Electricity Industry Participation Code Reconciliation Participant Audit Report

for

GLOBUG Limited

Prepared by Rebecca Elliot – Veritek Limited

Date of Audit: 26/06/16 to 29/06/16

Date Audit Report Complete: 25/08/17

Audit Report Due Date: 28/08/17

Executive Summary

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **GLOBUG Limited** (**GBUG),** 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 V7.1.

This audit is for the GBUG participant code only.

The audit found 21 non-compliance issues, and one recommendation is made. This is two less non-compliances than recorded than last year. This is a good result when considering the new audit format contains more sections. Globug have made good progress in relation to the management of registry validation since the last audit. A weekly process is run to manage alignment between Salesforce, SAP and the registry. The area of switching has also improved with no switch breaches recorded for the audit period.

The non-compliances with the highest impact relate to:

- the inaccuracies found in the content of CS files which will be effecting other participants
- the misalignment of active dates recorded on the registry, SAP and Salesforce
- some forward estimates remained at the 14 month revision.

Overall Globug has made good progress during the audit period. The indicative audit frequency table indicates the next audit should be in 12 months and I agree with this recommendation.

The matters raised are shown in the tables below:

Table of Non-Compliance

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	11.2 of part 11	Some registry discrepancies.	Moderate	Low	2	Investigating
Changes to registry	3.3	10 of schedule 11.1	Registry not updated within 5 business days of the event.	Moderate	Low	2	Identified
ANZSIC codes	3.6	9(1)(k) of schedule 11.1	4 active ICPs with an incorrect ANZSIC codes assigned.	Strong	Low	1	Cleared
Active status	3.8	17 of schedule 11.1	Incorrect active date recorded for three reconnected ICPs.	Moderate	Low	2	Investigating
Inactive status	3.9	19 of schedule 11.1	Incorrect active date recorded for seven disconnected ICPs. Credit disconnections not recorded for all inactive days.	Weak	Low	3	Investigating
Change of MEP	3.11	10.22(1)(a)	2 incorrect MEPs nominated.	Strong	Low	1	Identified
Switching	4.2	3 & 4 of schedule 11.3	Incorrect sending of the "PD" AN response code for transfer switches.	Moderate	Low	2	Identified
	4.3	5 of schedule 11.3	Incorrect last read date, incorrect read and average daily consumption figures being sent in some instances.	Moderate	Low	2	Investigating
	4.8	10 of schedule 11.3	Incorrect codes sent for two ICPs sampled.	Strong	Low	1	Identified
	4.9	10 (2) of schedule 11.3	35 ICPs of 5,202 move switches processed where the event date was either set earlier than the gaining traders or greater than 10 days from the gaining traders request date.	Strong	Low	1	Identified
	4.10	11 of schedule 11.3	Incorrect last read date and average daily consumption figures being sent in some instances. Estimated reads not sent for the event date.	Moderate	Low	2	Investigating
	4.15	17 of schedule 11.3	5 switch withdrawals sent later than 2 months of the event date.	Strong	Low	1	Investigating
Electricity conveyed	6.1	10.13	Energy is not metered and	Moderate	Low	2	Identified

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			quantified according to the code where meters are bridged.				
Interrogate meters once	6.8	7(1) & (2) of schedule 15.2	No reporting in place to quantify ICPs not interrogated at least once during the period of supply.	Weak	Low	3	Identified
90% read target	6.10	9 of schedule 15.2	For four ICPs without an actual read for four months, exceptional circumstances could not be confirmed, and there was insufficient evidence that the best endeavours requirement was met.	Moderate	Low	2	Identified
Correction of NHH meter readings	8.1	19(1) Schedule 15.2	Where a meter reading is modified by Mercury, including being recorded against a different meter or register or having its value changed, it should be recorded as an estimated reading. Only readings that exactly match the details in the source file should be recorded as actual validated readings.	Moderate	Low	2	Identified
Event logs	9.6	17 of schedule 15.2	AMI event information not adequately obtained and monitored.	Moderate	Low	2	Investigating
Permanence of meter readings	12.8	4 of schedule 15.2 and clause 15.2 of part 15	Not all meter readings were made permanent estimates by the 14 month revision. Forward estimate remained for the September, October and November 2015 14 month revisions.	Moderate	Low	2	Identified
Historic Estimate Process	12.11	4 & 5 of Schedule 15.3	Historic estimate is not calculated correctly for the switch in month, where an ICP has switched back to Globug after being supplied by another retailer	Moderate	Low	2	Investigating
Forward estimate accuracy	12.12	6 of Schedule	FE accuracy threshold not met for some balancing areas.	Moderate	Low	2	Identified

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
		15.3					
HE targets	13.4	10 of Schedule 15.3	Historic estimate targets were not met for all revisions.	Moderate	Low	2	Identified
					Future Risk Rating	39	
					Indicative Next Audit Frequency	12 months	

Future risk rating	0	1-3	4-14	16-40	41-55	55+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

Table of Recommendations

Subject	Section	Clause	Recommendation	Remedial action
Interrogate meters once	6.8	7(1) & (2) of schedule 15.2	Develop reporting to measure ICPs not reads during period of supply.	Identified

Persons Involved in This Audit

Auditor:

Name	Company	Role
Rebecca Elliot	Veritek Limited	Lead Auditor
Tara Gannon	Veritek Limited	Supporting Auditor

Mercury personnel assisting in this audit were:

Name	Title	Company
Anurag Sharda	Energy Analyst	Mercury Energy
Barbara O'Connor	Field Services Manager	Mercury Energy
Chandrashi Mehta	Data Analyst	Mercury Energy
Chris Posa	Compliance and Process Improvement Coordinator	Mercury Energy
Kiryn Savage	Switch Analyst	Mercury Energy
Mike Morrow	System Developer	Globug
Mokram Al-Zibaree	Validations Analyst – Team Leader	Mercury Energy
Ranjesh Kumar	Pricing Operations and Energy Services Manager	Mercury Energy
Urvashi Vats	Globug Operations Team Leader	Globug

Contents

1. Administrative

1.1 Summary of Previous Audit

Globug provided a copy of their previous audit reports conducted in June 2016 by Steve Woods (lead auditor) of Veritek Limited. The summary tables below show that nine of the issues have been resolved and three are still existing, but are much improved. Further comment is made in the relevant sections of this report for each non-compliance below.

Table of Non-Compliance

Subject	Section	Clause	Non compliance	Status
Bridged meters	1.10.6 now 6.1	10.12 & 10.24(b) of part 10	Electricity not quantified for 33 ICPs where meters were bridged. Metering installations interfered with.	Still existing
Relevant Information	1.11 now 2.1	15.2 of part 15	Incomplete validation between Salesforce, SAP and registry. Correction not conducted within a reasonable timeframe for bridged meters. FE calculation incorrect for some scenarios, where "09" readings are used when they should be ignored.	Still existing but much improved
Provide Accurate Information	1.12 now 2.1	11.2 of part 11	Incomplete validation between Salesforce, SAP and registry. Inactive status not routinely recorded on the registry.	Still existing but much improved
Switching	2.1.2 now 4.2	3 of schedule 11.3	Unable to determine AN response code for Globug.	Cleared for this but different issue found this year
	2.1.4 now 4.3	5 of schedule 11.3	Sending of a default average daily consumption figure and actual readings not being sent when available. 2 late CS files.	Cleared for this but different issue found this year
	2.1.5 now 4.4	6 of schedule 11.3	4 late RR files.	Cleared
	2.2.2 now 4.8	10 of schedule 11.3	Unable to determine the correct AN response code in some instances. Some late CS files.	Cleared for this but different issue found this year
	2.2.3 now 4.9	11 of schedule 11.3	Sending of a default average daily consumption figure and actuals not being sent when available.	Still existing

