmed compliance with this clause.

#### **Audit outcome**

Compliant

### 7.3. Non metering information collected / archived (Clause 21(5) Schedule 15.2)

#### **Code reference**

*Clause 21(5) Schedule 15.2*

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

*All relevant non-metering information, such as external control equipment operation logs, used in the determination of profile data must be collected, and archived in accordance with clause 18.*

#### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed.

#### **Audit commentary**

Checks confirmed EMS does not use non-metering information to determine profile data on behalf of NGAG

#### **Audit outcome**

Compliant

## 8. CREATING AND MANAGING (INCLUDING VALIDATING, ESTIMATING, STORING, CORRECTING AND ARCHIVING) VOLUME INFORMATION

### 8.1. Correction of NHH meter readings (Clause 19(1) Schedule 15.2)

#### Code reference

Clause 19(1) Schedule 15.2

#### Code related audit information

*If a reconciliation participant detects errors while validating non-half hour meter readings, the reconciliation participant must:*

*19(1)(a) - confirm the original meter reading by carrying out another meter reading*

*19(1)(b) - replace the original meter reading the second meter reading (even if the second meter reading is at a different date)*

*19(1A) if a reconciliation participant detects errors while validating non half hour meter readings, but the reconciliation participant cannot confirm the original meter reading or replace it with a meter reading from another interrogation, the reconciliation participant must:*

- *substitute the original meter reading with an estimated reading that is marked as an estimate; and*
- *subsequently replace the estimated reading in accordance with clause 4(2)*

#### Audit observation

This was discussed with NGAG. The LIS file and Registry were checked.

#### Audit commentary

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### Audit outcome

Not applicable

### 8.2. Correction of HHR metering information (Clause 19(2) Schedule 15.2)

#### Code reference

Clause 19(2) Schedule 15.2

#### Code related audit information

*If a reconciliation participant detects errors while validating half hour meter readings, the reconciliation participant must correct the meter readings as follows:*

*19(2)(a) - if the relevant metering installation has a check meter or data storage device, substitute the original meter reading with data from the check meter or data storage device; or*

*19(2)(b) - if the relevant metering installation does not have a check meter or data storage device, substitute the original meter reading with data from another period provided:*

- (i) *The total of all substituted intervals matches the total consumption recorded on a meter, if available; and*

- (ii) *The reconciliation participant considers the pattern of consumption to be materially similar to the period in error*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS.

#### **Audit commentary**

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The agreement between NGAG and EMS requires EMS to check and validate metering data for errors and anomalies. EMS will advise NGAG of any metering issues, potential or actual errors and anomalies. If NGAG requested EMS to correct meter reading data EMS would do so using the process outlined in the EMS audit report.

NGAG confirmed, no data was modified during this audit period.

The EMS Agent audit report dated 17/08/2023 did not identify any no non-compliance related to the above clause.

#### **Audit outcome**

Compliant

### **8.3. Error and loss compensation arrangements (Clause 19(3) Schedule 15.2)**

#### **Code reference**

*Clause 19(3) Schedule 15.2*

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

*A reconciliation participant may use error compensation and loss compensation as part of the process of determining accurate data. Whichever methodology is used, the reconciliation participant must document the compensation process and comply with audit trail requirements set out in the Code.*

#### **Audit observation**

This was discussed with NGAG. The Registry and certification records were checked. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS.

#### **Audit commentary**

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

Checks of certification records confirm that no error or loss compensation apply.

The EMS Agent audit report confirmed that there were no metering installations with external compensation factors other than ratio compensation.

#### **Audit outcome**

Compliant

## 8.4. Correction of HHR and NHH raw meter data (Clause 19(4) and (5) Schedule 15.2)

### Code reference

Clause 19(4) and (5) Schedule 15.2

### Code related audit information

*In correcting a meter reading in accordance with clause 19, the raw meter data must not be overwritten. If the raw meter data and the meter readings are the same, an automatic secure backup of the affected data must be made and archived by the processing or data correction application.*

*If data is corrected or altered, a journal must be generated and archived with the raw meter data file. The journal must contain the following:*

*19(5)(a)- the date of the correction or alteration*

*19(5)(b)- the time of the correction or alteration*

*19(5)(c)- the operator identifier for the person within the reconciliation participant who made the correction or alteration*

*19(5)(d)- the half-hour metering data or the non-half hour metering data corrected or altered, and the total difference in volume of such corrected or altered data*

*19(5)(e)- the technique used to arrive at the corrected data*

*19(5)(f)- the reason for the correction or alteration.*

### Audit observation

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS.

