ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT

For

GLOBUG LIMITED

Prepared by: Steve Woods

Date audit commenced: 9 July 2019

Date audit report completed: 8 August 2019

Audit report due date: 28-Aug-19

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EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **GLOBUG Limited** (**Globug),** to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1. The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.2.

This audit is for the GBUG participant code only.

The audit found 13 non-compliance issues, an improvement on 21 in the last audit. Three recommendations are made.

Improvements have been made in several areas since the last audit, as follows:

- status validation has significantly improved the number of discrepancies;
- data collection controls have reduced the number of unread meters; and
- corrections for bridged meters are now allocated to the correct periods.

The registry is still not being updated for all disconnections if they are for a period of less than one week.

Switching processes had a high level of compliance with very few late files and most content being accurate.

Reconciliation was found to have a high level of accuracy with robust processes in place. The improvement in meter reading attainment has assisted with this.

Overall Globug has significantly improved the level of compliance when compared to the last audit. The indicative audit frequency table indicates the next audit should be in 12 months. I have considered this result in conjunction with the responses from Globug and I recommend that the next audit be due in 18 months. The reason for this recommendation is that four of the matters have been cleared and the issue raised in Section 9.3, regarding rounding, only has a very small impact even though it has a breach risk rating of five.

The matters raised are shown in the tables below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	10.6,11.2 & 15.2	Some registry discrepancies.	Strong	Low	1	Cleared
Electrical Connection of Point of Connection	2.11	10.33A	Two ICPs reconnected with uncertified metering.	Strong	Low	1	Identified
Changes to registry information	3.3	10 of schedule 11.1	Registry not updated within 5 business days of the event for some reconnections, disconnections and 4 MEP changes.	Moderate	Low	2	Identified
Management of "inactive" status	3.9	19 Schedule 11.1	Incorrect status recorded for 3 ICPs. Credit disconnections not updated on the registry or SAP for each full day the ICPs are inactive.	Moderate	Low	2	Identified
Losing trader must provide final information - standard switch	4.3	5 of schedule 11.3	Calculation methodology for average daily consumption not compliant.	Strong	Low	1	Cleared
Losing trader determines a different date - switch move	4.9	10(2) Schedule 11.3	2 ICP switch event dates set earlier than the gaining trader's requested date.	Strong	Low	1	Cleared
Losing trader provision of final information	4.10	11 Schedule 11.3	Calculation methodology for average daily consumption not compliant. Readings for one ICP incorrectly labelled	Strong	Low	1	Cleared
Withdrawal of switch requests	4.15	17 & 18 of schedule 11.3	14 late switch withdrawals.	Strong	Low	1	Investigating
Electricity conveyed	6.1	10.13	Energy is not metered and quantified according to the code where meters are bridged.	Moderate	Low	2	Disputed

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Interrogate meters once	6.8	7(1) and (2) Schedule 15.2	Exceptional circumstances not proven for 8 ICPs not read during period of supply.	Moderate	Low	2	Identified
Meter data used to derive volume information	9.3	3(5) Schedule 15.2	Raw meter data is rounded upon receipt and not when volume information is created.	None	Low	5	Investigating
Permanence of meter readings for reconciliation	12.8	4 of Schedule 15.2	Estimate not made permanent for one ICP.	Strong	Low	1	Identified
Historical estimate reporting to RM	13.3	10 of Schedule 15.3	80% HE threshold not met for five NSPs. 100% threshold not met for one NSP.	Strong	Low	1	Identified
Future Risk Rating						21	

Future risk rating	0	1-3	4-15	16-40	41-55	55+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Recommendation	Remedial action
Status reporting	3.9	Check reporting available to confirm whether remote disconnection is successful or not.	Identified
Interrogate meters once during period of supply	6.8	Obtain meter readings during site visits.	Investigating
		Review reporting to capture only ICPs unread during the period of supply.	Investigating

ISSUES

Subject	Section	Description	Issue
		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

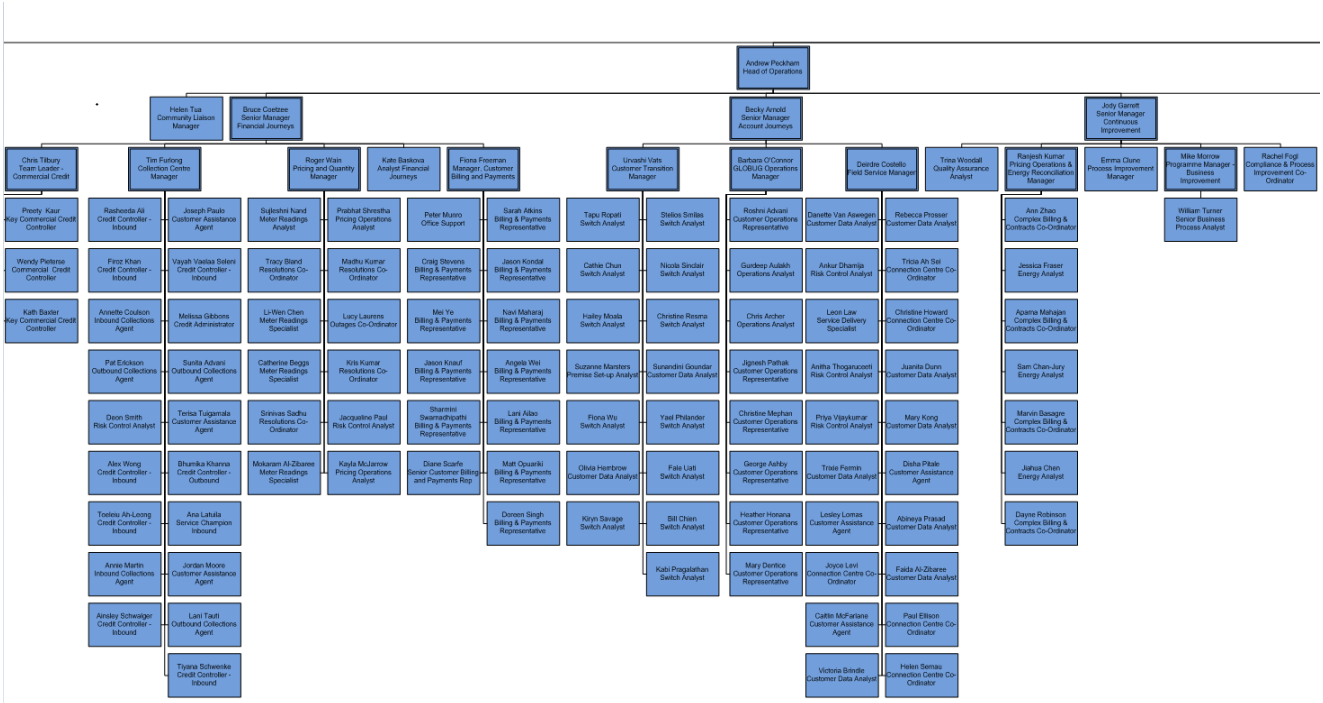
Current code exemptions were reviewed on the Electricity Authority website.

Audit commentary

Globug has no current exemptions relevant to this audit

1.2. Structure of Organisation

Mercury provided their current organisational structure, which includes Globug:



1.3. Persons involved in this audit

Auditor:

Name	Company
Steve Woods	Veritek Limited

Mercury/ Globug personnel assisting in this audit were:

Name	Title
Ranjesh Kumar	Pricing Operations and Energy Services Manager
Barbara O'Connor	Globug Operation Manager
Urvashi Vats	Customer Transition Manager
Christine Resma	Globug Switching Analyst
Gurdeep Aulakh	Globug Operations Analyst
Calvin Nagra	Globug Operations Analyst
Leon Law	Service Delivery Specialist
Fiona Wu	Energy Analyst
Perry Tan	Energy Analyst
Roger Wain	Manager Price and Quantity
Catherine Beggs	Meter Readings Specialist

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

Use of agents was discussed with Globug.

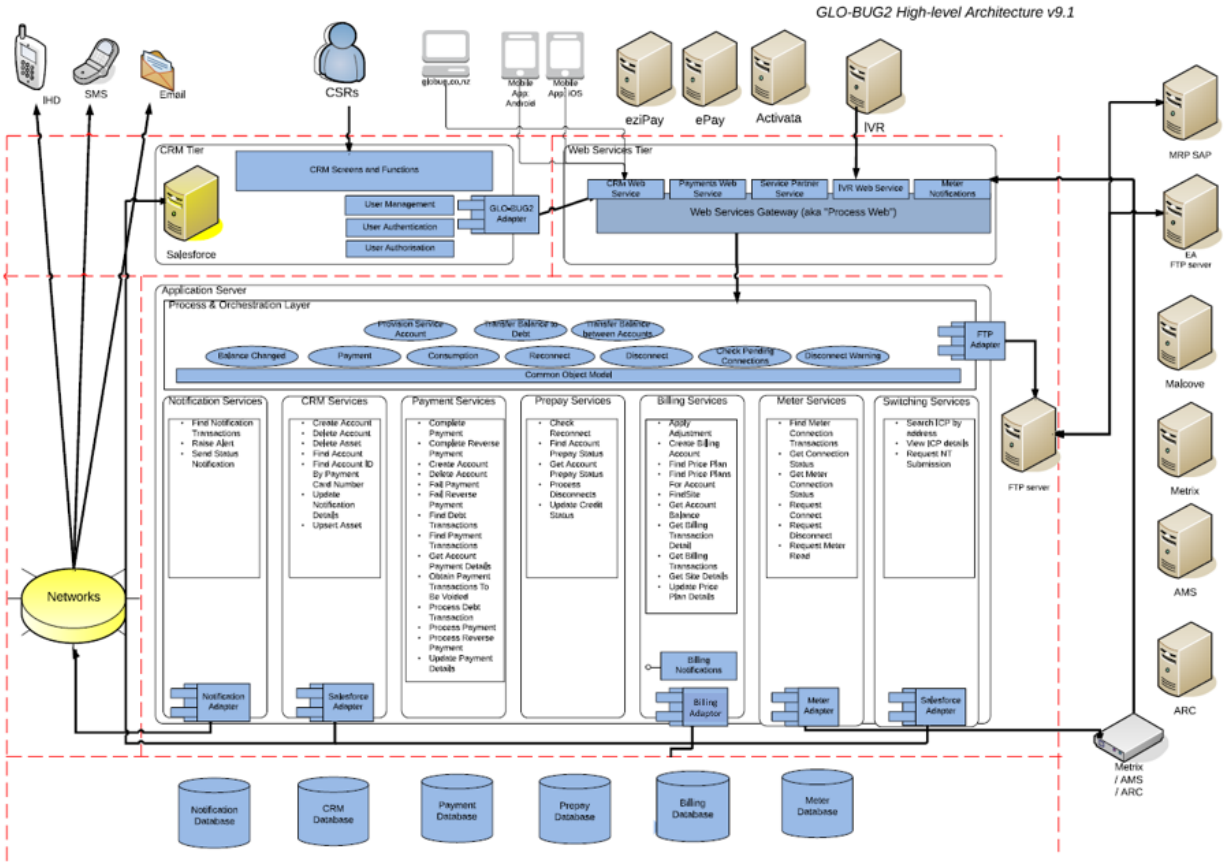
Audit commentary

Globug does not use any agents for the functions covered by the scope of this audit.

AMS, ARC, Metrix and Smartco provide AMI data as MEPs and are subject to a separate audit regime.

1.5. Hardware and Software

A diagram of Globug's system configuration is shown below:



Globug data is stored in two locations. AWS RDS Database and Salesforce CRM.

The AWS RDS Database is backed up with daily snapshots that are stored for one month. There is also a monthly backup in a private s3 bucket.

Salesforce is a cloud based PAAS CRM, within its own backups. For the Globug specific data, it is exported to RDS for reporting purposes. This then falls under the backup arrangements mentioned above.

Access to data sources is password controlled.

1.6. Breaches or Breach Allegations

Globug has not had any breach allegations recorded by the Electricity Authority which are relevant to this audit.

1.7. ICP Data

All active ICPs are summarised by metering category in the table below.

Metering Category	2019	2018	2017
1	25,046	26,739	28,830
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
9	0	3	1

Status	Number of ICPs 2019	Number of ICPs 2018	Number of ICPs 2017
Active (2,0)	25,046	26,742	28,381
Inactive – new connection in progress (1,12)	0	0	1
Inactive – electrically disconnected vacant property (1,4)	119	103	58
Inactive – electrically disconnected remotely by AMI meter (1,7)	537	705	814
Inactive – electrically disconnected at pole fuse (1,8)	4	0	1
Inactive – electrically disconnected due to meter disconnected (1,9)	21	12	11
Inactive – electrically disconnected at meter box fuse (1,10)	0	1	0
Inactive – electrically disconnected at meter box switch (1,11)	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	12	6	20
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	924	734	530

1.8. Authorisation Received

No authorisation was required as all the required data was provided by Globug.

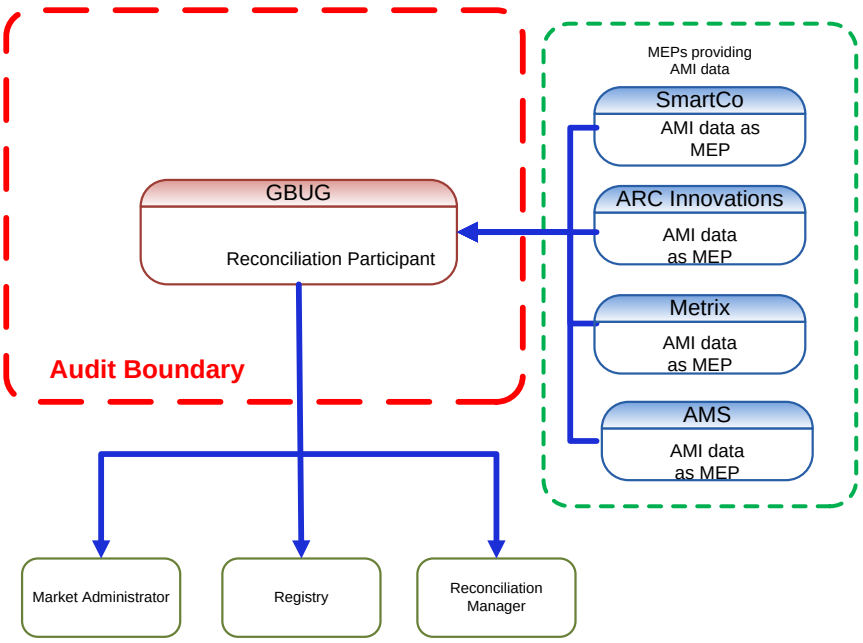
1.9. Scope of Audit

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of Globug, to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1.