Subject	Section	Clause	Non compliance	Status
	2.2.4 now 4.11	12 of schedule 11.3	8 late RR files for Globug.	Cleared
Provision of Information to the Registry	2.8.2 now 3.3	9 of schedule 11.1	Late updates for Active status on the registry.	Still existing
Changes to Registry Information	2.8.3 now 3.3	10 of schedule 11.1	Registry status not updated within 5 business days of the event.	Still existing
Registry Discrepancies	2.8.9 now 2.1	11 of schedule 11.1	Registry discrepancies between Salesforce, SAP and the registry.	Still existing
ANZSIC Codes	2.8.10 now 3.6	9(1)(k) of schedule 11.1	Active ICPs with no or incorrect ANZSIC codes assigned.	Still existing but much improved
Management of "Active" Status	2.8.12 now 3.8	17 of schedule 11.1	Status updates not managed between Salesforce, SAP and the registry.	Still existing
Management of "Inactive" Status	2.8.13 now 3.9	19 of schedule 11.1	Incorrect inactive status code recorded for Globug ICPs.	Still existing
Interrogate Meters Once	3.3.4 now 6.8	7(1) & (2) of schedule 15.2	No reporting in place to quantify ICPs not interrogated at least once during the period of supply.	Still existing
Interrogate NHH Meters Annually	3.3.5 now 6.9	8(1) & (2) of schedule 15.2	No process in place to manage unread vacant sites for the Globug.	Cleared
Event logs	4.2.5 now 9.6	17 (4) of schedule15.2	AMI event logs not checked as part of the validation process.	Still existing
Permanence of Meter Readings for Reconciliation	6.1.2 now 12.8	4 of schedule 15.2	Some estimates not replaced by the 14 month revision. Some volume incorrectly identified as FE.	Still existing
Creation of submission information	6.1.3 now 12.7	15.12 of part 15	Revisions not conducted when bridged meters are found. Shared unmetered load for 5 ICPs not being submitted.	Cleared
Forward Estimates	6.1.5 now 12.12	6 of schedule 15.3	FE accuracy threshold not met for some balancing areas. FE calculation incorrect for some scenarios.	Still existing
Provision of Submission Information	6.2.3 now 13.2	8 of schedule 15.3	Zeroing did not occur for NSP HLY0331, leading to over submission.	Cleared
Historical Estimates	6.2.4 now 13.4	10 of schedule 15.3	HE targets not met for some NSPs.	Still existing

Table of Recommendations

Subject	Section	Clause	Recommendation for Improvement	Status
Maintaining Shared Unmetered Load	2.10.3	11.14 of part 11	Monthly check for any shared unmetered load being added to any Globug ICPs and actioned accordingly.	Cleared
Interrogate meters once	3.3.4	7(1) & (2) of schedule 15.2	Develop reporting to measure ICPs not reads during period of supply.	Still existing

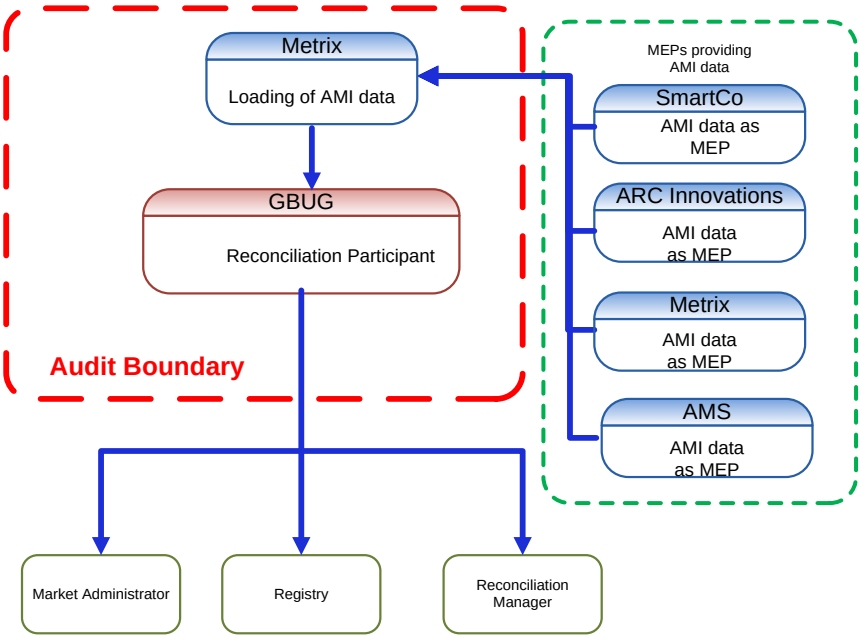
1.2 Scope of Audit

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 7.1.

The audit was carried out at Globug's premises in Auckland on June 26th -29th, 2017.

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. Metrix loads the AMI data but the validation function is performed by Globug.

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 – loading of AMI data	Metrix AMS SmartCo ARC Innovations
(c)(iii) - Creation and management of HHR and NHH volume information	Metrix – loading of AMI data	
(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.

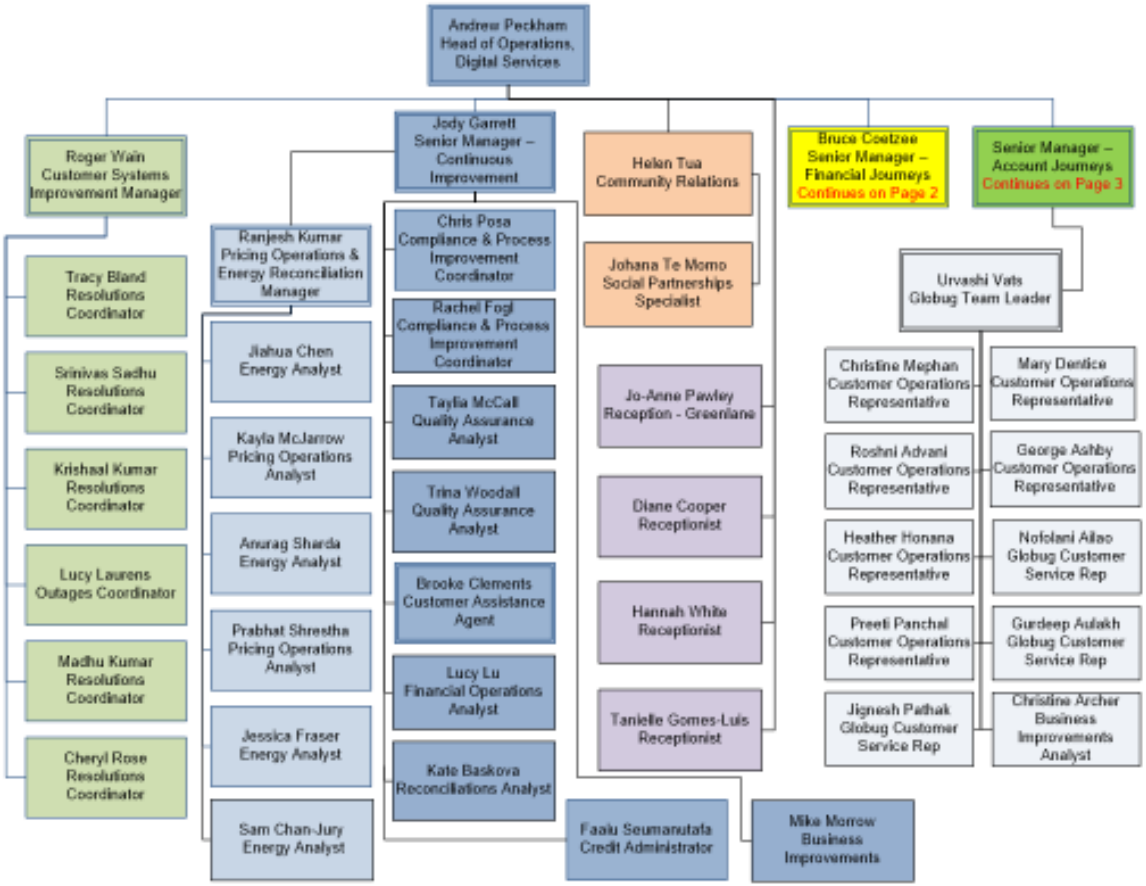
1.3 Exemptions From Obligations to Comply With Code (Section 11 of Electricity Industry Act 2010)

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.