### Audit commentary

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

NGAG confirmed no metering data corrections were advised by EMS during this audit period.

The EMS Agent audit report affirmed raw meter data is not overwritten and is archived according to the requirements of this clause.

### Audit outcome

Compliant



## 9. ESTIMATING AND VALIDATING VOLUME INFORMATION

### 9.1. Identification of readings (Clause 3(3) Schedule 15.2)

#### Code reference

*Clause 3(3) Schedule 15.2*

#### Code related audit information

*All estimated readings and permanent estimates must be clearly identified as an estimate at source and in any exchange of metering data or volume information between participants.*

#### Audit observation

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS.

#### Audit commentary

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The agreement between NGAG and EMS requires EMS to check and validate metering data for errors and anomalies. EMS will advise NGAG of any metering issues, potential or actual errors and anomalies.

NGAG confirmed there were no metering data estimations advised by EMS during this audit period.

The EMS Agent audit report affirms all estimated data is correctly identified at trading period level should it be required.

#### Audit outcome

Compliant

### 9.2. Derivation of volume information (Clause 3(4) Schedule 15.2)

#### Code reference

*Clause 3(4) Schedule 15.2*

#### Code related audit information

*Volume information must be directly derived, in accordance with Schedule 15.2, from:*

*3(4)(a) - validated meter readings*

*3(4)(b) - estimated readings*

*3(4)(c) - permanent estimates.*

#### Audit observation

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. HHR volume submission and meter reading data files were also checked.

#### Audit commentary

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The EMS Agent audit report affirmed all volume data was sourced from validated or estimated data.

#### **Audit outcome**

Compliant

### 9.3. Meter data used to derive volume information (Clause 3(5) Schedule 15.2)

#### **Code reference**

*Clause 3(5) Schedule 15.2*

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

*All meter data that is used to derive volume information must not be rounded or truncated from the stored data from the metering installation.*

#### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. HHR volume submission and meter reading data files were also checked.

#### **Audit commentary**

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The EMS Agent audit report affirmed the rounding process used if required. Volume data is calculated from raw meter reading data first. Rounding to two decimal places is only applied when creating the volume submission data file.

#### **Audit outcome**

Compliant

### 9.4. Half hour estimates (Clause 15 Schedule 15.2)

#### **Code reference**

*Clause 15 Schedule 15.2*

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

*If a reconciliation participant is unable to interrogate an electronically interrogated metering installation before the deadline for providing submission information, the submission to the reconciliation manager must be the reconciliation participant's best estimate of the quantity of electricity that was purchased or sold in each trading period during any applicable consumption period for that metering installation.*

*The reconciliation participant must use reasonable endeavours to ensure that estimated submission information is within the percentage specified by the Authority.*

#### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. HHR volume submission and meter reading data files were also checked.

#### **Audit commentary**

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The agreement between NGAG and EMS requires EMS to check and validate metering data for errors and anomalies. EMS will advise NGAG of any metering issues, potential or actual errors and anomalies.

NGAG confirmed they did not receive any notifications of the need to carry out any metering data estimations from EMS during this audit period.

If it were necessary for NGAG to requested EMS to correct meter reading data EMS would do so using the process outlined in their audit report.