The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V 7.2.

The audit was carried out at Globug's premises in Auckland on July 9th and 10th 2019.

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



The table below shows the tasks under clause 15.38 of part 15, for which Globug requires certification. This table also lists MEPs who assist with these tasks.

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	**Agents Involved in Performance of Tasks**	**MEPs providing AMI data**
(a) - Maintaining registry information and performing customer and embedded generator switching		
(b) – Gathering and storing raw meter data		Metrix AMS SmartCo ARC Innovations
(c)(iii) - Creation and management of HHR and NHH volume information		
(d) – Calculation of ICP days		

(da) - delivery of electricity supplied information under clause 15.7		
(db) - delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8		
(e) – Provision of submission information for reconciliation		

ARC Innovations, AMS, Smartco and Metrix conduct AMI data collection as MEPs and not as agents to reconciliation participants.

1.10. Summary of previous audit

Globug provided a copy of their previous audit report conducted in July 2018 by Rebecca Elliot (lead auditor) of Veritek Limited. The summary tables below show that some of the issues have been resolved and some are still existing. Further comment is made in the relevant sections of this report.

Table of non-compliance

Subject	Section	Clause	Non-Compliance	Status
Relevant information	2.1	10.6,11.2 & 15.2	Some registry discrepancies.	Still existing
Electrical Connection of Point of Connection	2.11	10.33A	Two ICPs reconnected with uncertified metering.	Still existing
Changes to registry information	3.3	10 of schedule 11.1	Registry not updated within 5 business days of the event for some reconnections, disconnections and one MEP change.	Still existing
Management of "active" status	3.8	17 Schedule 11.1	Incorrect status recorded for 18 ICPs (32%) in the registry and SAP.	Cleared
Management of "inactive" status	3.9	19 Schedule 11.1	Incorrect status recorded for 18 ICPs (32%). Credit disconnections not updated on the registry or SAP for each full day of no power.	Still existing
Losing trader must provide final information - standard switch	4.3	5 of schedule 11.3	One late CS file.	Still existing
Losing trader provides information - switch move	4.8	10 of schedule 11.3	A small number of late CS files.	Cleared

Subject	Section	Clause	Non-Compliance	Status
Losing trader determines a different date - switch move	4.9	10(2) Schedule 11.3	One ICP switch event date set earlier than the gaining trader's requested date.	Still existing
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	One late RR file.	Cleared
Withdrawal of switch requests	4.15	17 & 18 of schedule 11.3	Seven late switch withdrawals.	Still existing
Electricity conveyed	6.1	10.13	Energy is not metered and quantified according to the code where meters are bridged.	Still existing
Interrogate meters once	6.8	7(1) and (2) Schedule 15.2	Exceptional circumstances not proven for two ICPs not read during period of supply.	Still existing
NHH meters interrogated annually	6.9	8(1) & (2) of schedule 15.2	Exceptional circumstances not proven for 17 ICPs not read for 12 months.	Cleared
NHH meters 90% read rate	6.10	9(1) & (2) of schedule 15.2	Exceptional circumstances not proven for eight ICPs not read for four months.	Cleared
Correction of NHH meter readings	8.1	19(1) Schedule 15.2	Corrections for bridged meters not apportioned to the correct date range.	Cleared
Meter data used to derive volume information	9.3	3(5) Schedule 15.2	Raw meter data is rounded upon receipt and not when volume information is created.	Still existing
Electronic meter readings and estimated readings	9.6	17 Schedule 15.2	Event information not received from ARC Innovations.	Cleared
Calculation of ICP days	11.2	17 Schedule 15.2	ICP days submitted for inactive periods.	Cleared
Allocation of submission information	12.3	15.5	Corrections for bridged meters not apportioned to the correct date range. ICPs at the incorrect status causing volume to be allocated incorrectly.	Cleared
Permanence of meter readings for reconciliation	12.8	4 of Schedule 15.2	Estimates made permanent at 6 months, but reasonable endeavours not used to obtain meter readings.	Still existing

Subject	Section	Clause	Non-Compliance	Status
Historical estimate reporting to RM	13.3	10 of Schedule 15.3	80% HE threshold not met for some NSPs.	Still existing

Table of recommendations

Subject	Section	Recommendation	Status
Relevant information	2.1	Review discrepancy reporting.	Cleared
Management of status	3.8	Confirm status for all ICPs at the "inactive-vacant" status.	Cleared
Losing trader response to switch request - standard switch	4.2	For any transfer switch requests on vacant properties send the switch withdrawal request and no AN is sent.	Still existing
Interrogate meters once during period of supply	6.8	Review reporting to capture only ICPs unread during the period of supply.	Still existing
		Review disconnection for vacancy process for any ICPs that do not have an AMI meter installed.	Cleared
Correction of NHH meter readings	8.1	Monitor remote disconnection and reconnection events to ensure they are successful.	Still existing
Electricity Supplied	11.3	Investigate the reason for the increase in electricity supplied totals in November 2017 and then the corresponding reduction in December 2017.	Cleared

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

The process to find and correct incorrect information was examined. The list file was examined to confirm that all information was correct and not misleading. The registry validation process was examined in detail in relation to the achievement of this requirement. The list file was examined to identify any registry discrepancies.

Audit commentary

Registry management processes are managed on a weekly basis. Globug provides the Mercury field services team with a weekly report of all updates conducted in Salesforce (with the exception of credit disconnections which are detailed below). This report is loaded to the registry. Any files with errors are returned to be resolved by the Globug support team. Once the file is successfully loaded to the registry a file of the changes is uploaded to SAP to update all the affected ICPs, so all systems should align.

The list file was analysed, and the table below shows the findings.

Issue	2019 Qty	2018 Qty	2017 Qty	Comments
Active ICPs with cat 9 metering	0	2	1	None found during this audit.
Blank ANZSIC codes	0	0	0	Mercury checks these on a bi-monthly basis and any discrepancies are passed to Globug to investigate. See **section 3.6** for more details
ANZSIC "T999" not stated	0	0	0	Mercury checks these on a bi-monthly basis and any discrepancies are passed to Globug to investigate. See **section 3.6** for more details
ANZSIC "T994" don't know	0	0	4	Mercury checks these on a bi-monthly basis and any discrepancies are passed to Globug to investigate. See **section 3.6** for more details

Issue	2019 Qty	2018 Qty	2017 Qty	Comments
Incorrect status 1,4 - Disconnected Vacant	0	103	58	Sample of 22 ICPs checked and the status reasons were correct.
Incorrect status 1,8 - Disconnected at pole fuse	0	0	1	None found in this audit.
Incorrect status 1,7 – Disconnected AMI remote disconnection	3	705	814	These ICPs should have been recorded as Active
Incorrect status 1,9 - Disconnected due to meter disconnected	0	12	11	None found in this audit.
Incorrect status 1,10 - Disconnected meter fuse box	0	1	0	None found in this audit.
Incorrect status 1,12 - New connection in progress	0	0	1	None found in this audit.
ICPs with the incorrect active date recorded	0	0	5	Sample checked confirmed dates were aligned.
AMI = No	77	106	92	A sample of ten were checked and confirmed a meter change was underway after they had switched in or the ICP had since been disconnected or switched away.

Globug correct any discrepancies as they are found. The update process is generally working well, and this audit only identified a small number of discrepancies.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: 10.6,11.2 & 15.2 From: 01-Jul-18 To: 31-May-19	Some registry discrepancies. Potential impact: Medium Actual impact: Low Audit history: Multiple Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**

Low	The controls are rated as strong because risks are mitigated to an acceptable level. The audit risk is rated as low as there are only a small number of ICPs with incorrect statuses.

Actions taken to resolve the issue	Completion date	Remedial action status
1) Registry discrepancies **Response:** Non compliance accepted and remedial action complete **Action:** The 3 ICP's with incorrect status has been updated.	01/08/2019	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
On 1 May 2019 GLOBUG changed its business rules to update the status where 'meter creep' created false positive scenario. Status now are being updated to comply with the code.	May 2019	

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

Processes to provide information were reviewed and observed throughout the audit.

Audit commentary

This area is discussed in a number of sections in this report and compliance is confirmed.

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

Meter reads used to produce Globug electricity reconciliation reports and as billed data are imported into SAP.

I reviewed the method to receive meter reading information and traced a sample of reads for two ICPs per provider from the source files to SAP.

Audit commentary

Read data is transmitted to Globug via FTP for Metrix and AMS. These methods ensure the security and integrity of the data. I saw evidence that the data transfers are via FTP.

Metrix provides readings for their own meters and Counties Power. AMS provides reads for their own meters, Smartco and ARC. I traced a typical sample of two meter readings each for AMS, Smartco, ARC and Metrix from the source files to SAP. Reads matched in all cases.

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 (clause 21(4)(c)).*

Audit observation

A complete audit trail was checked for all data gathering, validation and processing functions. I reviewed audit trails for a small sample of events. Large samples were not necessary because audit trail fields are expected to be the same for every transaction of the same type.

Audit commentary

A complete audit trail was viewed for all data gathering, validation and processing functions. The logs of these activities for Globug include the activity identifier, date and time and an operator identifier.

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

I reviewed Globug's current terms and conditions.

Audit commentary

Globug's current terms and conditions with their customers includes consent to access for authorised parties for the duration of the contract.

Audit outcome

Compliant

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

I reviewed Globug's current terms and conditions and discussed compliance with these clauses. I reviewed five examples provided by Globug where access had to be arranged.

Audit commentary

Globug's contract with their customers includes consent to access for authorised parties for the duration of the contract. Globug confirmed that they have been able to arrange access for other parties when requested.

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

A registry list file was reviewed to confirm that all metered ICPs had an MEP recorded.

Audit commentary

All metered ICPs had an MEP recorded. Globug does not deal with new connections, has only Category 1 metering installations, and there are no metering installations where loss calculations occur.

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

I reviewed Globug's current terms and conditions.

Audit commentary

Globug's terms and conditions contain the appropriate clauses to achieve compliance with this requirement.

Audit outcome

Compliant

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

An event detail report for the audit period was reviewed, which confirmed that Globug had not completed any new connections during the audit period.

Audit commentary

Globug has not dealt with any new connections, and do not intend to.

Audit outcome

Compliant

2.10. Temporary Electrical Connection of an ICP (Clause 10.33(1))

Code reference

Clause 10.33(1)

Code related audit information

A reconciliation participant may temporarily electrically connect a point of connection, or authorise an MEP to temporarily electrically connect a point of connection, only if:

- *they are recorded in the registry as being responsible for the ICP; and*
- *one or more certified metering installations are in place at the ICP in accordance with Part 10; and*
- *for an ICP that has not previously been electrically connected, the network owner has given written approval.*

Audit observation

An event detail report for the audit period was reviewed, which confirmed that Globug had not completed any new connections during the audit period.

Audit commentary

Globug has not dealt with any new connections, and do not intend to.

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:

- *they are recorded in the registry as being responsible for the ICP; and*
- *one or more certified metering installations are in place at the ICP in accordance with Part 10; and*
- *for an ICP that has not previously been electrically connected, the network owner has given written approval.*

Audit observation

The list file as at June 2019 and event detail report for the period 1/7/18 to 31/5/19 were analysed. This confirmed that Globug had not completed any new connections during the audit period.

The meter certification from the PR 255 was compared to the active date in the event detail report for all reconnected ICPs.

Audit commentary

<u>New Connections</u>

Globug has not dealt with any new connections, and do not intend to.

<u>Reconnections</u>

All Globug customers must have an AMI meter. A meter change is ordered at the time of reconnection if the site is not an AMI metered site. The risk of Globug reconnecting on uncertified sites is low because the compliance level of AMI metering is high. Analysis of the event detail report confirmed this as it did not identify any reconnected ICPs with expired certification. ICP 0006016367RN37C was reconnected on 01/12/18. The certification expired on 04/12/18 but compliance is achieved because it was certified at the time of reconnection.

I also checked the records for all 87 ICPs where bridging occurred to reconnect. Two ICPs were not recertified after the bridging event. The ICPs are 0007103065RNDEE and 0005947537RNB70.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.11 With: 10.33A From: 01-Jul-18 To: 15-Jul-19	Two ICPs reconnected without metering being certified. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong as Globug has clear instructions to MEPs that certification must occur. 85 of 87 were certified correctly. The audit risk rating is low as this affected two ICPs.

Actions taken to resolve the issue	Completion date	Remedial action status
Two ICPs reconnected without metering being certified: **Response:** Non compliance accepted and remedial action under way **Action:** GB have asked the MEP to recertify these meters asap.	Aug 2019	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
GB will instruct the MEP of their obligation and Training will be provided so that agent can identify and resolve this with the MEP. A reporting will be put in place to capture these promptly.	Aug 2019	

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

The process to ensure an arrangement is in place before trading commences on a Network was examined and controls within SAP were checked.

Audit commentary

Globug demonstrated the existence of either a UoSA or other trading arrangement for all the networks they trade on.

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

The process to ensure an arrangement is in place with the metering equipment provider before an ICP is switched in was checked along with a check of controls within SAP.

Audit commentary

Globug has an arrangement in place with all MEPs that manage metering in relation to their customer base. Any MEP changes required when an ICP switches are provided to the field services team by Globug on a daily basis. These are loaded to SAP which then updates the registry.

Audit outcome

Compliant

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

An event detail report for the audit period was reviewed, which confirmed that Globug had not completed any new connections during the audit period.

Audit commentary

Globug has not dealt with any new connections, and do not intend to.

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

An event detail report for the audit period was reviewed, which confirmed that Globug had not completed any new connections during the audit period.

Audit commentary

Globug has not dealt with any new connections, and do not intend to.

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 five business days after the change.

Audit observation

The process to manage status changes is discussed in detail in **sections 3.8** and **3.9** below. In this section I have examined the event detail report for the period from 01/07/18 through to 31/05/19 to determine the overall performance for that period. I used the extreme case methodology examining all ICPs that were updated more than 30 days from the event date, for each of the event type updates. If the sample for greater than 30 days was less than ten ICPs I examined late updates made for less than 30 days.