Globug does not have any exemptions in place.

1.4 Organisation Structure

Globug provided a copy of their organisational structure:



1.5 Use of Agents (Clause 15.34 of Part 15)

Globug uses Metrix for some functions covered by the scope of this audit. All of the Metrix functions are commented on in this report; there is not a separate report.

1.6 Hardware and Software

Globug uses Metrix for some functions covered by the scope of this audit. All of the Metrix functions are commented on in this report; there is not a separate report.

1.7 Breaches or Breach Allegations

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

1.8 ICP Data

Globug provided a list file for each of their participant codes as at June 2017 by status:

ICP Status	Number of ICPs 2017	Number of ICPs 2016	Number of ICPs 2015
Active (2)	28,381	20,271	20,406
Inactive - new connection in progress (1,12)	1	0	0
Inactive – vacant (1,4)	58	3	77
Inactive – ready for decommissioning (1,6)	20	11	6
Inactive - AMI remote disconnection (1,7)	814	0	0
Inactive – de-energised at pole fuse (1,8)	1	0	1
Inactive – de-energised due to meter disconnected (1,9)	11	3	1
Decommissioned (3)	530	190	189

The active ICPs from the list file are summarised by meter category in the table below.

Category	2017	2016	2015	2014	2013
1	28,830	20,266	20,403	17,652	17,337
2	0	0	0	2	4
9	1	5	3	2	-

1.9 Authorisation Received

Globug provided a letter of authorisation to Veritek, permitting the collection of data from other parties for matters directly related to the audit.

2. Operational Infrastructure

2.1 Relevant Information (Clause 10.6 of Part 10 & Clause 11.2 of Part 11 &15.2 of Part 15)

A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under Part 15 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

Globug have made good progress in relation to the management of registry validation since the last audit. Registry notifications 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 registry and once confirmed to be correct a retailer time slice file is loaded to SAP.

The list file was analysed and found an overall improvement as detailed in the table below:

Issue	2017 Qty	2016 Qty	2015 Qty	Comments
Active ICPs with cat 9 metering	1	0	1	ICP 0364096659LCD47- this was incorrectly updated to active. The event has since been reversed returning site to "inactive-meter disconnected".
Blank ANZSIC codes	0	1	1	Mercury checks these on a bi-monthly basis and any discrepancies are passed to Globug to investigate. See section 3.6 "ANZSIC Codes" for more details
ANZSIC "T999" not stated	0	0	1	Mercury checks these on a bi-monthly basis and any discrepancies are passed to Globug to investigate. See section 3.6 "ANZSIC Codes" for more details
ANZSIC "T994" don't know	4	69	383	Mercury checks these on a bi-monthly basis and any discrepancies are passed to Globug to investigate. See section 3.6 "ANZSIC Codes" for more details
Status 1,8 - De-energised at pole fuse	1	0	1	This aligned with SAP and Salesforce.

Issue	2017 Qty	2016 Qty	2015 Qty	Comments
Status 1,7 – De-energised AMI remote disconnection	814	0	0	These aligned with SAP and Salesforce.
Status 1,9 - De-energised due to meter disconnected	11	14	1	These aligned with SAP and Salesforce.
Status 1,12- New connection in progress	1	0	0	Globug does not manage new connections. ICP 1000567176PC6F2 should have been claimed by BOSCO but was claimed by Globug due to human error and was corrected. This is recorded as non-compliance.
ICPs with the incorrect active date recorded	5	-	-	Five ICPs found updated to active for the incorrect date in SAP. See Section 3.8 "Management of "Active":
AMI = No	92	176		A sample of ten were checked and confirmed a meter change was underway after they had switched in and once this was complete they were updated to AMI. Compliance is confirmed.

Globug correct any discrepancies as they are found. The alignment between Salesforce, SAP and the registry is much improved since the last audit. This particularly evident in relation to ICP statuses now being managed. I note that 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 no power have occurred. This needs to be corrected and the status updated for every full day of no power. This is recorded as non-compliance in **Section 3.9 "Management of "inactive" status**.

Non-compliance is recorded for the registry discrepancies found. I note these are exceptions and overall the process in place is robust.

Non-compliance	Description
Audit ref: 2.1 With: Clause 10.6,11.2 & 15.2 From/to: 1/6/16-31/5/17	Some registry discrepancies. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach Risk Rating: 2
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are moderate and most issues have been identified. The impact on settlement is minor, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
As noted, overall the processes that we have in place are robust. The relatively unique nature of GBUG as a pre-pay only retailer brings in to question whether it would be desirable to bombard the registry with constant 'disconnection/reconnection' updates; we need to discuss this with the EA and will look to make the appropriate change to our process for registry updates if required.	Before end of 2017	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refer above comments		

2.2 Provision of information (Clause 15.35)

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.

2.3 Data Transmission (Clause 20 of Schedule 15.2)

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 20 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 five meter readings each for AMS, Smartco, Arc, Metrix (including Counties Power) from the source files to SAP. Reads matched in all cases. Compliance is confirmed.

2.4 Audit Trails (Clause 21 of Schedule 15.2)

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

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 Mercury and all agents include the activity identifier, date and time and an operator identifier.

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

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. Compliance is confirmed.

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

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.

Audit Observation
I reviewed Globug's current terms and conditions, and discussed compliance with these clauses.

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. Compliance is confirmed.

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

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. Compliance is confirmed.

2.8 Trader Contracts to Permit Assignment by the Authority (Clause 11.15B of Part 11)

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.

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.

2.9 Electrical connection of an ICP (Clause 10.32)

A reconciliation participant must only request electrical connection of a point of connection if they:
- accept responsibility for the ICP and the obligations under Parts 10 and 11, and, under Part 15; and
- have an arrangement with an MEP to provide metering at the point of connection under Part 15.

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.

2.10 Metering certification (Clause 10.33(2))

A reconciliation participant may energise or authorise the energisation of a connection only if the reconciliation participant has accepted responsibility for the point of connection if one or more certified metering installations are in place.

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.

2.11 Arrangements for line function services (Clause 11.16)

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

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 networks.

2.12 Arrangements for metering equipment provision (Clause 10.36)

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 and 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. This process is discussed in detail in **Section 3.11 "Change of MEP"**. Compliance is confirmed.

3. Maintaining registry information

3.1 Obtaining ICP Identifiers (Clause 11.3 of Part 11)

The following participants must obtain an ICP identifier for any point of connection, as defined in clause 11.3(3) of part 11, to any local network or embedded network:

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.*

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.

3.2 Providing registry information (Clause 11.7(2))

Each trader must provide information to the registry 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.