#### **Audit outcome**

Compliant

### **9.5. NHH metering information data validation (Clause 16 Schedule 15.2)**

#### **Code reference**

*Clause 16 Schedule 15.2*

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

*Each validity check of non-half hour meter readings and estimated readings must include the following:*

*16(2)(a) - confirmation that the meter reading or estimated reading relates to the correct ICP, meter, and register*

*16(2)(b) - checks for invalid dates and times*

*16(2)(c) - confirmation that the meter reading or estimated reading lies within an acceptable range compared with the expected pattern, previous pattern, or trend*

*16(2)(d) - confirmation that there is no obvious corruption of the data, including unexpected 0 values.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### **9.6. Electronic meter readings and estimated readings (Clause 17 Schedule 15.2)**

## Code reference

Clause 17 Schedule 15.2

## Code related audit information

*Each validity check of electronically interrogated meter readings and estimate readings must be at a frequency that will allow a further interrogation of the data storage device before the data is overwritten within the data storage device and before this data can be used for any purpose under the Code.*

*Each validity check of a meter reading obtained by electronic interrogation or an estimated reading must include:*

*17(4)(a) - checks for missing data*

*17(4)(b) - checks for invalid dates and times*

*17(4)(c) - checks of unexpected 0 values*

*17(4)(d) - comparison with expected or previous flow patterns*

*17(4)(e) - comparisons of meter readings with data on any data storage device registers that are available*

*17(4)(f) - a review of the meter and data storage device event log for any event that could have affected the integrity of metering data*

*17(4)(g) – a review of the relevant metering data where there is an event that could have affected the integrity of the metering data*

*If there is an event that could affect the integrity of the metering data (including events reported by MEPs, but excluding where the MEP is responsible for investigating and remediating the event) the reconciliation must investigate and remediate any events.*

*If the event may affect the integrity or operation of the metering installation the reconciliation participant must notify the metering equipment provider.*

## Audit observation

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. HHR volume submission and meter reading data files were also checked.

## Audit commentary

EMS are NGAG's agent for collection of raw meter data, the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG trades ICPs using the HHR profile for reconciliation purposes. EMS interrogates HHR data storage devices electronically and remotely to source raw meter data.

The agreement between NGAG and EMS requires EMS to check and validate metering data for errors and anomalies. EMS will advise NGAG of any metering issues, potential or actual errors and anomalies.

NGAG stated they did not receive any such notifications from EMS during this audit period. If this were to occur the relevant MEP would be informed, and an investigation requested.

EMS conducts thorough validation of data by checking for invalid data and time, checking for missing data, checks for unexpected zero values, checks for high and low demand, check meter events.

The EMS Agent audit report affirmed compliance with this clause.

## Audit outcome

Compliant

## 10. PROVISION OF METERING INFORMATION TO THE GRID OWNER IN ACCORDANCE WITH SUBPART 4 OF PART 13 (CLAUSE 15.38(1)(F))

10.1. Generators to provide HHR metering information (Clause 13.136)

10.2. Unoffered & intermittent generation provision of metering information (Clause 13.137)

10.3. Loss adjustment of HHR metering information (Clause 13.138)

10.4. Notification of the provision of HHR metering information (Clause 13.140)

### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG stated NGAG does not have any connections to the grid. Registry checks confirmed this. NGAG is not required to submit information to the grid owner

This clause is not applicable. Compliance was not assessed.

### **Audit outcome**

Not applicable

## 11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

### 11.1. Buying and selling notifications (Clause 15.3)

#### Code reference

Clause 15.3

#### Code related audit information

*Unless an embedded generator has given a notification in respect of the point of connection under clause 15.3, a trader must give notice to the reconciliation manager if it is to commence or cease trading electricity at a point of connection using a profile with a profile code other than HHR, RPS, UML, EG1, or PV1 at least five business days before commencing or ceasing trader.*

*The notification must comply with any procedures or requirements specified by the reconciliation manager.*

#### Audit observation

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. HHR volume submission and meter reading data files were also checked.

#### Audit commentary

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. There are no plans to use any other profile than HHR as both ICPs are category 5 requiring metering data to be submitted as half-hourly.

Checks confirm the HHR profile was used for reconciliation submissions.