Audit commentary

Event	Year	Total ICPs	ICPs notified within 5 days	ICPs notified greater than 5days	Average notification days	Percentage compliant
Change to active - Reconnections	2017	2,278	736	1,542	8.3	33%
	2018	1,388	1,254	134	3.2	90%
	2019	**4,627**	**4,164**	**463**	**4**	**90%**
Change to disconnected – all statuses except new connection in progress and ready for decommissioning	2017	4,041	1,118	2,923	19.2	28%
	2018	1,625	808	817	6.1	49.7%
	2019	**5,018**	**2,142**	**2,876**	**7**	**42.7%**

Change to de-energised ready for decommissioning	2017	190	27	163	86.1	14%
	2018	**48**	**34**	**14**	**4.4**	**70.1%**
	2019	**167**	**100**	**67**	**7**	**59.9%**

The process to manage changes to the registry was examined. Globug provides the Mercury field services team with a report of all updates conducted in Salesforce on a weekly basis. This report is loaded to the registry. Any files with errors are returned to be resolved by the Globug support team. Once the file is successfully loaded to the registry a file of the changes is uploaded to SAP to update all affected ICPs, so all systems should align. The timeliness of updates to the registry has remained similar to last year. The accuracy of updates is discussed in **sections 3.8** and **3.9.** As noted in **section 2.1**, the process for the updating of credit disconnections is not compliant and this is recorded as non-compliance in **section 3.9**.

Reconnections

The level of compliance for reconnections has remained at 90%. I checked 20 ICPs with late updates and found:

- two late updates were to correct in correct dates provided by field technicians; and
- 18 late updates were due to backdated switches in for ICPs at the inactive status, therefore the status change was backdated to the switch in date.

Disconnections

The disconnection process is discussed in **section 3.9**.

Electrically disconnected - "vacant" or similar

The level of compliance for ICPs being disconnected has reduced slightly from last year. I checked the records for 20 late updates and found:

- six were corrections for ICPs that had been identified during the last audit as having incorrect statuses;
- four were updated late due to processing issues;
- one was due to an incorrect change to active based on "meter creep"; and
- late notification from the field caused the remaining nine late updates.

Inactive - Ready for Decommissioning

The inactive-ready for decommissioning process is discussed in **sections 3.4** and **3.9**.

The level of compliance for updates to disconnected-ready to decommission has reduced slightly from last year. I checked 20 late updates and found:

- 7 late updates were due to processing issues; and
- 13 late updates were due to late notification from the network that installations had been decommissioned.

Change of MEP

Any ICPs that require a meter change are set up in SAP and then the Mercury service team are notified by email of MEP nominations, which are then manually loaded to the registry.

I checked 20 ICPs manually and found four late updates. The ICPs are shown below.

0000034673NT859 – 8 business days

0000431020MPA2A – 6 business days

0000510301NRA26 – 6 business days

0000541160TE5BA – 21 business days

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.3 With: 10 Schedule 11.1 From: 01-Jul-18 To: 31-May-19	Registry not updated within 5 business days of the event for some reconnections, disconnections and 4 MEP changes. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate as the process in place to update the registry is generally functioning well and most updates are within the required timeframes. The volume of ICPs affected by the late updates is small therefore the impact is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Registry not updated within 5 business days: **Response:** Non compliance accepted and remedial action completed **Action:** MEP changes have now been corrected. These were due to late paperwork and or incorrect MEP details.	Aug 2019	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
GB is investigating the case scenario's further in detail to ensure these are captured and rectified in timely manner to meet the code obligations.	Oct 2019	

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)):*
    - *arrange for a final interrogation to take place prior to or upon meter removal (clause 11.18(3)(a)); and*
    - *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

Retailers Responsibility to Nominate and Record MEP in the Registry

An event detail report for the audit period was reviewed, which confirmed that Globug had not completed any new connections during the audit period. This list file was analysed to confirm that all active ICPS have an MEP recorded.

ICP Decommissioning

The process for the decommissioning of ICPs was examined. A selection of five decommissioned ICPs was checked using the typical case method of sampling to prove the process and confirm controls are in place.

Audit commentary

Retailers Responsibility to Nominate and Record MEP in the Registry

The MEP nominations are produced daily by Globug and passed to the Mercury Field Services team who update SAP, which updates to the registry. The timeliness of these updates is recorded in **section 3.3**. A check of the list file confirmed that all active ICPs have an MEP recorded.

ICP Decommissioning

Globug continues with their obligations under this clause. ICPs that are vacant and active, or inactive are still maintained in SAP.

In all cases, an attempt is made to read the meter at the time of removal and if this is not possible then the last actual meter reading is used. This last actual reading is normally the one taken at the time of de-energisation. The Mercury field services team manage this process on behalf of Globug and they advise the MEP responsible that a site is to be decommissioned. A sample of five ICPs was examined to confirm an attempt to read the meter was made at the time of removal.

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 five 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

An event detail report for the audit period was reviewed, which confirmed that Globug had not completed any new connections during the audit period.

Audit commentary

Globug has not dealt with any new connections, and do not intend to. All information for ICPs is gained as they switch in.

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 process to capture and manage ANZISC codes was examined. The list file as at June 2019 was reviewed to check the ANZSIC code accuracy.

Audit commentary

The Mercury field services team checks these on a bi-monthly basis and any missing or "T9"- unknown coded ICPs are passed to Globug to investigate. Analysis of active ICPs in the list file found all ICPs had an ANZSIC code recorded and none were recorded with a "T9" code. Globug mainly deals with residential customers therefore all ANZSIC codes are "residential" with the exception of two ICPs. These were checked to confirm the correct ANZSIC code has been applied. One was correct and the other one was identified as part of the checking process and was corrected prior to the audit.

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

The process to manage standard unmetered load was examined. The list file as at July 2018 was examined to identify any ICPs with standard unmetered load and none were found.

Audit commentary

Globug has no capability to manage unmetered load on the prepay platform and will not accept ICPs with unmetered load. This is checked as part of the switch in process.

Audit outcome

Compliant

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 one 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

The process for the management of ICP reconnection was examined. The event detail report for the period from July 2018 to May 2019 was analysed and the findings in relation to the timeliness of updates to registry are recorded in **section 3.3**. I conducted a walkthrough of the processes supporting changes to Active status. I checked a sample of 30 Active ICPs to confirm the status in SAP and Salesforce matched.

Audit commentary

Salesforce and SAP will not allow more than one party per ICP nor will it allow an ICP to be set up without a meter. Arrangements are made for ICPs to be reconnected if they switch in at an inactive status and the status is updated in Salesforce once the site is confirmed to be reconnected. A weekly update file is generated from Salesforce and provided to the Mercury field services team to update the registry. They create an upload file to the registry. This report is loaded to the registry. Any files with errors are returned to be resolved by the Globug support team. Once the file is successfully loaded to the registry a file of the changes is uploaded to SAP to update all affected ICPs, so all systems should align.

My analysis of 30 ICPs found that the "Active" status was recorded correctly.

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

The process for the management of ICPs at the inactive statuses was examined. The event detail report for the period from July 2018 to May 2019 was analysed and the findings in relation to the timeliness of updates to registry is recorded in **section 3.3**. A sample of between five and ten ICPs per inactive status type (the sample size was determined based on the volume of ICPs at this status) were selected using the typical characteristics sample methodology from the list file as at June 2019. These were examined to confirm the status aligned between the registry, SAP and Salesforce.

Audit commentary

Inactive Status

Globug do not use status (1,12) "New Connection in progress" as they do not have any new connections. The status of "Inactive" is only used once a Globug approved contractor has confirmed that the ICP has been disconnected. Contractors are audited periodically to ensure the appropriate policies and procedures are being complied with.

My analysis of inactive statuses for 20 ICPs did not find any discrepancies. There is a process in place to validate statuses between SAP, Salesforce and the registry.

Analysis of ICP days discrepancies found some ICPs were incorrectly recorded as Inactive when they should have been Active. The ICPs are shown below.

ICP	Month
5708001000CH5F0	August 2018
5410004000CH3B2	December 2018
0000848372WP11F	April and May 2019

There were a further 25 with consumption showing on "disconnected" sites. I checked ten of these ICPs and in all cases, the registry had not been changed to disconnected so the status was actually correct.

It appears there may be an issue where Globug believes a remote disconnection has occurred, but it turns out the remote disconnection was not successful. I recommend Globug investigates this matter to identify whether there is some reporting available from the MEP confirming whether the disconnection was successful or not.

Clause	Recommendation	Audited party comment	Remedial action
19 Schedule 11.1	Check reporting available to confirm whether remote disconnection is successful or not.	GB will review and put a reporting in place.	Identified

As reported in the last audit, Globug do not update the registry in relation to credit disconnections in every instance. Due to the nature of the customer base there is high level of activity and they are under the understanding the Electricity Authority do not require this to be updated until seven consecutive days of an ICP being disconnected. In this audit I noted that when the disconnection is updated it is made effective from the seventh day of no power. This needs to be corrected and the status updated for every full day of no power. This is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.9 With: 19 of schedule 11.1 From: 01-Jul-17 To: 30-Jun-18	Incorrect status recorded for 3 ICPs. Credit disconnections not updated on the registry or SAP for each full day the ICPs are inactive. Potential impact: Medium Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**

Low	The controls are rated as moderate because they have been improved for identification of status discrepancies. Controls require improvement to ensure all inactive days are recorded. The audit risk is rated as low because there is no impact on settlement but there is an impact on ICP days and an impact on other participants if an ICP switches away at the incorrect status.

Actions taken to resolve the issue	**Completion date**	**Remedial action status**
1) Incorrect status recorded for 3 ICPs. **Response:** Non compliance accepted and remedial action completed **Action:** The status has been updated.	Aug 2019	Identified
2) Credit disconnections not updated on the registry or SAP for each full day the ICPs are inactive. **Response:** Non compliance accepted and remedial action on going **Action:** As GLOBUG credit disconnection volume is high and most are reconnection within a few days , the high volume of traffic this would generate is not justified. Also GLOBUG feel this would expose credit history to a wide variety of people for a vulnerable customer base. GB will investigate this further as to how compliance can be met, however we require EA's assistance due to the product type.	Oct 2019	
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Incorrect status: On 1 May 2019 GLOBUG changed it's business rules to update the status where 'meter creep' created false positive scenario. Status now are being updated to comply with the code. Credit disconnections not updated: As GLOBUG credit disconnection volume is high and most are reconnection within a few days , the high volume of traffic this would generate is not justified. Also GLOBUG feel this would expose credit history to a wide variety of people for a vulnerable customer base. GB will investigate this further as to how compliance can be met, however we require EA's assistance due to the product type.	Oct 2019	

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

The list file and event detail report were examined.

Audit commentary

Globug does not carry out any new connections and therefore there are no ICPS with them proposed as a trader. An event detail report for the audit period was reviewed, which confirmed that Globug had not completed any new connections during the audit period.

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)

Code reference

Clause 2 Schedule 11.3

Code related audit information

The standard switch process applies where a trader and a customer or embedded generator enters into an arrangement in which the trader commences trading electricity with the customer or embedded generator at a non-half hour or unmetered ICP at which another trader supplies electricity, or the trader assumes responsibility for such an ICP.

If the uninvited direct sale agreement applies to an arrangement described above, the gaining trader must identify the period within which the customer or embedded generator may cancel the arrangement in accordance with section 36M of the Fair Trading Act 1986. The arrangement is deemed to come into effect on the day after the expiry of that period.

A gaining trader must advise the registry manager of a switch no later than two business days after the arrangement comes into effect and include in its advice to the registry manager that the switch type is TR and one or more profile codes associated with that ICP.

Audit observation

The switch gain process was examined to determine when Globug deem all conditions to be met. A sample of ten ICPs using the typical characteristic sampling methodology were checked to confirm that these were notified to the registry within two business days.

Audit commentary

Globug's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files are sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind. There are currently no active marketing campaigns under way. The ICPs checked confirmed all were sent within two days of all conditions being met.

Audit outcome

Compliant

4.2. Losing trader response to switch request and event dates - standard switch (Clauses 3 and 4 Schedule 11.3)

Code reference

Clauses 3 and 4 Schedule 11.3

Code related audit information

Within three business days after receiving notice of a switch from the registry manager, the losing trader must establish a proposed event date. The event date must be no more than 10 business days after the date of receipt of such notification, and in any 12-month period, at least 50% of the event dates must be no more than five business days after the date of notification. The losing trader must then:

- *provide acknowledgement of the switch request by (clause 3(a) of Schedule 11.3):*
- *providing the proposed event date to the registry manager and a valid switch response code (clause 3(a)(i) and (ii) of Schedule 11.3); or*
- *providing a request for withdrawal of the switch in accordance with clause 17 (clause 3(c) of Schedule 11.3).*

When establishing an event date for clause 4, the losing trader must disregard every event date established by the losing trader for a customer who has been with the losing trader for less than two calendar months (clause 4(2) of Schedule 11.3).

Audit observation

An event detail report for the period from 01/07/18 to 31/05/19 was reviewed to identify AN files issued by Globug. A sample of five ANs per response code (or the whole population if there were less than five records) were reviewed to determine whether the codes had been correctly applied.

The switch breach report was examined for the audit period.

The event detail report was analysed to assess compliance with the requirement to meet the setting of event dates.

Audit commentary

The AN file is manually created in a daily excel file by the switch analyst. They select the most appropriate code. The file is sent to the registry at the end of each day. As Globug trade on mostly AMI metered sites the most common AN code used was "AD". The sample checked confirmed the most appropriate code was applied. The codes checked were AA, OC and PD.

The switch breach report confirmed that all AN files were sent within the required timeframe.

The event detail report for Globug records that 362 of 382 dates were set less than five business days, and the 20 set over five business days were all less than 10 business days.

Audit outcome

Compliant

4.3. Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3)

Code reference

Clause 5 Schedule 11.3

Code related audit information

If the losing trader provides information to the registry manager in accordance with clause 3(a) of Schedule 11.3 with the required information, no later than five business days after the event date, the losing trader must complete the switch by:

- *providing event date to the registry manager (clause 5(a)); and*
- *provide to the gaining trader a switch event meter reading as at the event date, for each meter or data storage device that is recorded in the registry with accumulator of C and a settlement indicator of Y (clause 5(b)); and*
- *if a switch event meter reading is not a validated reading, provide the date of the last meter reading (clause 5(c)).*

Audit observation

An event detail report for the period from April to June 2018 was reviewed to identify CS files issued by Globug. The accuracy of the content of CS files was confirmed by checking a sample of six records using the diverse characteristics methodology. The content checked included:

- correct meter number;
- correct identification of meter readings and correct date of last meter reading;
- accuracy of meter readings; and

- accuracy of average daily consumption.