3.3 Changes to registry information (Clause 10 Schedule 11.1)

If information provided by a trader to the registry about an ICP changes, the trader must notify the registry 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 November 2016 through to May 2017 to determine the overall performance for that period. I used the extreme case methodology examining a sample of ten ICPs that were updated greater than 30 days from the event date for each of the event type updates.

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	2016	667	164	503	30	25%
	2017	2,278	736	1,542	8.3	33%
Change to de-energised – all statuses except new connection in progress and ready for decommissioning	2016	5	0	5	333	0%
	2017	4,041	1,118	2,923	19.2	28%
Change to de-energised ready for decommissioning	2016	59	9	50	95	15%
	2017	190	27	163	86.1	14%
Change of MEP	2017	243	237	6	12.4*	98%

*The average notification days includes ICPs where the nomination has been accepted but the metering is yet to be loaded therefore the average notification days will be greater than the actual.

The process to manage changes to the registry has been improved since the last audit. Globug provides the Mercury field services team with a weekly report of all updates conducted in Salesforce. This report is loaded to the registry. Any error files returned are resolved by the Globug support team. Once the file is successfully loaded to the registry a retailer time slice file is uploaded to SAP to update all affected ICPs so all systems should align. This process was put in place in early December. This is reflected in the analysis undertaken which shows a large number of backdated changes where historical corrections were made to all ICPs that were not at the correct status in SAP or on the registry, hence the low level of compliance. This is expected to improve over time as the update process is now in place. As noted in **Section 2.1**, the process for the updating of credit disconnections is not compliant and this is recorded non-compliance in **Section 3.9**.

Reconnections

33% of ICPs reconnected were updated within five business days. 31 of these weren't updated within 30 days. This is reduction from the 108 found in the last audit, especially when the audit sample undertaken this time was considerable larger. The sample checked found four of these related to the status updating process that started in December 2016, hence these were a catch up as the new process took effect. In summary:

- Eight of these were ICPs that switched in at an "inactive - vacant" status. Globug will not update these until the new meter has been provisioned. If the paperwork is late coming back then the reconnection status update will be updated late.
- ICP 0220202451LCE1F has since been reversed and the site decommissioned as it was updated to active in error.
- ICP 0095600492TU487 was updated to active but the dates don't align with the records in Salesforce. Globug are investigating this.

The accuracy of the active dates is discussed in **Section 3.8 Management of "Active" Status**.
The late updating of the registry is recorded as non-compliance below.

Inactive - "vacant"

The table above shows the majority (72%) of the updates to registry to a de-energised status were made greater than five days from the event date. 539 (13%) were made 30 days or more after the event date. The sample checked for each status type found all 20 updates for those ICPs to "inactive-vacant" and "inactive-AMI remote disconnection" were part of the first update to registry when this process commenced in December 2016. The seven ICPs updated later than 30 days to status "inactive-meter disconnected" found that these had all gone to be investigated by the MEP and were updated once advised by the MEP that the meter had been either removed or disconnected. The late updating of the registry is recorded as non-compliance below.

Inactive- Ready for Decommissioning

The sample checked found that all were already at an inactive status and Vector had advised of the site being decommissioned late in all instances causing Globug to be late in updating the registry.

Change of MEP

The process to manage MEP changes is discussed in detail in **Section 3.11** below. The event detail analysis identified 243 MEP nomination events. The nomination date was compared to the metering event effective date to identify any ICPs that were not nominated within five business days and found 98% were sent within five days of the meter certification. The six that were found to be nominated later than five days from the meter event date were checked and confirmed four to be nominated after the meter change event. These are recorded as non-compliance.

Non-compliance	Description
Audit ref: 3.3 With: Clause 10 of schedule 11.1 From/to: 1/11/16-31/5/17	Registry not updated within 5 business days of the event. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach Risk Rating: 2
Audit Risk Rating	**Rationale for audit risk rating**
Low	The controls are moderate with a regular process in place to manage the changes between Salesforce and SAP which updates the registry. The sample checked found the overall level of compliance has improved, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
As noted above, a process has been in place since December 2016; this is reflected in continued improvement and backdated corrections have taken place. As noted in our comments for audit ref 2.1, we are reviewing our process.	Before end of 2017	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refer above comments		

3.4 Trader responsibility for an ICP (Clause 11.18)

A trader becomes responsible for an ICP when the trader is recorded in the registry as being responsible for the ICP. The responsible trader must ensure that an MEP is recorded in the Registry.

A trader ceases to be responsible for an ICP if another trader accepts responsibility in the registry; the ICP is decommissioned. If decommissioning an ICP, the trader must ensure that a final meter interrogation takes place, and that the MEP is notified.

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 ten 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 "Changes to registry"**. A check of the list file confirmed that all active ICPs have an MEP recorded. Compliance is confirmed.

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 ten ICPs was examined to confirm an attempt to read the meter was made at the time of removal. Compliance is confirmed.

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

The content of files provided to the registry contains the information set out in clause 9 of 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.

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

Traders must 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. A Registry List was reviewed to check ANZSIC codes.

Audit Commentary

Globug deals only with residential customers therefore all ANZSIC codes are "residential". The Mercury field services team checks these on a bi-monthly basis and any discrepancies are passed to Globug to investigate. Analysis of active ICPs in the list file found all ICPs had an ANZSIC code recorded and only four ICPs had the code T994 "Don't know". This is an improvement from the 72 ICPs with incorrect ANZSIC codes recorded last year. The four ICPs will be corrected as part of the regular discrepancy process, but are technically non-compliant.

Non-compliance	Description
Audit ref: 3.6 With: Clause 9(1)(k) of schedule 11.1 From/to: 1/6/16-31/5/17	4 active ICPs with an incorrect ANZSIC codes assigned. Potential impact: Low 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 strong for the management of ANZSIC codes. Only four ICPs were found with an incorrect ANZSIC code therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action Status
The four incorrect ANZSIC codes have been corrected.	Completed	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
A robust process is in place; we will monitor and review the process as required.	Ongoing	

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

Traders must populate the unmetered load details for all ICPs with unmetered load for which they are responsible.

Audit Observation

The process to manage standard unmetered load was examined. The list file as at May 2017 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. Compliance is confirmed.

3.8 Management of "active" status (Clause 17 Schedule 11.1)

Before being given an "Active" status the retailer is required to ensure that the ICP has only one customer, embedded generator, or direct purchaser; and that the electricity consumed is quantified by a metering installation(s) or other approved method of calculation.

Audit Observation

The process for the management of ICP reconnection was examined. The event detail report for the audit period was analysed and the findings in relation to the timeliness of updates to registry is recorded in **Section 3.3 Changes to registry information**.

Audit Commentary

Before being given an "Active" status, the retailer is required to ensure that the ICP has only one customer, embedded generator, or direct purchaser; and that the electricity consumed is quantified by a metering installation(s) or other Authority approved method of calculation. 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.

As detailed in **Sections 2.1 and 3.3**, there is now a regular updating process between Salesforce and SAP and the registry. This process commenced in December 2016. The expectation is that any discrepancies will be resolved before the file is accepted by the registry and then SAP. My checking of the late updates to registry found three of the ten reconnected ICPs checked had been updated to an incorrect active date as detailed in the table below:

ICP	Registry active date	Salesforce active date
0005086370RN814	4/9/16	30/8/16
0005497485RNAB0	18/9/16	13/9/16
0005667542RN4D5	18/9/16	14/9/16

These were all updated on the registry as part of one of the first updates on 13/12/16. These need to be corrected. The incorrect active date is recorded as non-compliance.