#### Audit outcome

Compliant

### 11.2. Calculation of ICP days (Clause 15.6)

#### Code reference

Clause 15.6

#### Code related audit information

*Each retailer and direct purchaser (excluding direct consumers) must deliver a report to the reconciliation manager detailing the number of ICP days for each NSP for each submission file of submission information in respect of:*

*15.6(1)(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*

*15.6(1)(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

*The ICP days information must be calculated using the data contained in the retailer or direct purchaser's reconciliation system when it aggregates volume information for ICPs into submission information.*

### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. The ICPDAYS and ICPCOMP files were also checked.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

EMS are agent for the calculation of submission data and the transmission of data to the Reconciliation Manager.

NGAG are not required to submit ICPDAYS files as a generator. EMS does however submit ICPDAYS files on behalf of NGAG.

Checks confirm the ICPDAYS files submitted are accurate.

The EMS Agent audit report affirmed compliance with this clause.

### **Audit outcome**

Compliant

## **11.3. Electricity supplied information provision to the reconciliation manager (Clause 15.7)**

### **Code reference**

*Clause 15.7*

### **Code related audit information**

*A retailer must deliver to the reconciliation manager its total monthly quantity of electricity supplied for each NSP, aggregated by invoice month, for which it has provided submission information to the reconciliation manager, including revised submission information for that period as non-loss adjusted values in respect of:*

*15.7(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*

*15.7(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

Generators are not required to submit electricity supplied information (BILLED) files.

This clause is not applicable. Compliance was not assessed.

### **Audit outcome**

Not applicable

## **11.4. HHR aggregates information provision to the reconciliation manager (Clause 15.8)**

### **Code reference**

*Clause 15.8*

### **Code related audit information**



*A retailer or direct purchaser (excluding direct consumers) must deliver to the reconciliation manager its total monthly quantity of electricity supplied for each half hourly metered ICP for which it has provided submission information to the reconciliation manager, including:*

*15.8(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*

*15.8(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

#### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed. HHR volume submission and HHRAGGR files were also checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG are not required to submit HHRAGGR files as a generator. EMS does however submit HHRAGGR files on behalf of NGAG.

Checks confirm the HHRAGGR files submitted were accurate.

The EMS Agent audit report affirmed compliance with this clause.

#### **Audit outcome**

Compliant

## 12. SUBMISSION COMPUTATION

### 12.1. Daylight saving adjustment (Clause 15.36)

#### Code reference

Clause 15.36

#### Code related audit information

*The reconciliation participant must provide submission information to the reconciliation manager that is adjusted for NZDT using 1 of the techniques set out in clause 15.36(3) specified by the Authority.*

#### Audit observation

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed.

#### Audit commentary

The EMS audit report states the company uses the “trading period run on” technique for daylight saving adjustment.

The EMS Agent audit report affirmed compliance with this clause.

#### Audit outcome

Compliant

### 12.2. Creation of submission information (Clause 15.4)

#### Code reference

Clause 15.4

#### Code related audit information

*By 1600 hours on the 4th business day of each reconciliation period, the reconciliation participant must deliver submission information to the reconciliation manager for all NSPs for which the reconciliation participant is recorded in the registry as having traded electricity during the consumption period immediately before that reconciliation period (in accordance with Schedule 15.3).*

*By 1600 hours on the 13th business day of each reconciliation period, the reconciliation participant must deliver submission information to the reconciliation manager for all points of connection for which the reconciliation participant is recorded in the registry as having traded electricity during any consumption period being reconciled in accordance with clauses 15.27 and 15.28, and in respect of which it has obtained revised submission information (in accordance with Schedule 15.3).*

#### Audit observation

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. The HHRVOLS, ICPDAYS, ACCYHHR and HHRAGGR submission files between June 2023 and November 2023 were reviewed.

#### Audit commentary

NGAG is responsible for two generation ICPs only.

EMS are agent for the calculation of submission data and the transmission of data to the Reconciliation Manager.

Checks confirm EMS submitted submission information files to the reconciliation manager as specified by this Clause.

The EMS audit report outlined the process for creating the submission information files on behalf of NGAG from the raw meter reading data to the volumes and aggregates information.

The EMS Agent audit report affirmed compliance with this clause.