All ICPs with an average daily consumption of zero were reviewed.

The process to manage the sending of the CS file within five business days of the event date was examined.

The switch breach report was examined for the audit period and found 12 late "E2" CS files were recorded. These were examined.

Audit commentary

The CS file content is taken from SAP. It is manually entered into the registry for each CS file. The sample checked confirmed all the details were accurate.

The methodology of calculating the average daily consumption was checked. It is being calculated by averaging the read to read consumption over a minimum of seven days where possible. The registry functional specification requires estimated daily kWh to be based on the average daily consumption for the last read to read period. For Globug this will often be the last day of supply, because daily reading occurs. Globug's current process is likely to produce a more accurate indication of the average daily consumption especially where the read to read period is for only one day, especially when the ICP is vacant for that day, but as it does not meet the codes requirements the current methodology is recorded as non-compliant. Two of six examples had non-compliant average daily consumption. ICP 0000029792DE9E4 had 19 kWh populated (average consumption for seven days) but 12 kWh was consumed on the last day the ICP was with Globug. ICP 0000040808TRDB2 had 36 kWh populated (average consumption for seven days) but 23 kWh was consumed on the last day the ICP was with Globug. I checked all 14 ICPs where the average daily consumption was zero and in all cases zero was correct due to vacancy.

Of the 12 breaches recorded, none were confirmed as valid breaches.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.3 With: Clause 5 of Schedule 11.3 From: 01-Jul-18 To: 31-May-19	Calculation methodology for average daily consumption not compliant. Potential impact: None Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong because the current methodology provides a more accurate indication of average daily consumption. The average daily consumption figures will become less accurate when Globug changes to a compliant methodology. Therefore, I have given the lowest possible rating.

Actions taken to resolve the issue	Completion date	Remedial action status
Calculation methodology for average daily consumption not compliant. **Response:** Non compliance accepted and remedial action completed **Action:** Change has been made and implemented to use two actual meter reads.	Aug 2019	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Change has been made and implemented to use two actual meter reads.	Aug 2019	

4.4. Retailers must use same reading - standard switch (Clause 6(1) and 6A Schedule 11.3)

Code reference

Clause 6(1) and 6A Schedule 11.3

Code related audit information

The losing trader and the gaining trader must both use the same switch event meter reading as determined by the following procedure:

- *if the switch event meter reading provided by the losing trader differs by less than 200 kWh from a value established by the gaining trader, the gaining trader must use the losing trader's validated meter reading or permanent estimate (clause 6(a)); or*
- *the gaining trader may dispute the switch meter reading if the validated meter reading or permanent estimate provided by the losing trader differs by 200 kWh or more (clause 6(b)).*

If the gaining trader disputes a switch meter reading because the switch event meter reading provided by the losing trader differs by 200 kWh or more, the gaining trader must, within four calendar months of the actual event date, provide to the losing trader a changed switch event meter reading supported by two validated meter readings.

- *the losing trader can choose not to accept the reading however must advise the gaining trader no later than five business days after receiving the switch event meter reading from the gaining trader (clause 6A(a)); or*
- *if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader (clause 6A(b)).*

Audit observation

The process for the management of read requests was examined.

The event detail report and switch breach report were analysed to identify all read change requests and acknowledgements for the period from 01/07/18 to 31/05/19. I checked a sample of eight out of 99 records, a combination of sent and received.

The switch breach history report for the audit period was reviewed, and no breaches were recorded for the audit period.

Audit commentary

Read requests are triggered by the meter change process, or the losing trader requesting a change after the switch completes. RR requests are generally initiated via email between the two parties and only once an agreement has been reached an RR file is sent to complete. All RR requests are evaluated and validated against the ICP information. If the request is within validation requirements these are accepted. Once accepted these are loaded directly to the registry.

The sample for the read requests checked found read requests were either issued from two validated reads, or removal reads if the meter had been changed. Compliance is confirmed.

Audit outcome

Compliant

4.5. Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3)

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

If the losing trader trades electricity from a non-half hour meter, with a switch event meter reading that is not from an AMI certified meter flagged Y in the registry: and

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 6(2)(b);*
- *the gaining trader within five business days after receiving final information from the registry manager, may provide the losing trader with a switch event meter reading from that meter. The losing trader must use that switch event meter reading.*

Audit observation

The process for the management of switch event meter reads was examined. The event detail report and switch breach report were analysed to identify all read requests either accepted or rejected by Globug. This identified three RRs received by Globug and none were rejected.

The switch breach history report for the audit period was reviewed to identify late read change acknowledgement files and found none recorded.

Audit commentary

Any of these RR requests are processed in the same way as those received for greater than 200 kWh except that emails are not normally exchanged in advance for these. Each request is evaluated and validated against the ICP information. If the request is within validation requirements these are accepted.

Audit outcome

Compliant

4.6. Disputes - standard switch (Clause 7 Schedule 11.3)

Code reference

Clause 7 Schedule 11.3

Code related audit information

A losing trader or gaining trader may give written notice to the other that it disputes a switch event meter reading provided under clauses 1 to 6. Such a dispute must be resolved in accordance with clause 15.29 (with all necessary amendments).

Audit observation

I confirmed with Globug whether any disputes have needed to be resolved in accordance with this clause.

Audit commentary

Globug confirms that no disputes have needed to be resolved in accordance with this clause.

Audit outcome

Compliant

4.7. Gaining trader informs registry of switch request - switch move (Clause 9 Schedule 11.3)

Code reference

Clause 9 Schedule 11.3

Code related audit information

The switch move process applies where a gaining trader has an arrangement with a customer or embedded generator to trade electricity at an ICP using non half-hour metering or an unmetered ICP, or to assume responsibility for such an ICP, and no other trader has an agreement to trade electricity at that ICP, this is referred to as a switch move and the following provisions apply:

If the "uninvited direct sale agreement" applies, the gaining trader must identify the period within which the customer or embedded generator may cancel the arrangement in accordance with section 36M of the Fair Trading Act 1986. The arrangement is deemed to come into effect on the day after the expiry of that period.

In the event of a switch move, the gaining trader must advise the registry manager of a switch and the proposed event date no later than two business days after the arrangement comes into effect.

In its advice to the registry manager the gaining trader must include:

- *a proposed event date (clause 9(2)(a)); and*
- *that the switch type is "MI" (clause 9(2)(b); and*
- *one or more profile codes of a profile at the ICP. (clause 9(2)(c))*

Audit observation

The switch gain process was examined to determine when Globug deem all conditions to be met. A sample of five ICPs using the typical sampling methodology were checked to confirm that these were notified to the registry within two business days, and I checked all three backdated NT files.

Audit commentary

A sample of ICPs were checked and I confirmed all were sent within two days of all conditions being met.

Audit outcome

Compliant

4.8. Losing trader provides information - switch move (Clause 10(1) Schedule 11.3)

Code reference

Clause 10(1) Schedule 11.3

Code related audit information

10(1) Within five business days after receiving notice of a switch move request from the registry manager—

- *10(1)(a) If the losing trader accepts the event date proposed by the gaining trader, the losing trader must complete the switch by providing to the registry manager:*
  - *confirmation of the switch event date; and*
  - *a valid switch response code; and*
  - *final information as required under clause 11; or*
- *10(1)(b) If the losing trader does not accept the event date proposed by the gaining trader, the losing trader must acknowledge the switch request to the registry manager and determine a different event date that—*
  - *is not earlier than the gaining trader's proposed event date, and*
  - *is no later than 10 business days after the date the losing trader receives notice; or*
- *10(1)(c) request that the switch be withdrawn in accordance with clause 17.*

Audit observation

An event detail report for the period from 01/07/18 to 31/05/19 was reviewed to identify AN files issued by Globug. A sample of five ANs per response code (or the whole population if there were less than five records) were reviewed to determine whether the codes had been correctly applied.

The process to manage the sending of the CS file within five business days of the event date was examined.

The switch breach history report for the audit period was reviewed in relation to both late AN and CS files. There were 99 late CS files ("E2" coded) and no late AN files were recorded. I manually checked all 99 records to determine if they were valid.

Audit commentary

The AN file is manually created in a daily excel file by the switch analyst. They select the most appropriate code. The file is sent to the registry at the end of each day. The sample checked confirmed the most appropriate code was applied.

The switch breach report is monitored to ensure that all CS files are sent within the required timeframe. Examination of the 99 files recorded as being late, found that none of them were late.

Audit outcome

Compliant

4.9. Losing trader determines a different date - switch move (Clause 10(2) Schedule 11.3)

Code reference

Clause 10(2) Schedule 11.3

Code related audit information

If the losing trader determines a different date, the losing trader must also complete the switch by providing to the registry manager as described in subclause (1)(a):

- *the event date proposed by the losing trader; and*
- *a valid switch response code; and*

- *final information as required under clause 1.*

Audit observation

The setting of event dates for move switches was examined. The event detail report for the audit period was examined comparing the NT requested event date with the AN event date sent by Globug for any switches dated earlier than the NT requested date. The report was also checked for any event dates that were set greater than ten days from the NT receipt date. The analysis found two with backdated event dates. These were checked. The analysis found none with an event date set greater than ten days from the NT receipt date.

Audit commentary

The event date in the AN file is set manually. The analysis found two ICPs where a withdrawal was planned for "date fail" but the AN with an earlier proposed date was sent prior to the withdrawal being sent. Globug now has a different process where the NW is sent first.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.9 With: 10(2) Schedule 11.3 From: 10-Jul-18 To: 28-Jul-18	2 ICP switch event dates set earlier than the gaining trader's requested date. Potential impact: None Actual impact: None Audit history: Twice Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong as risk is mitigated to an acceptable level and the process is now improved. The audit risk rating is low as only two ICPs were found to have an incorrect event date and both were subsequently withdrawn.

Actions taken to resolve the issue	Completion date	Remedial action status
2 ICP switch event dates set earlier than the gaining trader's requested date. **Response:** Non compliance accepted and remedial action completed **Action:** GBUG has reviewed the process and incorporated to send withdrawals before AN files are sent. This has been implemented to ensure no further occurrences.	Aug 2019	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	

GBUG has reviewed our process and incorporated to send withdrawals before AN files are sent. This has been implemented to ensure no further occurrences.	Aug 2019	

4.10. Losing trader must provide final information - switch move (Clause 11 Schedule 11.3)

Code reference

Clause 11 Schedule 11.3

Code related audit information

The losing trader must provide final information to the registry manager for the purposes of clause 10(1)(a)(ii), including—

- *the event date (clause 11(a)); and*
- *a switch event meter reading as at the event date for each meter or data storage device that is recorded in the registry with an accumulator type of C and a settlement indicator of Y (clause 11(b)); and*
- *if the switch event meter reading is not a validated meter reading, the date of the last meter reading of the meter or storage device (clause (11(c)).*

Audit observation

An event detail report for the period from 01/07/18 to 31/05/19 was reviewed to identify CS files issued by Globug. The accuracy of the content of CS files was confirmed by checking a sample of six records using the diverse characteristics methodology. The content checked included:

- correct meter number;
- correct identification of meter readings and correct date of last meter reading;
- accuracy of meter readings; and
- accuracy of average daily consumption.

All ICPs with an average daily consumption of zero were reviewed.

Audit commentary

The CS file content is taken from SAP. It is manually entered into the registry for each CS file.

The methodology of calculating the average daily consumption was checked. It is being calculated by averaging the read to read consumption over a minimum of seven days where possible. The registry functional specification requires estimated daily kWh to be based on the average daily consumption for the last read to read period. For Globug this will often be the last day of supply, because daily reading occurs. Globug's current process is likely to produce a more accurate indication of the average daily consumption especially where the read to read period is for only one day, especially when the ICP is vacant for that day, but as it does not meet the codes requirements the current methodology is recorded as non-compliant. Two of six examples had non-compliant average daily consumption. ICP 0000002479CPE38 had 42 kWh populated (average consumption for seven days) but 11 kWh was consumed on the last day the ICP was with Globug. ICP 0000004036TE45F had 10 kWh populated (average consumption for seven days) but 29 kWh was consumed on the last day the ICP was with Globug. I checked all 14 ICPs where the average daily consumption was zero and, in all cases zero was correct due to vacancy.

One ICP had reads recorded as "A" but they were for a different date prior to a vacant period so they should have been recorded as "E".

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.10 With: Clause 11 Schedule 11.3 From: 01-Jul-18 To: 16-Jul-19	Calculation methodology for average daily consumption not compliant. Readings for one ICP incorrectly labelled. Potential impact: None Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong because the current methodology provides a more accurate indication of average daily consumption. The average daily consumption figures will become less accurate when Globug changes to a compliant methodology. Therefore, I have given the lowest possible rating.

Actions taken to resolve the issue	Completion date	Remedial action status
1) Calculation methodology for average daily consumption not compliant. **Response/Action:** Same as above Audit Ref: 4.3 2) Readings for one ICP incorrectly labelled. **Response:** Non compliance accepted and remedial action completed **Action:** The issue was caused due to a human error and adequate training has been reiterated with the team.	Aug 2019	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Calculation methodology for average daily consumption not compliant – as above audit ref: 4.3 Readings for one ICP incorrectly labelled - adequate training has been reiterated with the team.	Aug 2019	

4.11. Gaining trader changes to switch meter reading - switch move (Clause 12 Schedule 11.3)

Code reference

Clause 12 Schedule 11.3

Code related audit information

The gaining trader may use the switch event meter reading supplied by the losing trader or may, at its own cost, obtain its own switch event meter reading. If the gaining trader elects to use this new switch event meter reading, the gaining trader must advise the losing trader of the switch event meter reading and the actual event date to which it refers as follows:

- *if the switch meter reading established by the gaining trader differs by less than 200 kWh from that provided by the losing trader, both traders must use the switch event meter reading provided by the gaining trader (clause 12(2)(a)); or*
- *if the switch event meter reading provided by the losing trader differs by 200 kWh or more from a value established by the gaining trader, the gaining trader may dispute the switch meter reading. In this case, the gaining trader, within four calendar months of the actual event date, must provide to the losing trader a changed validated meter reading or a permanent estimate supported by 2 validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):*
- *advise the gaining trader if it does not accept the switch event meter reading and the losing trader and the gaining trader must resolve the dispute in accordance with the disputes procedure in clause 15.29 (with all necessary amendments) (clause 12(3)(a)); or*
- *if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader. (clause 12(3)(b)).*

12(2A) If the losing trader trades electricity from a non-half hour meter, with a switch event meter reading that is not from an AMI certified meter flagged Y in the registry,

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 12(2A)(b));*
- *the gaining trader no later than five business days after receiving final information from the registry manager, may provide the losing trader with a switch event meter reading from that meter. The losing trader must use that switch event meter reading (clause 12(2B)).*

Audit observation

The process for the management of read requests was examined.