Non-compliance	Description
Audit ref: 3.8 With: Clause 17 of schedule 11.1 From/to: 30/8/16-18/9/16	Incorrect active date recorded for three reconnected ICPs. Potential impact: Low Actual impact: Unknown Audit history: None Controls: Moderate Breach Risk Rating: 2
Audit Risk Rating	**Rationale for audit risk rating**
Low	I have rated the controls as moderate due to the errors found in applying the correct active date. The errors found call into question the validation being used to select the correct active date in the files being provided to the registry and SAP. This has a minor impact on the accuracy of reconciliation hence the audit risk rating of low.

Actions taken to resolve the issue	Completion date	Remedial action Status
These are in the process of being corrected.	31.08.2017	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are reviewing our process to strengthen our controls.	Before end of 2017	

3.9 Management of "inactive" status (Clause 19 Schedule 11.1)

The ICP status of "inactive" must be managed by the relevant trader and indicates that:
- electricity cannot flow at that ICP; or
- submission information related to the ICP is not required by the reconciliation manager for the purpose of compiling reconciliation information.

Audit Observation

An event detail report for the period of November 2016 to May 2017 was reviewed, to identify all changes to inactive during the audit period.

The process to manage ICPs at the inactive statuses was examined. A sample of five ICPs at each inactive status using the typical characteristics methodology were checked. The findings in relation to the timeliness of updates to registry is recorded in **Section 3.3 Changes to registry information**.

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.

As noted in **Section 2.1**, 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 being disconnected. This needs to be corrected and the status updated for every full day of no power. This is recorded as non-compliance

As detailed in **Sections 2.1 and 3.3**, there is now a regular updating process between Salesforce and SAP and the registry. This process commenced in December 2016. My checking of the late updates to registry found the discrepancy between the dates of disconnection in Salesforce and that recorded in the registry for 7 of the 20 ICPs checked. This is the same issue as reported in **section 3.8.**

ICP	Inactive status	Registry inactive date	Salesforce inactive date
0000026974TR56D	1,4- vacant	27/9/16	28/9/16
0000066367TR29F	1,4- vacant	25/10/16	18/10/16
0000105279UNCA1	1,4- vacant	25/10/16	18/10/16
0000205471UN407	1,4- vacant	25/10/16	18/10/16
0000001747UNF2B	1,7- AMI remote disco	10/7/16	8/6/15
0000002234UN153	1,7- AMI remote disco	1/12/15	28/9/16
0000002252UNF2C	1,7- AMI remote disco	10/7/16	13/7/16

Non-compliance	Description
Audit ref: 3.9 With: Clause 19 of schedule 11.1 From/to: 1/06/16-31/5/17	Incorrect active date recorded for three reconnected ICPs. Credit disconnections not recorded for all inactive days. Potential impact: Low Actual impact: Unknown Audit history: Twice Controls: Weak Breach Risk Rating: 3
Audit Risk Rating	**Rationale for audit risk rating**
Low	I have rated the controls as weak as credit disconnections for each full day of no power are not recorded in the registry and SAP. I have rated the audit risk as low as the consumption is being reconciled, but line charges will be higher than actual due to this issue.

Actions taken to resolve the issue	Completion date	Remedial action Status
The affected ICPs are in the process of being corrected.	31.08.2017	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
This goes hand in hand with 3.8, we are reviewing our process to strengthen our controls.	Before end of 2017	

3.10 ICPs at new or ready status for 24 months (Clause 15 Schedule 11.1)

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

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 Commentary

N/A

3.11 Change of MEP (Clause 10.22(1)(a)(i))

If the MEP for an ICP which is not also an NSP changes, the trader must notify the registry of the gaining MEP in accordance with Part 11.

Audit Observation

The process to manage a change of MEP on an existing ICP was examined. The timeliness of these being updated on the registry is recorded in **Section 3.3** above.

Audit Commentary

The MEP nomination for any MEP changes are sent as soon as possible after the switch has completed. These are provided to the Mercury field services team by Globug on a daily basis. These are loaded to SAP which then updates the registry. Any MEP rejections are managed via the registry notifications which are reviewed on a weekly basis as described in **Section 2.1**. The four late MEP nominations are recorded as non-compliance in **Section 3.3**. I found two incorrect MEP nominations were sent. Delta was nominated and accepted for ICP 0000036714DECA0. The correct nomination was sent late once it was determined that the correct MEP was NGCM. The second was found from the event detail report. There was one MEP rejection. TRUM rejected the nomination for ICP 1001283762LCB6E. It appears this nomination was sent in error when a switch on the same day has been withdrawn. The incorrect nominations are recorded as non-compliance.

The list file analysis found all active ICPs had an MEP recorded on the registry.

Non-compliance	Description
Audit ref: 3.11 With: Clause 10.22(1)(a) From/to: 18/11/16-15/2/17	2 incorrect MEPs nominated. Potential impact: None Actual impact: None Audit history: Once Controls: Strong Breach Risk Rating: 1
Audit Risk Rating	**Rationale for audit risk rating**
Low	I have rated the controls as strong as the two examples are exception and not indicative of any systematic issue. I have recorded the audit risk rating as low as the effect of will have no direct impact on settlement outcomes.

Actions taken to resolve the issue	Completion date	Remedial action Status
These have been corrected.	Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Upon investigation the cause was found to be human error. We have strong controls in place and will be reviewing our training.	Ongoing	

4. Performing customer and embedded network switching

I note that the switch breach reporting is in the process of being updated by Jade to align with the current code. Therefore, the switch breach report has been used to indicate non-compliance but due to inaccuracies it is not always possible to give a definitive number of the volume of late files.

4.1 Inform Registry of Switch Request for ICPs (Clause 2 of Schedule 11.3)

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 of a switch no later than 2 business days after the arrangement comes into effect and include in its advice to the registry that the switch type is TR and 1 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 five ICPs using the typical 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 and confirmed all were sent within two days of all conditions being met. Compliance is confirmed.

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

Within three business days after receipt of notification of a switch from the registry, 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 providing the proposed event date to the registry and a valid switch response code; or providing a request for withdrawal.

Audit Observation

An event detail report for the audit period was reviewed, to identify AN files issued by Globug during the audit period. A sample of three ANs per response code were reviewed to determine whether the codes had been correctly applied.

The switch breach report was examined for the audit period and no breaches were recorded.

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

Audit Commentary

Globug have improved their processes during the audit period with the deployment of an AN response code tool that presents an AN code to the operator along with relevant account details drawn from SAP, the registry and Salesforce and the operator accepts the code or changes it. I found that in six of the nine cases checked the correct switch response codes were used. No AA codes were used where a more valid option is available. I did find that the "PD" was being sent for transfer switches. I checked these sites and found they were all de-energised vacant, therefore the switch should have been withdrawn and a move switch requested by the gaining trader.

The incorrect codes being sent are recorded as non-compliance below.

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

The event detail report for Globug records that all event dates were five days or less. Compliance is confirmed.

Non-compliance	Description
Audit ref: 4.2 With: Clauses 3 & 4 of schedule 11.3 From/to: 1/06/16-31/5/17	Incorrect sending of the "PD" AN response code for transfer switches. Potential impact: None Actual impact: None Audit history: None Controls: Moderate Breach Risk Rating: 2
Audit Risk Rating	**Rationale for audit risk rating**
Low	I have rated the controls as moderate as the correct code is being sent for all other scenarios. I have recorded the audit risk rating as low as there is no direct effect on settlement outcomes in relation to this clause.