#### **Audit outcome**

Compliant

### 12.3. Allocation of submission information (Clause 15.5)

#### **Code reference**

Clause 15.5

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

*In preparing and submitting submission information, the reconciliation participant must allocate volume information for each ICP to the NSP indicated by the data held in the registry for the relevant consumption period at the time the reconciliation participant assembles the submission information. Volume information must be derived in accordance with Schedule 15.2.*

*However, if, in relation to a point of connection at which the reconciliation participant trades electricity, a notification given by an embedded generator under clause 15.13 for an embedded generating station is in force, the reconciliation participant is not required to comply with the above in relation to electricity generated by the embedded generating station.*

#### **Audit observation**

#### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. The HHRVOLS, ICPDAYS, ACCYHHR and HHRAGGR submission files between June 2023 and November 2023 were reviewed.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

EMS are agent for the calculation of submission data and the transmission of data to the Reconciliation Manager.

EMS as the agent of NGAG submits data for 2 ICPs connected to NSP KOE1101.

Reconciliation submission files provided by NGAG were checked. The ICPs were allocated to the correct NSP recorded in the registry.

The EMS Agent audit report affirmed compliance with this clause.

#### **Audit outcome**

Compliant

### 12.4. Grid owner volumes information (Clause 15.9)

#### **Code reference**

Clause 15.9

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

*The participant (if a grid owner) must deliver to the reconciliation manager for each point of connection for all of its GXPs, the following:*

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.9(a))*

- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period. (clause 15.9(b))*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG is not a Grid Owner.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 12.5. Provision of NSP submission information (Clause 15.10)

#### **Code reference**

*Clause 15.10*

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

*The participant (if a local or embedded network owner) must provide to the reconciliation manager for each NSP for which the participant has given a notification under clause 25(1) Schedule 11.1 (which relates to the creation, decommissioning, and transfer of NSPs) the following:*

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.10(a))*
- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period. (clause 15.10(b))*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG is not an Embedded Network Owner.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 12.6. Grid connected generation (Clause 15.11)

#### **Code reference**

*Clause 15.11*

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

*The participant (if a grid connected generator) must deliver to the reconciliation manager for each of its points of connection, the following:*

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.11(a))*

- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period. (clause 15.11(b))*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is not responsible for a grid connected generator.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 12.7. Accuracy of submission information (Clause 15.12)

#### **Code reference**

*Clause 15.12*

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

*If the reconciliation participant has submitted information and then subsequently obtained more accurate information, the participant must provide the most accurate information available to the reconciliation manager or participant, as the case may be, at the next available opportunity for submission (in accordance with clauses 15.20A, 15.27, and 15.28).*

#### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. The HHRVOLS, ICPDAYS, ACCYHHR and HHRAGGR submission files between June 2023 and November 2023 were reviewed.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

EMS are agent for the calculation of submission data and the transmission of data to the Reconciliation Manager.

The EMS audit outlines the revision process used to create revision files.

The EMS Agent audit report affirmed compliance with this clause.

#### **Audit outcome**

Compliant

### 12.8. Permanence of meter readings for reconciliation (Clause 4 Schedule 15.2)

#### **Code reference**

*Clause 4 Schedule 15.2*

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

*Only volume information created using validated meter readings, or if such values are unavailable, permanent estimates, has permanence within the reconciliation processes (unless subsequently found to be in error).*

*The relevant reconciliation participant must, at the earliest opportunity, and no later than the month 14 revision cycle, replace volume information created using estimated readings with volume information created using validated meter readings.*

*If, despite having used reasonable endeavours for at least 12 months, a reconciliation participant has been unable to obtain a validated meter reading, the reconciliation participant must replace volume information created using an estimated reading with volume information created using a permanent estimate in place of a validated meter reading.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 12.9. Reconciliation participants to prepare information (Clause 2 Schedule 15.3)

#### **Code reference**

*Clause 2 Schedule 15.3*

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

*If a reconciliation participant prepares submission information for each NSP for the relevant consumption periods in accordance with the Code, such submission information for each ICP must comprise the following:*