The event detail report and switch breach report were analysed to identify all read change requests and acknowledgements for the period from 01/07/18 to 31/05/19. I checked a sample of eight out of 99 records, a combination of sent and received.

The switch breach history report for the audit period was reviewed, and no breaches were recorded for the audit period.

Audit commentary

Read requests are triggered by the meter change process, or the losing trader requesting a change after the switch completes. RR requests are generally initiated via email between the two parties and only once an agreement has been reached an RR file is sent to complete. All RR requests are evaluated and validated against the ICP information. If the request is within validation requirements these are accepted. Once accepted these are loaded directly to the registry.

The sample for the read requests checked found read requests were either issued from two validated reads, or removal reads if the meter had been changed. Compliance is confirmed.

Audit outcome

Compliant

4.12. Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3)

Code reference

Clause 13 Schedule 11.3

Code related audit information

The gaining trader switch process applies when a trader has an arrangement with a customer or embedded generator to trade electricity through or assume responsibility for:

- *a half hour metering installation (that is not a category 1 or 2 metering installation) at an ICP with a submission type of half hour in the registry and an AMI flag of "N"; or*
- *a half hour metering installation at an ICP that has a submission type of half hour in the registry and an AMI flag of "N" and is traded by the losing trader as non-half hour; or*
- *a non half hour metering installation at an ICP at which the losing trader trades electricity through a half hour metering installation with an AMI flag of "N".*

If the uninvited direct sale agreement applies to an arrangement described above, the gaining trader must identify the period within which the customer or embedded generator may cancel the arrangement in accordance with section 36M of the Fair Trading Act 1986. The arrangement is deemed to come into effect on the day after the expiry of that period.

A gaining trader must advise the registry manager of the switch and expected event date no later than 3 business days after the arrangement comes into effect.

14(2) The gaining trader must include in its advice to the registry manager:

a) a proposed event date; and
b) that the switch type is HH.

14(3) The proposed event date must be a date that is after the date on which the gaining trader advises the registry manager, unless clause 14(4) applies.

14(4) The proposed event date is a date before the date on which the gaining trader advised the registry manager, if:

> *14(4)(a) – the proposed event date is in the same month as the date on which the gaining trader advised the registry manager; or*
>
> *14(4)(b) – the proposed event date is no more than 90 days before the date on which the gaining trader advises the registry manager and this date is agreed between the losing and gaining traders.*

Audit observation

As Globug is pre-pay trader they do not trade at category 3 and above sites. The event detail report and switch breach report were analysed to identify all switch files sent during the audit period. No half hour switches were identified.

Audit commentary

Not applicable

Audit outcome

Not applicable

4.13. Losing trader provision of information - gaining trader switch (Clause 15 Schedule 11.3)

Code reference

Clause 15 Schedule 11.3

Code related audit information

Within three business days after the losing trader is informed about the switch by the registry manager, the losing trader must:

> *15(a) - provide to the registry manager a valid switch response code as approved by the Authority; or*
>
> *15(b) - provide a request for withdrawal of the switch in accordance with clause 17.*

Audit observation

As Globug is pre-pay trader they do not trade at category 3 and above sites. The event detail report and switch breach report were analysed to identify all switch files sent during the audit period. No half hour switches were identified.

Audit commentary

Not applicable

Audit outcome

Not applicable

4.14. Gaining trader to advise the registry manager - gaining trader switch (Clause 16 Schedule 11.3)

Code reference

Clause 16 Schedule 11.3

Code related audit information

The gaining trader must complete the switch no later than three business days, after receiving the valid switch response code, by advising the registry manager of the event date.

If the ICP is being electrically disconnected, or if metering equipment is being removed, the gaining trader must either-

> *16(a)- give the losing trader or MEP for the ICP an opportunity to interrogate the metering installation immediately before the ICP is electrically disconnected or the metering equipment is removed; or*
>
> *16(b)- carry out an interrogation and, no later than 5 business days after the metering installation is electrically disconnected or removed, advise the losing trader of the results and metering component numbers for each data channel in the metering installation.*

Audit observation

As Globug is pre-pay trader they do not trade at category 3 and above sites. The event detail report and switch breach report were analysed to identify all switch files sent during the audit period. No half hour switches were identified.

Audit commentary

Not applicable

Audit outcome

Not applicable

4.15. Withdrawal of switch requests (Clauses 17 and 18 Schedule 11.3)

Code reference

Clauses 17 and 18 Schedule 11.3

Code related audit information

A losing trader or gaining trader may request that a switch request be withdrawn at any time until the expiry of two calendar months after the event date of the switch.

If a trader requests the withdrawal of a switch, the following provisions apply:

- *for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*
  - *the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and*
  - *the withdrawal advisory code published by the Authority (clause 18(c)(ii))*
- *within 5 business days after receiving notice from the registry manager of a switch, the trader receiving the withdrawal must advise the registry manager that the switch withdrawal request is accepted or rejected. A switch withdrawal request must not become effective until accepted by the trader who received the withdrawal (clause 18(d))*
- *on receipt of a rejection notice from the registry manager, in accordance with clause 18(d), a trader may re-submit the switch withdrawal request for an ICP in accordance with clause 18(c). All switch withdrawal requests must be resolved within 10 business days after the date of the initial switch withdrawal request (clause 18(e))*
- *if the trader requests that a switch request be withdrawn, and the resolution of that switch withdrawal request results in the switch proceeding, within two business days after receiving notice from the registry manager in accordance with clause 22(b), the losing trader must comply with clauses 3,5,10 and 11 (whichever is appropriate) and the gaining trader must comply with clause 16 (clause 18(f)).*

Audit observation

The switch withdrawal process was examined. The content of a sample of three ICPs for each withdrawal code was checked using the typical sampling methodology from the event detail report. A sample of 15 switch rejections for both switch withdrawal requests issued and received were checked using the typical sample methodology. The event detail report was also analysed to confirm timeliness of switch withdrawals, both requests and AW files as this is not currently being identified in the switch breach report. This identified that all AW files were sent within five days of a withdrawal request being received and there were 14 late switch withdrawal requests sent. The switch breach report was checked for any late switch withdrawal acknowledgements and found none were recorded.

Audit commentary

The switch withdrawal process is managed through the registry and the interaction is tracked in Salesforce. There were no backdated or late files. The content of all NW files was correct.

463 switch withdrawal requests issued. 14 switches were backdated greater than two months than the event detail report and these were confirmed to be due to:

- customer cancellation for six;
- wrong property for seven; and
- date fail for one

All had the correct reason code, but their late withdrawal is recorded as non-compliance below.

The sample checked for the rejected switch withdrawals found all were valid withdrawal rejections.

The sample checked found the correct withdrawal code was used and these were actioned as soon as possible.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.15 With: 17 of Schedule 11.3 From: 01-Jul-18 To: 31-May-18	14 late switch withdrawals. Potential impact: None Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong as risk is mitigated to an acceptable level. I have recorded the audit risk rating as low as these are actioned as soon as possible with the intent that submission is as accurate as possible.

Actions taken to resolve the issue	Completion date	Remedial action status
Response: Non compliance accepted and remedial action on going **Action:** Globug has strong and robust process around switching. These were legitimate reasons which caused the non compliance and the back dating was carried out in the best interest of the customer. The issue has been raised at the EA forum and we are seeking further assistance from EA as to how we can be compliant where a withdrawal is required but is outside of the allowed timeframe.		Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Globug has strong and robust process around switching. These were legitimate reasons which caused the non compliance and the back dating was carried out in the best interest of the customer. The issue has been raised at the EA forum and we are seeking further assistance from EA as to how we can be compliant where a withdrawal is required but is outside of the allowed timeframe.	On Going	

4.16. Metering information (Clause 21 Schedule 11.3)

Code reference

Clause 21 Schedule 11.3

Code related audit information

For an interrogation or validated meter reading or permanent estimate carried out in accordance with Schedule 11.3:

> *21(a)- the trader who carries out the interrogation, switch event meter reading must ensure that the interrogation is as accurate as possible, or that the switch event meter reading is fair and reasonable.*
>
> *21(b) and (c) - the cost of every interrogation or switch event meter reading carried out in accordance with clauses 5(b) or 11(b) or (c) must be met by the losing trader. The costs in every other case must be met by the gaining trader.*

Audit observation

The meter reading process in relation to meter reads for switching purposes was examined. Examples to confirm this procedure have been examined as part of the sending of final information for switches and read requests made.

Audit commentary

All meter readings used in the switching process are validated meter readings or permanent estimates. This process is discussed further in **section 4.3.**

Globug's policy regarding the management of meter reading expenses has not changed during the audit period.

Audit outcome

Compliant

4.17. Switch saving protection (Clause 11.15AA to 11.15AB)

Code reference

Clause 11.15AA to 11.15AB

Code related audit information

A trader that buys electricity from the clearing manager may elect to have a switch saving protection by giving notice to the Authority in writing.

If a protected trader enters into an arrangement with a customer of another trader (the losing trader), or a trader enters into an arrangement with a customer of a protected trader, to commence trading electricity with the customer, the losing trader must not, by any means, initiate contact with the customer to attempt to persuade the customer to terminate the arrangement during the period from the receipt of the NT to the event date of the switch including by:

> *11.15AB(4)(a)- making a counter offer to the customer; or*
>
> *11.15AB(4)(b)- offering an enticement to the customer.*

Audit observation

The Electricity Registry switch save protected retailer list was examined to confirm that Globug is a switch save protected trader and has no win back activity.

I checked the event detail report for all withdrawn switches from the audit period, to identify any withdrawn switches with a CX code applied prior to the switch completion date in relation to any switch save protected retailers.

Audit commentary

Globug is a switch save protected retailer. They confirmed they do not have a save or win back process. There were no switch withdrawals that were withdrawn prior to the event date.

Audit outcome

Compliant

5. MAINTENANCE OF UNMETERED LOAD

5.1. Maintaining shared unmetered load (Clause 11.14)

Code reference

Clause 11.14

Code related audit information

The trader must adhere to the process for maintaining shared unmetered load as outlined in clause 11.14:

> *11.14(2) - The distributor must give written notice to the traders responsible for the ICPs across which the unmetered load is shared, of the ICP identifiers of the ICPs.*
>
> *11.14(3) - A trader who receives such a notification from a distributor must give written notice to the distributor if it wishes to add or omit any ICP from the ICPs across which unmetered load is to be shared.*
>
> *11.14(4) - A distributor who receives such a notification of changes from the trader under (3) must give written notice to the registry manager and each trader responsible for any of the ICPs across which the unmetered load is shared.*
>
> *11.14(5) - If a distributor becomes aware of any change to the capacity of a shared unmetered load ICP or if a shared unmetered load ICP is decommissioned, it must give written notice to all traders affected by that change as soon as practicable after that change or decommissioning.*
>
> *11.14(6) - Each trader who receives such a notification must, as soon as practicable after receiving the notification, adjust the unmetered load information for each ICP in the list for which it is responsible to ensure that the entire shared unmetered load is shared equally across each ICP.*
>
> *11.14(7) - A trader must take responsibility for shared unmetered load assigned to an ICP for which the trader becomes responsible as a result of a switch in accordance with Part 11.*
>
> *11.14(8) - A trader must not relinquish responsibility for shared unmetered load assigned to an ICP if there would then be no ICPs left across which that load could be shared.*
>
> *11.14(9) - A trader can change the status of an ICP across which the unmetered load is shared to inactive status, as referred to in clause 19 of Schedule 11.1. In that case, the trader is not required to give written notice to the distributor of the change. The amount of electricity attributable to that ICP becomes UFE.*

Audit observation

The registry list was reviewed and found Globug has eight active ICPs with shared unmetered load.

I reviewed processes to identify shared unmetered load.

Audit commentary

The loads were compared against the Distributor's details and were confirmed to be correct.

All ICPs are checked when switching in for shared unmetered load and if this is found these are not accepted. The eight ICPs that have shared unmetered load recorded have all had the load added post the ICP having switched into Globug. This is proof of the process in place that existing ICPs are monitored for this via the registry notification process.

Globug's platform has no facility to manage ICPs with shared unmetered load. The unmetered details are stored in two places in SAP. One writes to the registry and the other is used to derive submission. The shared unmetered load is correctly loaded to both areas of SAP. Submission is occurring for these ICPs from SAP however Globug does not pass these costs onto their customer.

Audit outcome

Compliant

5.2. Unmetered threshold (Clause 10.14 (2)(b))

Code reference

Clause 10.14 (2)(b)

Code related audit information

The reconciliation participant must ensure that unmetered load does not exceed 3,000 kWh per annum, or 6,000 kWh per annum if the load is predictable and of a type approved and published by the Authority.

Audit observation

Globug does not accept standard unmetered load associated with any ICPs and the list file as at June 2019 was examined to identify any ICPs with standard unmetered load and found none.

Audit commentary

No ICPs with standard unmetered load were found.

Audit outcome

Compliant

5.3. Unmetered threshold exceeded (Clause 10.14 (5))

Code reference

Clause 10.14 (5)

Code related audit information

If the unmetered load limit is exceeded the retailer must:

- *within 20 business days, commence corrective measure to ensure it complies with Part 10*
- *within 20 business days of commencing the corrective measure, complete the corrective measures*
- *no later than 10 business days after it becomes aware of the limit having been exceeded, advise each participant who is or would be expected to be affected of:*
    - *the date the limit was calculated or estimated to have been exceeded*
    - *the details of the corrective measures that the MEP proposes to take or is taking to reduce the unmetered load.*

Audit observation

Globug does not accept standard unmetered load associated with any ICPs and the list file as at June 2019 was examined to identify any ICPs with standard unmetered load and found none.

Audit commentary

No ICPs with standard unmetered load were found.

Audit outcome

Compliant

5.4. Distributed unmetered load (Clause 11 Schedule 15.3, Clause 15.37B)

Code reference

Clause 11 Schedule 15.3, Clause 15.37B

Code related audit information

An up-to-date database must be maintained for each type of distributed unmetered load for which the retailer is responsible. The information in the database must be maintained in a manner that the resulting submission information meets the accuracy requirements of clause 15.2.