Actions taken to resolve the issue	Completion date	Remedial action Status
We note that this is not a breach, however it is Mercury's policy to withdraw in these circumstances, this was human error.		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refer above comments		

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

If the losing trader provides information to the registry 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 a CS file.

Audit Observation

An event detail report for the audit period was reviewed, to identify CS files issued by Globug during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of five records. The content checked included:

- correct identification of meter readings and correct date of last meter reading
- accuracy of meter readings
- accuracy of average daily consumption (this is based on the most recent read to read consumption).

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 no breaches were recorded.

Audit Commentary

The CS file content was checked for accuracy and found:

- the average daily consumption is now being calculated correctly
- the incorrect last actual read date was sent in all instances checked
- the read sent was for the incorrect date for two ICPs e.g. the event date was 10/11/16 but the read for 8/11/16 from Salesforce was sent, however these reads were correctly labelled as estimates
- the midnight read was not sent for two AMI capable ICPs, the reads sent were from 1.24 AM and 12.32 AM of the event date. Both reads were incorrectly recorded as actuals.

The CS file content is loaded manually to the registry. AMI reads are not pulled through for switches as the AMI reads are only loaded on a monthly basis to SAP. The incorrect CS file content is recorded as non-compliance below.

Non-compliance	Description
Audit ref: 4.3 With: Clause 5 of schedule 11.3 From/to: 1/06/16-31/5/17	Incorrect last read date, incorrect read and average daily consumption figures being sent in some instances. Potential impact: Low Actual impact: Medium Audit history: Twice Controls: Moderate Breach Risk Rating: 2
Audit Risk Rating	**Rationale for audit risk rating**
Low	I have rated the controls as moderate as the CS file content was found to have some inaccuracies. I have recorded the audit risk rating as low as other traders rely on the CS content being correct and if this is inaccurate this will have a minor effect on settlement outcomes.

Actions taken to resolve the issue	Completion date	Remedial action Status
The Globug switch-out process is under review.	Before end of 2017	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are investigating a system change that would allow for AMI reads to be pulled through for switches.	First half of 2018	

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

If the validated meter reading or permanent estimate provided by the losing trader differs by less than 200 kWh from a value established by the gaining trader for a Transfer Switch event, the gaining trader uses the losing trader's validated meter reading or permanent estimate as the switch event meter reading.

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 during the audit period.

A combined sample of ten read change requests from the event detail report was selected using the diverse sample methodology. The sample included both transfer and gaining trader read requests, files exchanged with different traders, and a mix of acceptances and rejections.

A sample of five read change rejections and five acceptances was selected from the event detail report using the diverse sample methodology. The sample covered both transfer and gaining trader read requests, and files exchanged with different traders.

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 checked 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.

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

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 on the registry: and
- the gaining trader will trade electricity from a meter with a half hour submission type in the registry;
- the gaining trader within five business days after receiving final information from the registry, 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 read requests was examined. The event detail report and switch breach report were analysed. A sample of five ICPs (or all were checked if less than five were found) for each of the following scenarios were selected using the typical sample methodology from the event detail report. The sample covered both transfer and gaining trader read requests, and a variety of other participants.

- other retailer's request accepted by Mercury
- other retailer's request rejected by Mercury.

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

Audit Commentary

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.

The sample checked confirmed that these were correctly accepted. I note that if the AMI reads were available to send, the volume of read requests received would reduce greatly. Compliance is confirmed.

4.6 Disputes – standard switch (Clause 7 Schedule 11.3)

A losing trader or gaining trader may notify the other that it disputes a switch event meter reading, notified under clauses 1 to 6. Such a dispute must be resolved in accordance with clause 15.29.

Audit Observation

Confirm 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.

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

The code requires that "for each ICP, to which a switch relates, the gaining trader must advise the registry of the switch no later than two business days after the arrangement with the customer or embedded generator comes into effect."

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.

Audit Commentary

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

4.8 Losing trader provides information – switch move (Clause 10 Schedule 11.3)

After receiving notification of a switch request from the registry, the losing trader must respond to the switch request within five business days.

Audit Observation

An event detail report for the period from October 2016 to May 2017 was reviewed, to identify AN files issued by Globug during the audit period. A sample of two ANs per response code were reviewed to determine whether the codes had been correctly applied.

The switch breach history report for the audit period was reviewed in relation to both late AN and CS files and no breaches were recorded.

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

Audit Commentary

As noted in **Section 4.2**, Globug have improved their processes during the audit period with the deployment of an AN response code tool that presents an AN code to the operator along with relevant account details drawn from SAP, the registry and Salesforce and the operator accepts the code or changes it. I found all were correct with the exception of:

- ICP 0000538517NR3CF is an AMI capable site but the AA code was sent when the AD code would be more accurate
- ICP 0000008247UN68E was a vacant site with no AMI but the OC code was incorrectly sent when AA would have been more accurate.

This is recorded as non-compliance below.

The switch breach report is monitored to ensure that all CS files are sent within the required timeframe. No late CS files were recorded. This is an improvement from last year.

Non-compliance	Description
Audit ref: 4.8 With: Clauses 10 of schedule 11.3 From/to: 1/06/16-31/5/17	Incorrect codes sent for two ICPs sampled. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Strong Breach Risk Rating: 1
Audit Risk Rating	**Rationale for audit risk rating**
Low	I have rated the controls as strong as the process has improved significantly since the last audit. I have recorded the audit risk rating as low as the AN code has no direct impact on reconciliation outcomes.

Actions taken to resolve the issue	Completion date	Remedial action Status
Incorrect codes sent in two instances due to human error, we have robust processes in place and are reviewing our training.	Before end of 2017	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are working on better documentation and training.	Before end of 2017	

4.9 Losing trader determines a different switch date – switch move (Clause 10 Schedule 11.3)

If the losing trader determines a different date, the losing trader must also complete the switch by providing to the registry as described in sub-clause (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 Mercury for any switches dated earlier than the NT requested date. The report was also checked to for any event dates that were set greater than ten days from the NT receipt date. A sample of ten of these was checked using the typical case methodology.

Audit Commentary

The event date in the AN file is set manually. The analysis found 35 ICPs where the event date was either set earlier than the gaining traders request date or greater than 10 days from the NST receipt date. This is an error rate of 0.006%. The sample checked found all were due to human error and all were sent for the gaining traders requested date. This is an excellent result when compared with the volume processed, but is technically non-compliant.

Non-compliance	Description
Audit ref: 4.9 With: Clauses 10 (2) of schedule 11.3 From/to: 1/06/16-31/5/17	35 ICPs of 5,202 move switches processed where the event date was either set earlier than the gaining traders or greater than 10 days from the gaining traders request date. Potential impact: None Actual impact: None Audit history: None Controls: Strong Breach Risk Rating: 1
Audit Risk Rating	**Rationale for audit risk rating**
Low	I have rated the controls as strong as there is a greater 99% accuracy rate. I have recorded the audit risk rating as all were sent for the gaining trader's requested date.

Actions taken to resolve the issue	Completion date	Remedial action Status
As noted above, the error rate was 0.006%.	Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We have strong controls in place. We will monitor and review the process as required.	Ongoing.	

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

If the losing trader has provided information to the registry in accordance with clause 10(a), within three business days after the later of the actual event date or date of receipt of the switch request, the losing trader must:

- *provide the event date (clause 11(a)); and*
- *provide the switch event meter reading as at the event date for each meter or data storage device noted on the registry (clause 11(b)); and*

if switch event meter reading is not a validated meter reading, provide the date of the last reading of the meter or storage device (clause (11(c)).