- *half hour volume information for the total metered quantity of electricity for each ICP notified in accordance with clause 11.7(2) for which there is a category 3 or higher metering installation (clause 2(1)(a)) for each ICP about which information is provided under clause 11.7(2) for which there is a category 1 or category 2 metering installation (clause 2(1)(ac) to 2(1)(ae)):*
  - a) *any half hour volume information for the ICP; or*
  - b) *any non-half hour volumes information calculated under clauses 4 to 6 (as applicable).*
  - c) *unmetered load quantities for each ICP that has unmetered load associated with it derived from the quantity recorded in the registry against the relevant ICP and the number of days in the period, the distributed unmetered load database, or other sources of relevant information. (clause 2(1)(c))*
- *to create non half hour submission information a reconciliation participant must only use information that is dependent on a control device if (clause 2(2)):*
  - a) *the certification of the control device is recorded in the registry; or*
  - b) *the metering installation in which the control device is location has interim certification.*
- *to create submission information for a point of connection the reconciliation participant must use volume information (clause 2(3))*
- *to calculate volume information the reconciliation participant must apply raw meter data :*
  - a) *for each ICP, the compensation factor that is recorded in the registry (clause 2(4)(a))*
  - b) *for each NSP the compensation factor that is recorded in the metering installations most recent certification report. (clause 2(4)(b))*

#### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. The HHRVOLS, ICPDAYS, ACCYHHR and HHRAGGR submission files between June 2023 and November 2023 were reviewed.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

EMS are agent for the calculation of submission data and the transmission of data to the Reconciliation Manager.

The EMS audit report describes the process used to create submission information on behalf of NGAG.

The EMS Agent audit report affirmed compliance with this clause.

#### **Audit outcome**

Compliant

### 12.10. Historical estimates and forward estimates (Clause 3 Schedule 15.3)

#### **Code reference**

*Clause 3 Schedule 15.3*

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

*For each ICP that has a non-half hour metering installation, volume information derived from validated meter readings, estimated readings, or permanent estimates must be allocated to consumption periods using the following techniques to create historical estimates and forward estimates. (clause 3(1))*

*Each estimate that is a forward estimate or a historical estimate must clearly be identified as such. (clause 3(2))*

*If validated meter readings are not available for the purpose of clauses 4 and 5, permanent estimates may be used in place of validated meter readings. (clause 3(3))*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 12.11. Historical estimate process (Clause 4 and 5 Schedule 15.3)

#### **Code reference**

*Clause 4 and 5 Schedule 15.3*

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

*The methodology outlined in clause 4 of Schedule 15.3 must be used when preparing historic estimates of volume information for each ICP when the relevant seasonal adjustment shape is available.*

*If a seasonal adjustment shape is not available, the methodology for preparing an historical estimate of volume information for each ICP must be the same as in clause 4, except that the relevant quantities  $kWh_{Px}$  must be prorated as determined by the reconciliation participant using its own methodology or on a flat shape basis using the relevant number of days that are within the consumption period and within the period covered by  $kWh_{Px}$ .*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 12.12. Forward estimate process (Clause 6 Schedule 15.3)

#### **Code reference**

*Clause 6 Schedule 15.3*

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

*Forward estimates may be used only in respect of any period for which an historical estimate cannot be calculated.*

*The methodology used for calculating a forward estimate may be determined by the reconciliation participant, only if it ensures that the accuracy is within the percentage of error specified by the Authority.*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

### 12.13. Compulsory meter reading after profile change (Clause 7 Schedule 15.3)

#### **Code reference**

*Clause 7 Schedule 15.3*

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



*If the reconciliation participant changes the profile associated with a meter, it must, when determining the volume information for that meter and its respective ICP, use a validated meter reading or permanent estimate on the day on which the profile change is to take effect.*

*The reconciliation participant must use the volume information from that validated meter reading or permanent estimate in calculating the relevant historical estimates of each profile for that meter.*

### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. The HHRVOLS, ICPDAYS, ACCYHHR and HHRAGGR submission files between June 2023 and November 2023 were reviewed.

### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. There are no plans to use any other profile than HHR as both ICPs are category 5 requiring metering data to be submitted as half-hourly.

Checks confirm HHR profile was used for reconciliation submissions.