A separate audit is required for distributed unmetered load data bases.

The database must satisfy the requirements of Schedule 15.5 with regard to the methodology for deriving submission information.

Audit observation

Globug does not accept distributed unmetered load associated with any ICPs and the list file as at June 2019 was examined to identify any distributed unmetered load ICPs

Audit commentary

Examination of the list file confirmed there were no ICPs with distributed unmetered load.

Audit outcome

Compliant

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 one 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

A registry list was examined to confirm whether Globug supplies any ICPs with generation.

Audit commentary

Review of the registry list confirmed that Globug does not supply any ICPs with generation and these are not accepted.

Globug provided a list of 87 ICPs bridged meters. This is recorded as non-compliance below, because although estimates were conducted for the bridged period, the fact that bridging occurred means electricity is not quantified in accordance with the Code for that period. I reviewed a sample of ten bridged meters and noted that they had all been unbridged at a later date. Consumption during the during the bridged period was estimated and is discussed further in **section 8.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.1 With: Clause 10.13 From: 01-Jul-18 To: 31-May-18	Energy is not metered and quantified according to the code where meters are bridged. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating		
Low	The controls are moderate as bridging only occurs when a soft reconnection cannot be performed after hours. The volume of bridged meters is small, and all have consumption estimated for the bridged period therefore the audit risk rating is low.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**
Response: Non compliance to be discussed further as the energy is quantified. **Action:** GB has strong controls in place. GLOBUG will not leave vulnerable customers without power overnight so sometimes has no option but to bridge, in terms of the energy used, we do quantify / estimate all the energy so we believe this should be reviewed before we submit the final report please. We believe that the breach risk rating should be removed from the overall total.		On going	Disputed
Preventative actions taken to ensure no further issues will occur		**Completion date**	
GB has strong controls in place. GLOBUG will not leave vulnerable customers without power overnight so sometimes has no option but to bridge, in terms of the energy used, we do quantify / estimate all the energy so we believe this should be reviewed before we submit the final report please. We believe that the breach risk rating should be removed form the overall total.		On-going	

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 three months for the grid owner to review and comment on the design*
- *respond within three 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

A registry list was examined to confirm whether Globug supplies any GIPs.

Audit commentary

Review of the registry list confirmed that Globug does not supply any GIPs.

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

A registry list was examined to confirm whether Globug uses any profiles that require certification of control devices.

Audit commentary

Examination of the list file found that Globug has only used the RPS profile, and control devices are not used for reconciliation purposes.

Audit outcome

Compliant

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

Processes relating to defective metering were examined. Ten examples of defective meters were identified and reviewed, to determine whether the MEP was advised and if appropriate action was taken.

Audit commentary

Defective meters are typically identified through the meter reading validation process. There is a check for zeros as part of this process.

Upon identifying a possible defective meter, Globug raises a field services job to investigate or correct the issue. I reviewed ten examples of defective metering installations. In all cases a field services job was raised, and the MEP advised if they haven't been the first to alert Globug. There were no other examples 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 is 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

The data collection process was examined by a walkthrough of the processes including data loading and validation.

Audit commentary

All actual reads are sourced from the services interface, as AMI readings.

Read data is provided by Metrix, ARC, Smartco and AMS. Globug does not collect data as a certified reconciliation participant. The data loading and validation processes are compliant.

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

The data collection process was examined by a walkthrough of responsibilities and processes.

Audit commentary

No manual readings are conducted, and customer readings are not accepted. Only AMI readings used to determine volume information are provided by Metrix, ARC, Smartco and AMS.

Readings are appropriately labelled.

Electronic readings are discussed further in **section 9.6**.

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

The process for the application of meter readings was examined.

Audit commentary

Globug imports midnight AMI readings, which are applied as at 2400hrs. One read per day is provided in the AMI read files.

Application of reads was reviewed as part of the historic estimate checks and is discussed in **section 12.11**, and reads were traced from the source files to SAP in **section 6.5**.

Audit outcome

Compliant

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

The process to manage missed reads was examined. A report of all ICPs not read during the audit period was provided. A sample of 17 unread ICPs were selected using the typical characteristics sample methodology.

Audit commentary

Meters without AMI, and non-communicating AMI meters are not accepted by Globug. For all sites that switch into Globug an AMI meter must be installed, if not already present. If an ICP switches in and it is subsequently determined that an AMI meter cannot be installed, Globug contacts the customer and advises them they must switch to another retailer within seven days, or Globug will switch them to Mercury. In these instances, no reads will be gained for the short period of supply that has elapsed, and the customer will be switched on an estimated reading.

A list of 610 ICPs not read during period of supply was provided. 531 (87%) of these were with Globug for less than three months. Of those, 192 (36%) were with Globug for less than one month. The sample checked found:

- five of the ICPs were never with Globug because switches were withdrawn;
- four ICPs had withdrawn switches but were with Globug for one day;
- three ICPs had AMI metering and readings were not provided by the MEP; and

- five ICPs had non-AMI metering and manual meter readings were not obtained during the period of supply, nor were any attempts made.

There are often site visits conducted to change non-AMI meters to AMI meters. I recommend meter readings are obtained during these visits to assist with the accuracy of invoices, submission and switch out reads.

Recommendation	Description	Audited party comment	Remedial action
Regarding: Clause 7(1) & (2) of schedule 15.2	Obtain meter readings during site visits.	GBUG will explore the recommendation further	Investigating

It appears that the report is over reporting the ICPs unread during the period of supply and I recommend that the report is reviewed.

Recommendation	Description	Audited party comment	Remedial action
Regarding: Clause 7(1) & (2) of schedule 15.2	Review reporting to capture only ICPs unread during the period of supply.	GBUG will explore the recommendation further	Investigating

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.8 With: 7(1) & (2) of schedule 15.2 From: 01-Jul-18 To: 31-May-19	Exceptional circumstances not proven for 8 ICPs not read during period of supply. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate as Globug use AMI meters, but where these can't be installed and the ICP isn't switched away these sites remain unread. The audit risk rating is low as the volume of ICPs affected by this is small.

Actions taken to resolve the issue	Completion date	Remedial action status
Response: Non compliance accepted and remedial action ongoing **Action:** GB has reviewed its process and has made changes to ensure the meters are read to comply with the code.	Aug 2019	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

GB has reviewed its process and has made changes to ensure the meters are read to comply with the code.	Aug 2019	

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

The meter reading attainment process was examined, including reviewing reports and other evidence that processes were operating as stated. Monthly meter reading frequency reports for the months of January to May 2019 were provided.

All ICPs unread for more than 12 months as at June 2019 were reviewed to determine whether reasonable endeavours were used to attain reads, and if exceptional circumstances existed.

Audit commentary

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 12 months	NSPs <100% read	ICPs unread for 12 months	Overall percentage read
January 2019	122	2	2	99.99%
February 2019	124	1	1	99.99%
March 2019	124	2	2	99.99%
April 2019	123	2	2	99.99%
May 2019	123	1	1	99.99%

Meters without AMI, and non-communicating AMI meters are not accepted by Globug. As discussed in **section 6.8**, all ICPs are required to have AMI meters, or the customer must agree to have an AMI meter installed on switch in. If an ICP switches in and it is subsequently determined that an AMI meter cannot be installed, Globug contacts the customer and advises them they must switch to another retailer within seven days, or Globug will switch them to Mercury.

Where a meter read is not received for more than 72 hours, and communications cannot be established, the customer is contacted to determine whether their power supply is turned off at the mains. If the customer cannot be contacted, a field service request is raised to investigate.

There is weekly liaison between Globug and the MEPs regarding ICPs without readings. This process is working well and there are now very few ICPs not read at 12 months.

The vacancy process is expected to commence as soon as the property becomes vacant. A letter is sent prompting the next occupant to register with Globug. A further two letters are sent and if no response has been received to the third letter (week six) and there are no communications to the site, a site visit is arranged to check for occupancy.

I reviewed four ICPs not read at 12 months and I found best endeavours had been made despite exceptional circumstances in all cases.

Audit outcome

Compliant

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 four months, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every four 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

The meter reading attainment process was examined, including reviewing reports and other evidence that processes were operating as stated. Monthly meter reading frequency reports for the months of January to May 2019 were provided.

Nine ICPs not read in the previous four months were reviewed to determine whether reasonable endeavours were used to attain reads, and if exceptional circumstances existed.

Audit commentary

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	Total ICPs unread for 4 months	Overall percentage read
January 2018	126	0	40	99.82%
February 2018	127	0	35	99.85%
March 2018	127	0	39	99.83%
April 2018	126	0	35	99.84%
May 2018	126	2	53	99.76%

As discussed in **Section 6.8**, all ICPs are required to have AMI meters, or the customer must agree to have an AMI meter installed on switch in. There are processes in place to switch the ICP to another retailer in the event that AMI metering cannot be installed.

I reviewed nine ICPs not read in the previous four months determine whether exceptional circumstances exist, and if Globug had used their best endeavours to obtain readings. In all cases, Globug had made many attempts to get readings through liaison with MEPs. There is weekly liaison between Globug and the MEPs regarding ICPs without readings. This process is working well and there are now very few ICPs not read at 4 months.

Audit outcome

Compliant

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

NHH data is collected by MEPs. The data collection processes were reviewed as part of their audits.

Audit commentary

Compliance with this clause has been demonstrated by MEPs and is discussed in their audit reports.

Audit outcome

Compliant

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

A registry list file was reviewed for the audit period to confirm that all AMI meters supplied by Globug have submission type NHH.

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

A registry list file was reviewed for the audit period to confirm that all HHR meters supplied by Globug have submission type NHH.

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

A registry list file was reviewed for the audit period to confirm that all AMI meters supplied by Globug have submission type NHH.

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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 ±0.1% (±2 seconds).

Audit observation

A registry list file was reviewed for the audit period to confirm that all HHR meters supplied by Globug have submission type NHH.

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

Processes to archive and store raw meter data were reviewed. Raw meter data from 2014 was reviewed to ensure that it is retained.

Audit commentary

When meter reading data reaches SAP the level of security is robust, and unauthorised personnel cannot access data. Metering, billing and risk control have access to modify meter reading information in SAP.

I reviewed raw meter data from as early as 2016 recorded in SAP, confirming that meter reading data is retained for at least 48 months.

Compliance with clause 18.3 of schedule 15.2 was examined, which requires that ".....meter readings cannot be modified without an audit trail being created." Readings cannot be modified without an audit trail being created. Validation occurs in a temporary table before it becomes a permanent record and meter readings are not edited. I viewed these audit trails, and they are discussed in further detail in **section 2.4**.

No paper-based readings are received.

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

Processes for non-metering information were discussed.

Audit commentary

Globug does not deal with any non-metering information.

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 errors are detected during validation of non-half hour meter readings, one of the following must be undertaken:

> *19(1)(a) - confirmation of the original meter reading by carrying out another meter reading*
>
> *19(1)(b) - replacement of the original meter reading by another meter reading (even if the replacement meter reading may be at a different date)*
>
> *19(1)(c) - if the original meter reading cannot be confirmed or replaced by a meter reading from another interrogation, then an estimated reading is substituted, and the estimated reading is marked as an estimate and it is subsequently replaced in accordance with clause 4(2).*

Audit observation

Processes for correction of NHH meter readings were reviewed. A sample of ten corrections were reviewed.

Audit commentary

Where errors are detected during validation of non-half hour meter readings, the read is checked against other AMI data for the ICP. If an original meter reading cannot be confirmed as correct, an estimated reading is used.

I reviewed a sample of corrections during the audit period.

Estimated consumption for the bridged period is based on the current average daily usage for the customer multiplied by the number of days bridged. The estimated consumption is provided to Mercury, who follow a meter reprogram process. The bridged meter is closed on an estimated read which captures the estimated consumption during the bridged period, and then restarted on the meter read that applied when the meter was unbridged. I reviewed ten examples of bridged meters. Each example had a worksheet to estimate the consumption during the bridged period and these were checked. An email is sent to the Reconciliation team with the total kWh and also the date range of the bridged period. This process has been improved since the last audit because the date range was not previously supplied. Corrections were all accurate and for the correct date range.

No examples of corrections for multiplier issues were identified during the audit period.

Where disconnected ICPs have consumption, SAP submits this consumption automatically. Five examples of consumption on disconnected ICPs were examined. In all five cases the registry was still showing as "Active".

It appears there are issues with remote disconnections not being successful and Globug not knowing whether the disconnection has occurred or not. I recommend in **section 3.9** that Globug investigates monitoring of the event information to identify unsuccessful disconnection or reconnection attempts.

Audit outcome

Compliant

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 errors are detected during validation of half hour metering information the correction must be as follows:

> *19(2)(a) - if a check meter or data storage device is installed at the metering installation, data from this source may be substituted*
>
> *19(2)(b) - in the absence of any check meter or data storage device, data may be substituted from another period if the total of all substituted intervals matches the total consumption recorded on the meter, if available, and the pattern of consumption is considered materially similar to the period in error.*

Audit observation

A registry list file was reviewed for the audit period to confirm that all HHR meters supplied by Globug have submission type NHH.

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

If error compensation and loss compensation are carried out as part of the process of determining accurate data, the compensation process must be documented and must comply with audit trail requirements.

Audit observation

Processes for error and loss compensation were discussed.

Audit commentary

Globug does not deal with any error and loss compensation arrangements.

Audit outcome

Compliant

8.4. Correction of HHR and NHH raw meter data (Clause 22(1) and (2) Schedule 15.2)

Code reference

Clause 22(1) and (2) 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:

22(2)(a) - the date of the correction or alteration

22(2)(b) - the time of the correction or alteration

22(2)(c) - the operator identifier of the reconciliation participant

22(2)(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

22(2)(e) - the technique used to arrive at the corrected data

22(2)(f) - the reason for the correction or alteration.

Audit observation

Corrections are discussed in **section 8.1**, which confirmed that raw meter data is not overwritten as part of the correction process. Audit trails are discussed in **section 2.4**.

Raw meter data retention for MEPs was reviewed as part of their MEP audits.

Audit commentary

Audit trails were reviewed for the sample of corrections discussed in **section 8.1**. The correction journals and audit trails were compliant with the requirements of this clause.

Compliance is confirmed.

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

Provision of estimated reads to other participants during switching was reviewed in **sections 4.3**, **4.4**, **4.10** and **4.11**.