Audit Observation

An event detail report for the audit period was reviewed, to identify CS files issued by Mercury during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of five records. The content checked included:

- correct identification of meter readings and correct date of last meter reading
- accuracy of meter readings
- accuracy of average daily consumption (this is based on the most recent read to read consumption).

Audit Commentary

The CS file content was checked for accuracy and found:

- the average daily consumption is now being calculated correctly
- the incorrect last actual read date was sent in three of five instances checked
- the read sent was for the incorrect date for three ICPs e.g. the event date was 22/2/17 but the read for 20/2/17 from Salesforce was sent. These reads were correctly labelled as estimates.

The process is the same for transfer switches with the CS file content being loaded manually to the registry. AMI reads are not pulled through for switches as the AMI reads are only loaded on a monthly basis to SAP. The incorrect CS file content is recorded as non-compliance below.

Non-compliance	Description
Audit ref: 4.10 With: Clauses 11 of schedule 11.3 From/to: 1/06/16-31/5/17	Incorrect last read date and average daily consumption figures being sent in some instances. Estimated reads not sent for the event date. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach Risk Rating: 2
Audit Risk Rating	**Rationale for audit risk rating**
Low	I have rated the controls as moderate as the CS file content was found to have some inaccuracies. I have recorded the audit risk rating as low as other traders rely on the CS content being correct and if this is inaccurate this will have a minor effect on settlement outcomes

Actions taken to resolve the issue	Completion date	Remedial action Status
The Globug switch-out process is under review.	Before end of 2017	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are investigating a system change that would allow for AMI reads to be pulled through for switches.	First half of 2018	

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

As of October 9th, 2015, the gaining trader may provide an AMI switch event meter reading within five business days of the event date to the losing trader. In this instance the losing trader MUST use the gaining traders switch event meter reading. If no AMI switch event meter reading is available the gaining trader MUST use the losing traders switch event meter reading. If the validated meter reading or permanent estimate provided by the losing trader differs by less than 200 kWh from a value established by the gaining trader for a Move Switch event, the gaining trader uses the losing trader's validated meter reading or permanent estimate as the switch event meter reading.

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 during the audit period.

A combined sample of ten read change requests from the event detail report was selected using the diverse sample methodology. The sample included both transfer and gaining trader read requests, files exchanged with different traders, and a mix of acceptances and rejections.

A sample of five read change rejections and five acceptances was selected from the event detail report using the diverse sample methodology. The sample covered both transfer and gaining trader read requests, and files exchanged with different traders.

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

Audit Commentary

The process for switch moves is the same as for transfer switches. These 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 checked for the read requests checked found read requests were either issued from two validated reads or the removal reads if the meter had been changed. Compliance is confirmed.

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

The gaining trader 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 to trade electricity through or assume responsibility for:
- a half hour metering installation that is not a category 1 or 2 metering installation, that has an ICP with a submission type half hour on the registry and an AMI flag of "N"; or
- a half hour metering installation that has a submission flag of half hour 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 with the losing trader trades through a half hour metering installation with an AMI flag of "N".

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

N/A

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

Within three business days after the losing trader is informed about the switch by the registry, the losing trader must:
15(a) - provide to the registry 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

N/A

4.14 Gaining trader to notify registry – gaining trader switch (Clause 16 Schedule 11.3)

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

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

N/A

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

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.

Within five business days after receiving a notification from the registry of a switch, the trader receiving the withdrawal must notify the registry 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.

On receipt of a rejection notification from the registry, a trader may re-submit the switch withdrawal request for an ICP. All switch withdrawal requests must be resolved within 10 business days after the date of the initial switch withdrawal request.

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 receipt of notification from the registry 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.

Audit Observation

The switch withdrawal process was examined. The content of a sample of two ICPs for each withdrawal code was checked using the typical sampling methodology from the event detail report. A sample of five switch rejections were checked using the typical sample methodology. The event detail report was also analysed to confirm timeliness of switch requests as this is not currently being identified in the switch breach report. This identified five ICPs that were backdated greater than two months from the event date. 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 five switches backdated greater than two months found in the event detail report and these were confirmed to be due to:

- two were the wrong premise being switched in
- three were due to the customer cancelling late.

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

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

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

Non-compliance	Description
Audit ref: 4.15 With: Clauses 17 & 18 of schedule 11.3 From/to: 1/006/16-31/5/17	5 switch withdrawals sent later than 2 months of the event date. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach Risk Rating: 1
Audit Risk Rating	**Rationale for audit risk rating**
Low	I have rated the controls as strong as the process to manage switch withdrawals is well understood and those backdated were actioned as soon as possible. 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
Although technically non-compliant, we are unaware of a way to rectify these issues in a correct and transparent fashion without breaching the Code. We plan to raise this with the EA to get some guidance.	Before end of 2017	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refer above comments.		

4.16 Metering information (Clause 21 Schedule 11.3)

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

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

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 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. Compliance is confirmed.

5. Maintenance of unmetered load

5.1 Maintaining shared unmetered load (Clause 11.14)

The trader must adhere to the process for maintaining shared unmetered load.

Audit Observation

The registry list was reviewed and found Globug has four 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.

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 however Globug does not pass these costs onto their customer as their platform has no facility to manage ICPs with shared unmetered load. All ICPs are checked when switching in for shared unmetered load and if this is found these are not accepted. Any existing ICPs are monitored for this via the registry notification process. Compliance is confirmed.

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

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 May 2017 was examined to identify any ICPs with standard unmetered load and found none.

Audit Commentary

N/A

5.3 Unmetered threshold exceeded (Clause 10.14 (5))

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 May 2017 was examined to identify any ICPs with standard unmetered load and found none.

Audit Commentary

N/A

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

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 May 2017 was examined to identify any distributed unmetered load ICPs and found none.

Audit Commentary

N/A.

6. Gathering raw meter data

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

A trader must ensure that for each energised ICP that electricity is conveyed is in accordance with the code.

A participant is not required to quantify the electricity at a point of connection if the electricity is supplied by an embedded generator who has given the Reconciliation Manager a notification under clause 15.13 of Part 15.

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 provided a list of 21 ICPs where remote disconnection had occurred then the meter had been bridged to reconnect. This is recorded as non-compliance below. I reviewed a sample of five bridged meters and noted that they had all been unbridged at a later date, and consumption during the bridged period was estimated, or in the process of being estimated.

Non-compliance	Description
Audit ref:6.1 With: Clause 10.13 From/to: entire audit period	Energy is not metered and quantified according to the code where meters are bridged. Potential impact: Low Actual impact: Low Audit history: Three times previously Controls: Moderate Breach Risk Rating:2
Audit Risk Rating	Rationale for audit risk rating
Low	Bridging only occurs where a soft reconnection cannot be performed after hours and the customer urgently requires their energy supply for health and safety reasons.

Actions taken to resolve the issue	Completion date	Remedial action Status
The 21 ICPs have been unbridged and their usage during the period of bridging has been estimated.	Completed.	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
A process is now in place to ensure that in situations where meters must be bridged for health and safety reasons, the usage is estimated for the period of bridging.	Completed	

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

An asset owner must, for each GIP that connects to the grid, ensure that there is one or more certified metering installations for the GIP.

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.

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

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. Compliance is confirmed.

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

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. Six 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, or from information provided by the meter read provider.

Upon identifying a possible defective meter, Globug raises a field services job to investigate or correct the issue. I reviewed six examples of potential defective meters, including stopped, faulty, and bridged meters. In all cases a field services job was raised and the MEP advised. Compliance is confirmed.