### **Audit outcome**

Compliant

## 13. SUBMISSION FORMAT AND TIMING

### 13.1. Provision of submission information to the RM (Clause 8 Schedule 15.3)

#### Code reference

*Clause 8 Schedule 15.3*

#### Code related audit information

*For each category 3 of higher metering installation, a reconciliation participant must provide half hour submission information to the reconciliation manager.*

*For each category 1 or category 2 metering installation, a reconciliation participant must provide to the reconciliation manager:*

- *Half hour submission information; or*
- *Non half hour submission information; or*
- *A combination of half hour submission information and non-half hour submission information*

*However, a reconciliation participant may instead use a profile if:*

- *The reconciliation participant is using a profile approved in accordance with clause Schedule 15.5; and*
- *The approved profile allows the reconciliation participant to provide half hour submission information from a non-half hour metering installation; and*
- *The reconciliation participant provides submission information that complies with the requirements set out in the approved profile.*

*Half hour submission information provided to the reconciliation manager must be aggregated to the following levels:*

- *NSP code*
- *reconciliation type*
- *profile*
- *loss category code*
- *flow direction*
- *dedicated NSP*
- *trading period*

*The non-half hour submission information that a reconciliation participant submits must be aggregated to the following levels:*

- *NSP code*
- *reconciliation type*
- *profile*
- *loss category code*
- *flow direction*
- *dedicated NSP*
- *consumption period or day*

#### Audit observation

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. The HHRVOLS, ICPDAYS, ACCYHHR and HHRAGGR submission files between June 2023 and November 2023 were reviewed.

#### Audit commentary

NGAG is responsible for two generation ICPs only.

EMS are agent for the calculation of submission data and the transmission of data to the Reconciliation Manager.

The EMS audit report describes the process used to create submission information on behalf of NGAG.

The EMS Agent audit report affirmed compliance with this clause.

#### **Audit outcome**

Compliant

### 13.2. Reporting resolution (Clause 9 Schedule 15.3)

#### **Code reference**

*Clause 9 Schedule 15.3*

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

*When reporting submission information, the number of decimal places must be rounded to not more than 2 decimal places.*

*If the unrounded digit to the right of the second decimal place is greater than or equal to 5, the second digit is rounded up, and*

*If the digit to the right of the second decimal place is less than 5, the second digit is unchanged.*

#### **Audit observation**

This was discussed with NGAG. The EMS Agent audit report dated 17/08/2023 was reviewed along with the agreement between NGAG and EMS. The HHRVOLS, ICPDAYS, ACCYHHR and HHRAGGR submission files between June 2023 and November 2023 were reviewed.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

EMS are agent for the calculation of submission data and the transmission of data to the Reconciliation Manager.

The EMS audit report describes the process used to create submission information on behalf of NGAG.

The EMS Agent audit report affirmed compliance with this clause.

#### **Audit outcome**

Compliant

### 13.3. Historical estimate reporting to RM (Clause 10 Schedule 15.3)

#### **Code reference**

*Clause 10 Schedule 15.3*

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

*By 1600 hours on the 13th business day of each reconciliation period the reconciliation participant must report to the reconciliation manager the proportion of historical estimates per NSP contained within its non-half hour submission information.*

*The proportion of submission information per NSP that is comprised of historical estimates must (unless exceptional circumstances exist) be:*

- *at least 80% for revised data provided at the month 3 revision (clause 10(3)(a))*

- *at least 90% for revised data provided at the month 7 revision (clause 10(3)(b))*
- *100% for revised data provided at the month 14 revision. (clause 10(3)(c))*

#### **Audit observation**

This was discussed with NGAG. The LIS file and Registry were checked.

#### **Audit commentary**

NGAG is responsible for two generation ICPs only.

NGAG's agent EMS submits information to the Reconciliation Manager using the HHR profile. NGAG is not responsible for any NHH ICPs. Registry checks confirmed this.

This clause is not applicable. Compliance was not assessed

#### **Audit outcome**

Not applicable

## CONCLUSION

See executive summary.

## PARTICIPANT RESPONSE

We thank Allan for his constructive and engaging approach to the Audit.