Correct identification of estimated reads, and review of the estimation process was completed in **section 8.1**.

Audit commentary

Readings are clearly identified as required by this clause.

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

A sample of submission data was reviewed in **section 12**, to confirm that volume was based on readings as required.

Audit commentary

Review of submission data confirmed that it is based on readings as required by this clause.

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

A sample of submission data was reviewed in **section 12**, to confirm that volume was based on readings as required.

I reviewed the method to receive meter reading information and traced a sample of reads for two ICPs per provider from the source files to Globug's systems in **section 6.5**.

Audit commentary

AMI data provided by MEPs is truncated on import, readings are recorded to zero decimal places. The MEP retains the raw, unrounded data. This has previously been recorded as compliant because the MEP has the unrounded raw meter data, however a recent review of the wording of this clause has led to a revised interpretation, which is that rounding should not occur until volume information is created. Rounding occurs prior to the creation of volume information, therefore non-compliance exists.

Unmetered load calculations are rounded to zero decimal places per ICP per month. This clause refers to metering installations and the definition of a metering installation includes the process to calculate unmetered load, therefore non-compliance exists. The definition of a metering installation is shown below:

metering installation means—
(a) equipment, including all metering components, used, or intended to be used, for metering:
(b) in the context of unmetered load, the calculation process used to derive the quantity of unmetered load:
(c) in the context of instances of both metered electricity quantities and unmetered load, both (a) and (b)

For the metered installations, there is little impact because all submission is NHH, therefore any minor over or under submissions in a month will be corrected in the next month. For unmetered load, there will be incorrect submission, but only by a very small amount, as shown in the table below.

ICP	Daily Unmetered kWh	June calculation	June rounded	Difference
0005313236RNE6A	0.65	19.50	20	-0.50
0005359856RNE45	0.21	6.30	6	0.30
0005359864RN938	0.21	6.30	6	0.30
0005410959RNAA1	0.33	9.90	10	-0.10
0005558395RN6A3	0.214	6.42	6	0.42
0005558417RNC6E	0.214	6.42	6	0.42
0005844851RN68B	0.12	3.60	4	-0.40
0006498183RNC91	0.35	10.50	11	-0.50

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.3 With: Clause 3(5) Schedule 15.2 From: 01-Jul-18 To: 18-Jul-19	Raw meter data is rounded upon receipt and not when volume information is created. Potential impact: Low Actual impact: None Audit history: Once Controls: None Breach risk rating: 5
Audit risk rating	**Rationale for audit risk rating**
Low	There are no controls to prevent rounding of raw meter data, the system is designed to round as soon as the data arrives. There is very little impact because no metered consumption information is "missing", and the unmetered differences are very small, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Response: Non compliance accepted. **Action:** Mercury's current system stores the meter reading as whole numbers. In order to comply with the code it will require a massive system change which will be very costly and not very feasible as there is no market impact. An analysis was carried out for a month and the difference was only 1 kwh, which is not material. The breach risk rating is high which needs to be reviewed or not considered from the total rating.	On going	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Mercury's current system stores the meter reading as whole numbers. In order to comply with the code it will require a massive system change which will be very costly and not very feasible as there is no market impact. An analysis was carried out for a month and the difference was only 1 kwh, which is not material. The breach risk rating is high which needs to be reviewed or not considered from the total rating.	On going	

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

A registry list file was reviewed for the audit period to confirm that all HHR meters supplied by Globug have submission type NHH.

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

I reviewed and observed the NHH data validation process, including checking a sample of data validations. Review of SAP system parameters for read and consumption validation.

Audit commentary

The read data validation process includes:

- checks that the data relates to an ICP, meter and register held within the system;
- checks for missing data and that reads are loaded against orders, any outstanding orders are investigated to determine why a read was not received;

- the read import process identifies reads with invalid dates and times, or a date that does not match the expected read order date, it will also identify obvious data corruption;
- billing validations, including checks for high reads and reads lower than previous will identify consumption not in line with the history for the ICP or unexpected zero values; and
- it is not possible to enter a read for a period which has already been billed.

If a read is not validated, it will not be used by the billing or reconciliation process.

The credit team monitors meters with zero consumption, and consumption on vacant and disconnected ICPs. Where consumption is identified on vacant ICPs a field visit is conducted to identify whether there is a customer requiring registration, or whether the normal "dunning" process needs to start so the ICP is ultimately disconnected. Submission occurs for all vacant consumption regardless of whether it is billed or not. I confirmed that vacant consumption is included in submission files by checking ten ICPs that were vacant with consumption recorded. Disconnected ICPs with consumption are monitored, and if consumption occurs an investigation commences.

A further validation occurs in the billing process. Any invoices that fail validation and cannot be reasonably explained are held and investigated.

Audit outcome

Compliant

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 zero 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 meter and data storage device event list. Any event that could have affected the integrity of metering data must be investigated.

Audit observation

Review of meter event logs and validation checks.

Audit commentary

Information used to determine volume information is provided by MEPs. This function has been examined as part of their respective audits.

Readings are appropriately labelled as recorded in **section 6.5**.

The Code requires *"…a review of meter and data storage device event log. Any event that could have affected the integrity of metering data must be investigated."*

The MEPs must check the event log for evidence of malfunctioning or tampering and they must pass relevant event log entries to the reconciliation participant for the metering installation. The reconciliation participant must conduct a review of meter and data storage device event log. Any event that could have affected the integrity of metering data must be investigated.

MEPs are reviewing and filtering metering events which are emailed to Globug and they are reviewed and actioned. I saw evidence of field service jobs raised as a result of these reviews. The previous audit recorded that ARC events were not being sent. This matter is now resolved, and I have checked the ARC process for evaluating events, which is compliant. Only relevant events are sent.

Audit outcome

Compliant

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

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

Code reference

Clause 13.136

Code related audit information

The generator (and/or embedded generator) must provide to the pricing manager and the grid owner connected to the local network in which the embedded generator is located, half hour metering information in accordance with clause 13.138 in relation to generating plant that is subject to a dispatch instruction:

- *that injects electricity directly into a local network; or*
- *if the meter configuration is such that the electricity flows into a local network without first passing through a grid injection point or grid exit point metering installation.*

Audit observation

A registry list was examined to confirm whether Globug supplies any ICPs with generation.

Audit commentary

Review of the registry list confirmed that Globug does not supply any ICPs with generation. Globug is not required to provide generation information to the pricing manager.

Audit outcome

Not applicable

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

Code reference

Clause 13.137

Code related audit information

Each generator must provide the pricing manager and the relevant grid owner half-hour metering information for:

- *any unoffered generation from a generating station with a point of connection to the grid 13.137(1)(a)*
- *any electricity supplied from an intermittent generating station with a point of connection to the grid. 13.137(1)(b)*

The generator must provide the pricing manager and the relevant grid owner with the half-hour metering information required under this clause in accordance with the requirements of Part 15 for the collection of that generator's volume information. (clause 13.137(2))

If such half-hour metering information is not available, the generator must provide the pricing manager and the relevant grid owner a reasonable estimate of such data. (clause 13.137(3))

Audit observation

A registry list was examined to confirm whether Globug supplies any ICPs with generation.

Audit commentary

Review of the registry list confirmed that Globug does not supply any ICPs with generation.

Globug is not required to provide generation information to the pricing manager.

Audit outcome

Not applicable

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

Code reference

Clause 13.138

Code related audit information

The generator must provide the information required by clauses 13.136 and 13.137,

13.138(1)(a)- adjusted for losses (if any) relative to the grid injection point or, for embedded generators the grid exit point, at which it offered the electricity

13.138(1)(b)- in the manner and form that the pricing manager stipulates

13.138(1)(c)- by 0500 hours on a trading day for each trading period of the previous trading day.

The generator must provide the half-hour metering information required under this clause in accordance with the requirements of Part 15 for the collection of the generator's volume information.

Audit observation

A registry list was examined to confirm whether Globug supplies any ICPs with generation.

Audit commentary

Review of the registry list confirmed that Globug does not supply any ICPs with generation. Globug is not required to provide generation information to the pricing manager.

Audit outcome

Not applicable

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

Code reference

Clause 13.140

Code related audit information

If the generator provides half-hourly metering information to the pricing manager or a grid owner under clauses 13.136 to 13.138, or 13.138A, it must also, by 0500 hours of that day, advise the relevant grid owner.

Audit observation

A registry list was examined to confirm whether Globug supplies any ICPs with generation.

Audit commentary

Review of the registry list confirmed that Globug does not supply any ICPs with generation. Globug is not required to provide generation information to the pricing manager.

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

A registry list was reviewed to confirm that only the RPS profile was used.

Audit commentary

As Globug has only used the RPS profile, trading notifications were not required.

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

The process for the calculation of ICP days was examined by checking ICPCOMP reports for several months and by checking discrepancies in the ICPCOMP reports for 31 NSPs.

Audit commentary

The following table shows the ICP days difference between Globug files and the RM return file (GR100) for all available revisions for 17 months. Negative percentage figures indicate that the Globug ICP days figures are higher than those contained on the registry. The discrepancies are growing over time and it's for this reason I chose to examine this area by checking 31 NSPs. The analysis found that Globug ICP days correctly matches the submission information, therefore compliance is achieved. For example, if there is

consumption for a day on an ICP where the registry shows it as being disconnected, SAP will calculate one ICP day because there is consumption. Many of the examples checked were also where the status on switch in was inactive and this was not corrected until after the initial submission.

Month	Ri	R1	R3	R7	R14
Jan-18	-0.86%	-1.19%	-1.31%	-1.45%	-1.43%
Feb-18	-0.64%	-1.09%	-1.21%	-1.32%	-1.30%
Mar-18	-0.52%	-1.06%	-1.14%	-1.25%	-1.21%
Apr-18	-0.49%	-1.01%	-1.10%	-1.22%	
May-18	-0.71%	-1.06%	-1.14%	-1.26%	
Jun-18	-0.49%	-1.02%	-1.07%	-1.25%	
Jul-18	-0.72%	-1.09%	-1.14%	-1.33%	
Aug-18	-0.74%	-1.01%	-1.07%	-1.25%	
Sep-18	-0.64%	-0.96%	-1.05%	-1.21%	
Oct-18	-0.75%	-0.99%	-1.14%	-1.30%	
Nov-18	-0.74%	-0.93%	-1.01%		
Dec-18	-0.56%	-0.84%	-0.99%		
Jan-19	-0.84%	-1.14%	-1.19%		
Feb-19	-0.46%	-0.90%	-0.95%		
Mar-19	-0.36%	-0.78%			
Apr-19	-0.25%	-0.86%			
May-19	-0.41%				

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

The process for the calculation of as billed volumes was examined by checking four NSPs with a small number of ICPs to confirm the AV120 calculation was correct.

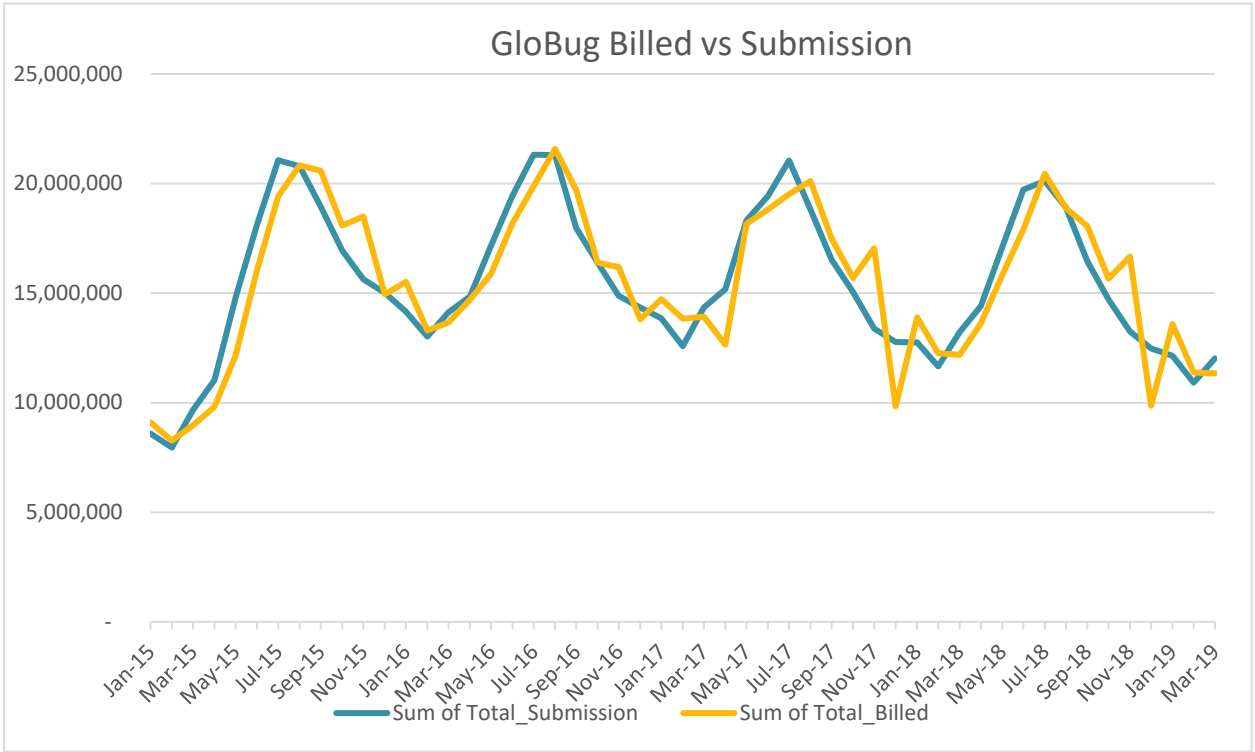
GR130 reports for January 2015 onwards were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

Audit commentary

The process for calculating and submitting electricity supplied information was examined by checking individual invoices for a typical sample of four NSPs to ensure the billed amount equalled the figure in the ICP level file which forms the basis of the aggregate file sent to the RM. The file is correct for the sample checked. Compliance is confirmed.

The table below shows a comparison between submissions and electricity supplied information. At an aggregate level, submitted data is 0.13% higher than billed data for the four years ended April 2019. The reason for the variation at Christmas time each year is that "invoicing" is processed early prior to Christmas to cater for staff being on holiday.

Comparison between Submitted Volumes and Electricity Supplied



Audit outcome

Compliant

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

A registry list file was reviewed for the audit period to confirm that all HHR meters supplied by Globug have submission type NHH.

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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 one of the techniques set out in clause 15.36(3) specified by the Authority.

Audit observation

A registry list file was reviewed for the audit period to confirm that all HHR meters supplied by Globug have submission type NHH.

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

A list of breaches was obtained from the Electricity Authority. There were no breaches for late provision of submission information.

A sample of NHH ICPs were checked to make sure they are handled correctly, including vacant ICPs and unmetered load. Globug does not supply any ICPs with distributed generation. Further information on calculation of historic estimates is recorded in **section 12.11**.

A sample of corrections were reviewed to ensure that they flowed through to revision submissions in **section 8.1.**

Audit commentary

No breaches had been recorded for late provision of submission information.

Vacant consumption is correctly included in submissions as discussed in **section 8.1**. I reviewed all ICPs with shared unmetered load and confirmed that consumption was correctly calculated and submitted. Comment is made in **section 9.3** regarding rounding of unmetered load totals.

Reconciliation submissions are reviewed for completeness and accuracy prior to submission. I walked through the review process, including viewing evidence of previous submission reviews.

The NHH pre-submission review process includes:

- GXP level comparison to the same period last year and previous month for initial submission. For revision submissions, a comparison to previous submissions for the month is also completed. If anomalies are identified, it is possible to drill down to ICP level to identify and investigate the cause of the difference.
- ICPs with consumption over 70,000 kWh are checked against a list of known high users. Any ICPs with high consumption not on the list will be investigated and added to the list if necessary.
- Exception reports are run to identify possible situations where meter rollovers have not been processed correctly, usually due to an incorrect number of dials being recorded. These are then investigated and corrected.

All pre-submission checks are reviewed by the Pricing Operations and Energy Services Manager, who provides approval via email.

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

Processes to ensure that information used to aggregate the reconciliation reports is consistent with the registry were reviewed in **section 2.1**.

The process to ensure that AV080 submissions are accurate was discussed. The process for aggregating the AV080 was examined by checking four NSPs with a small number of ICPs.

The GR170 to AV080 files were compared for eight months, to confirm zeroing occurs.

Audit commentary

The process for the calculation of NHH volumes was examined by checking four NSPs with a small number of ICPs. NHH volume calculation was confirmed to be correct.

GR170 and AV080 files for eight months were compared, and found to contain the same NSPs and totals, confirming that zeroing is occurring as required.

The Energy Services team check NHH submissions against balancing data received from the reconciliation manager and NSP notifications using an Access database. This process identifies and adds any zero rows that are needed and confirms that the before and after volume totals remain the same. This process was observed, and compliance is confirmed.

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

A registry list with history was reviewed for the audit period to confirm that Globug has not supplied any GIPs.

Audit commentary

Examination of the list file found that Globug has not supplied any GIPs. Globug is not required to report any grid owner volume information

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

Globug is not a local or embedded network owner.

Audit commentary

Globug is not a local or embedded network owner and is not required to provide NSP submission information.

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

A registry list with history was reviewed for the audit period to confirm that Globug has not supplied any GIPs.

Audit commentary

Examination of the list file found that Globug has not supplied any GIPs. Globug is not required to report any grid connected generation.

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

AV080 and AV110 submission dates and times were reviewed on the allocation portal, to confirm that revised submissions are provided at the next available opportunity. Where revised submissions were not provided, I reviewed the data to confirm whether there had been any changes from the previous submission.

Corrections were reviewed in **section 8.1.**

Audit commentary

Review of submissions on the allocation portal confirmed revisions were submitted as expected.

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).

Volume information created using estimated readings must be subsequently replaced at the earliest opportunity by the reconciliation participant by volume information that has been created using validated meter readings or permanent estimates by, at the latest, the month 14 revision cycle.

A permanent estimate may be used in place of a validated meter reading, but only if, despite having used reasonable endeavours; the reconciliation participant has been unable to obtain a validated meter reading.

Audit observation

AV080 14-month revisions were reviewed for January, February and March 2018 to identify any forward estimate still existing.

Audit commentary

The process is that all estimates are made permanent at 6 months, prior to the 7-month revision. Most 7 and 14-month revisions have 100% HE recorded. This clause requires Globug to use reasonable endeavours to obtain a meter reading before an estimate can be made permanent. In **section 6.9**, it is recorded that the reasonable endeavours threshold has been met to obtain meter readings at the 12-month point and the 4-month point.

In January 2018, there was estimated consumption that has not been made permanent for one ICP.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.8 With: Clause 4 of schedule 15.2 From: 01-Jan-18 To: 31-Jan-18	Estimate not made permanent for one ICP. Potential impact: Medium Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong because they mitigate risk to an acceptable level. The impact on settlement is minor therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Response: Non compliance accepted **Action:** We have very strong controls in place and one incident was caused due to back dating of a switch. GB always strive to meet the code obligation.	Aug 2019	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We have very strong controls in place and one incident was caused due to back dating of a switch. GB always strive to meet the code obligation	Aug 2019	

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 must comprise the following:

- *half hour volume information 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)(b)):*
  a) half hour volume information for the ICP; or

b) *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 apply to the raw meter data (clause 2(3):*
  a) *for each ICP, the compensation factor that is recorded in the registry (clause 2(3)(a))*
  b) *for each NSP the compensation factor that is recorded in the metering installations most recent certification report (clause 2(3)(b)).*

Audit observation

Aggregation and content of reconciliation submissions was reviewed.

Audit commentary

Aggregation of the AV080 and AV110 submissions are covered in **sections 13.2** and **11.2** respectively.

The Registry list was reviewed to confirm that there were no active ICPs with meter category 3 or higher.

Unmetered load was checked and confirmed to be reported correctly in **section 12.2**. Globug only uses the RPS profile, which is not dependent on certified control devices.

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

I reviewed 14 AV080 submissions for revisions 3 to 14, to confirm that historic estimates are included and identified.

Permanence of meter readings is reviewed in **section 12.8**. The methodology to create forward estimates is reviewed in **section 12.12**.

Audit commentary

I reviewed 14 AV080 submissions for a diverse sample of months and revisions and confirm that forward and historic estimates are included and identified as such. Compliance is confirmed.

Audit outcome

Compliant

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

To assist with determining compliance of the Historical Estimate (HE) processes, Globug was supplied with a list of scenarios, and for some individual ICPs a manual HE calculation was conducted and compared to the result from SAP.

Audit commentary

Globug provided examples of historic estimate calculations, which were reviewed. The check of calculations included confirming that readings and Seasonal Adjustment Shape Values (SASV) were applied correctly.

The process for managing shape files was examined. There is an automated process where the RM web server is polled for new files, which are moved to the system production files. I viewed the data capture process and noted that files had been processed as expected, and the most recent files were available.

Test	Scenario	Test expectation	Result
A	ICP becomes Inactive part way through a month.	Consumption is only calculated for the Active portion of the month.	Compliant
B	ICP becomes Active then Inactive within a month.	Consumption is only calculated for the Active portion of the month.	Has not occurred
C	ICP becomes Inactive, then Active, then Inactive again within a month.	Consumption is only calculated for the Active portion of the month.	Has not occurred
D	Network/GXP/Connection (POC) alters partway through a month.	Consumption is separated and calculated for the separate portions of where it is to be reconciled to.	Compliant
E	ICP Starts on the 1st day of a month.	Consumption is calculated to include the 1st day of responsibility.	Compliant
F	ICP Ends on the Last Day of the month.	Consumption is calculated to include the last day of responsibility.	Compliant

Test	Scenario	Test expectation	Result
G	ICP Starts part way through a month.	Consumption is calculated to include the 1st day of responsibility.	Compliant
H	ICP Ends part way through a month.	Consumption is calculated to include the last day of responsibility.	Compliant
I & J	ICP is Lost and Won Back in a month.	Consumption is calculated for each day of responsibility.	Compliant
K	Unmetered load for a full month	Consumption is calculating based on daily unmetered kWh for full month.	Compliant
L	Unmetered load for a part month	Consumption is calculating based on daily unmetered kWh for active days of the month.	Compliant
M	ICP Starts on 1st and Ends on Last day of month.	Consumption is calculated for each day of responsibility.	Compliant
N	Rollover Reads	Consumption is calculated correctly in the instance of meter rollovers.	Compliant

Compliance is confirmed for all scenarios tested.

Audit outcome

Compliant

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

The process to create forward estimates was reviewed.

Forward estimates were checked for accuracy by analysing the GR170 file for variances between revisions over the audit period.

Audit commentary

Globug's forward estimates are based on either:

- historic readings; or
- historic daily average consumption based on price plan and billing group.

Globug's forward estimate process also includes a "factoring" process, which involves the use of the average of the previous two-year's profile shape. This ensures that submission information is not understated or overstated during "shoulder" months.

The accuracy of the initial submission, in comparison to each subsequent revision is required to be within 15% and within 100,000kWh. The table below shows the target was met for all revisions.

Quantity of balancing areas with differences over 15% and 100,000 kWh

Month	Revision 1	Revision 3	Revision 7	Revision 14	Total
Jan 2018	0	0	0	0	49
Feb 2018	0	0	0	0	50
Mar 2018	0	0	0	0	50
Jun 2018	0	0	0	0	49
Oct 2018	0	0	0	-	49
Nov 2018	0	0	0	-	49
Dec 2018	0	0	-	-	49
Jan 2019	0	0	-	-	48
Feb 2019	0	0	-	-	48

The total variation between revisions at an aggregate level is shown below:

Month	Revision 1	Revision 3	Revision 7	Revision 14
Jan 2018	1.14%	0.58%	0.51%	0.51%
Feb 2018	-0.58%	-2.25%	-2.34%	-2.29%
Mar 2018	-1.82%	-3.31%	-3.27%	-3.21%
Jun 2018	-6.10%	-6.92%	-6.92%	-
Oct 2018	-0.34%	-1.73%	-1.80%	-
Nov 2018	1.98%	-0.32%		-
Dec 2018	3.20%	-0.09%	-	-
Jan 2019	2.42%	1.48%	-	-

Month	Revision 1	Revision 3	Revision 7	Revision 14
Feb 2019	2.77%	0.41%	-	-

I investigated some differences between revisions even though they were not over the threshold. There were two issues present. One NSP was moved into its own balancing area, leading to a step change in the shape file. Some NSPs with a large amount of irrigation have quite volatile shape files.

Audit outcome

Compliant

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

A registry list was reviewed for the audit period to confirm that Globug has used the RPS profile during the audit period.

The registry list with history for the audit period was examined to identify all ICPs which had a profile change during the audit period. No profile changes were identified during the audit period.

Audit commentary

Examination of the list file found that there have been no profile changes. In the event of a profile change, Globug will use a validated meter reading or a permanent estimate on the day that the change is effective.

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

Submission information provided to the reconciliation manager must be aggregated to the following level:

- *NSP code (clause 8(a))*
- *reconciliation type (clause 8(b))*
- *profile (clause 8(c))*
- *loss category code (clause 8(d))*
- *flow direction (clause 8(e))*
- *dedicated NSP (clause 8(f))*
- *trading period for half hour metered ICPs and consumption period or day for all other ICPs (clause 8(g)).*

Audit observation

The process to ensure that AV080 submissions are accurate was discussed. Aggregation of the AV080 report was checked for a sample of four small NSPs for one month.

Processes to ensure that information used to aggregate the reconciliation reports is consistent with the registry were reviewed in **section 2.1.**

Audit commentary

I checked aggregation for a sample of four NSPs in the February 2019 AV080 report and found that the AV080 was aggregated correctly.

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 two decimal places.

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

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

Audit observation

I reviewed the rounding of data on the AV080 reports as part of the aggregation checks.

Audit commentary

Review of 14 AV080 reports confirmed that submission data is rounded to zero decimal places. Compliance is confirmed, as this is not more than two decimal places.

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

The timeliness of submissions of historic estimate was reviewed in **section 12.2**.

I reviewed ten months of AV080 reports to confirm that historic estimate requirements were met.

Audit commentary

The quantity of historical estimates is contained in the submission file and is not a separate report. Historic estimate targets were not met for some revisions. Read attainment rates are discussed in **sections 6.9, 6.10 and 6.11**. HE is 100% from the 7-month revision on, now that Globug is making all estimates permanent at the 6-month point. This is discussed further in **section 12.8**.

Quantity of NSPs where revision targets were met.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Jan 2018	130	131	130	131
Feb 2018	131	132	132	132
Mar 2018	132	132	132	132
Jun 2018	130	130	-	130
Oct 2018	128	129	-	129
Nov 2018	128	-	-	129
Dec 2018	128	-	-	128
Jan 2019	128	-	-	128
Feb 2019	127	-	-	128

The table below shows that the percentage HE at a summary level is at a high level.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Jan 2018	99.75%	99.99%	100%
Feb 2018	99.77%	100%	100%
Mar 2018	99.78%	100%	100%
Jun 2018	99.82%	100%	-
Oct 2018	99.76%	100%	-
Nov 2018	99.85%	-	-
Dec 2018	99.81%	-	-
Jan 2019	99.78%	-	-
Feb 2019	99.71%	-	-

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 13.3 With: Clause 10 of schedule 15.3 From: 01-Jan-18 To: 28-Feb-19	80% HE threshold not met for five NSPs. 100% threshold not met for one NSP. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong because risks are mitigated to an acceptable level. The impact on settlement is minor therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Response: Non compliance accepted and remedial action ongoing **Action:** GB has strong controls in place and always thrive to meet the code obligations. GB is reviewing its process further to ensure compliance is met.	Sept 2019	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
GB has strong controls in place and always thrive to meet the code obligations. GB is reviewing its process further to ensure compliance is met.	Sept 2019	

CONCLUSION

The audit found 13 non-compliance issues, an improvement on 21 in the last audit. Three recommendations are made.

Improvements have been made in several areas since the last audit, as follows:

- status validation has significantly improved the number of discrepancies;
- data collection controls have reduced the number of unread meters; and
- corrections for bridged meters are now allocated to the correct periods.

The registry is still not being updated for all disconnections if they are for a period of less than one week.

Switching processes had a high level of compliance with very few late files and most content being accurate.

Reconciliation was found to have a high level of accuracy with robust processes in place. The improvement in meter reading attainment has assisted with this.

PARTICIPANT RESPONSE

GLOBUG has taken compliance very seriously and strives to meet the code obligations. A huge improvement has been made compared to the last audit with high level of accuracy and more robust processes around it. We will continue to make further improvements and we believe 24 months audit period will be reflective as the existing non-compliance are not material.