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

A reconciliation participant must obtain raw meter data used to determine volume information from the services access interface. Except when only the Metering Equipment Provider can electronically interrogate a metering installation for which it is responsible and they have an arrangement with the reconciliation participant which prevents them from interrogating the metering installation themselves.

Audit Observation

The data collection process was examined. A sample of 20 meter reads were checked using the typical case sample methodology.

Audit Commentary

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

Read data is provided by Metrix and AMS. I traced a typical sample of five meter readings each for AMS, Smartco, Arc and Metrix from the source files to SAP. Reads matched in all cases.

Compliance is confirmed.

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

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. A sample of 20 meter reads were checked using the typical case sample methodology.

Processes for customer reads were reviewed.

Audit Commentary

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

Readings are appropriately labelled, and data matched for the sample checked.

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

Compliance is confirmed.

6.7 NHH meter reading application (Clause 6 Schedule 15.2)

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 midnight 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, discussed in **section 12.11**, and reads were traced from the source files to SAP in **section 6.5**.

Compliance is confirmed.

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

A validated meter reading must be 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, unless exceptional circumstances prevent this from occurring. This may be a validated meter reading at the time the ICP is switched to, or from, the reconciliation participant.

The NHH meter reading frequency guidelines published by the Electricity Authority define "Exceptional circumstances" as meaning "circumstances in which access to the relevant meter is not achieved despite the reconciliation participant's best endeavours". "Best endeavours" is defined as "Where a reconciliation participant failed to interrogate an ICP as a result of access issues, the reconciliation participant had made a minimum of three attempts to contact the customer, by using at least two methods of communication".

Audit Observation

The process to manage missed reads was examined.

Audit Commentary

Meters without AMI, and non-communicating AMI meters are not read 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. I reviewed letters advising customers to switch, and a list of turn downs in process.

ICPs that switch in, and then become vacant before their meter is installed fall under the vacant disconnection process.

There is no reporting in place to quantify how many ICPs are not read during the period of supply. I was unable to efficiently identify ICPs not read during the period of supply, so compliance with the best endeavours requirement was unable to be assessed. I repeat last year's recommendation that reporting should be developed, and record non-compliance below.

Recommendation	Description	Audited party comment	Remedial action
Regarding: Clause 7(1) & (2) of schedule 15.2	Develop reporting to measure ICPs not reads during period of supply.	We are now able to generate this report.	Identified

Non-compliance	Description
Audit ref:6.8 With: Clause 7(1) & (2) of schedule 15.2 From/to: 1/6/16-31/5/17	No reporting in place to quantify ICPs not interrogated at least once during the period of supply. Potential impact: Low Actual impact: Unknown Audit history: Seven times previously Controls: Weak Breach Risk Rating:3
Audit Risk Rating	**Rationale for audit risk rating**
Low	It is expected a relatively small number of ICPs will not have their meters read during the period of supply as most ICPs have AMI metering installed.

Actions taken to resolve the issue	Completion date	Remedial action Status
We have improved our 'no reads' process overall and we are now able to generate this report.	Completed.	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refer above comments		

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

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 November 2016 to May 2017 were provided.

All ICPs where reads were unread for more than 12 months as at May 2017 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
November 2016	136	10	18	99.91%
December 2016	137	13	17	99.91%
January 2017	135	10	12	99.94%
February 2017	135	7	8	99.96%
March 2017	134	8	8	99.96%
April 2017	133	6	6	99.97%
May 2017	130	6	6	99.97%

Meters without AMI, and non-communicating AMI meters are not read by Globug. As discussed in **section 6.8**, all ICPs are required to have AMI meters installed, 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.

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 if turned off at the mains. If the customer cannot be contacted, a field service request is raised to investigate.

The vacancy process commences 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 all ICPs unread for more than 12 months as at May 2017. All of the ICPs were vacant. As Globug has no customer for the ICP, it is difficult to obtain access to the meter, or consent for the ICP to switch to Mercury. In one case the main switch is off so reads cannot be obtained, and in others attempted disconnections have failed. In all cases exceptional circumstances have prevented Globug from obtaining reads, and they have used best endeavours to obtain reads.

Compliance is confirmed.

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

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

A report is to be sent to the market administrator 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 November 2016 to May 2017 were provided.

Ten 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
November 2016	136	25	49	99.81%
December 2016	137	21	33	99.87%
January 2017	135	20	28	99.89%
February 2017	135	23	31	99.88%
March 2017	134	25	36	99.86%
April 2017	133	16	25	99.90%
May 2017	130	14	20	99.92%

As discussed in **Section 6.8**, all ICPs are required to have AMI meters installed, 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 ten ICPs not read in the previous four months determine whether exceptional circumstances exist, and if Globug had used their best endeavours to obtain readings.

- five cases relate to vacant ICPs, where it is difficult to gain customer cooperation and exceptional circumstances exist
- in three cases Globug has tried to arrange meter replacement and premise verification, but could not gain access to complete the job despite best endeavours
- one switch was withdrawn
- in one case no action has been taken.

Exceptional circumstances or compliance with the best endeavours requirement could not be confirmed in one case. As discussed in **section 9.6**, a further three ICPs had not received an actual read for more than four months and had not had any action taken. This is recorded as non-compliance below.

Non-compliance	Description
Audit ref:6.10 With: Clause 8(1) & (2) of schedule 15.2 From/to: May 2017	For four ICPs without an actual read for four months, exceptional circumstances could not be confirmed, and there was insufficient evidence that the best endeavours requirement was met. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach Risk Rating:2
Audit Risk Rating	**Rationale for audit risk rating**
Low	For four ICPs, exceptional circumstances could not be confirmed, and there was insufficient evidence that the best endeavours requirement was met.

Actions taken to resolve the issue	Completion date	Remedial action Status
We have a 99% read rate overall. We have identified ways to ensure that we are meeting the best endeavours requirements and are developing processes.	30.09.2017	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refer above comments		

6.11 NHH meter interrogation log (Clause 10 Schedule 15.2)

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 AMS and Metrix. The data collection processes were reviewed as part of their audits.

Audit Commentary

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

6.12 HHR data collection (Clause 11(1) Schedule 15.2)

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.

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

The following information is collected during each interrogation of HHR metering:

- *The unique identifier (device ID) of the meter or data logger;*
- *The connection time, disconnection time and recorder time;*
- *The half-hour metering information for each trading period;*
- *Events log.*

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.

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

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 HHR meters supplied by Globug have submission type NHH.

Audit Commentary
Globug does not deal with any HHR data.

7. Storing raw meter data

7.1 Trading period duration (Clause 13 Schedule 15.2)

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.

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

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 2013 was reviewed to ensure that it is retained.

Audit Commentary
When meter reading data reaches SAP the level of security is also 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 1999 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.

Compliance is confirmed.

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

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.

7.4 Data Storage Device Clock Synchronisation (Clause 2(5)&(6) of Schedule 15.2)

When electronically interrogating the meter the participant must ensure that the clock is synchronised and correct the clock and raw data where necessary.

Audit Observation

Clock synchronisation processes for MEPs were reviewed as part of their MEP audits. MEPs are to advise Globug of clock synchronisation discrepancies and adjustments.

Audit Commentary

Clock synchronisation processes for MEPs were reviewed as part of their MEP audits.

Globug has not received any information on clock synchronisation events from Metrix during the audit period, but I saw one example of clock synchronisation information provided by AMS. No action by Globug was required as a result of the event.

Compliance is confirmed.

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)

If errors are detected during validation of non-half hour meter readings, one of the following must be undertaken:
- confirmation of the original meter reading by carrying out another meter reading
- replacement of the original meter reading by another meter reading (even if the replacement meter reading may be at a different date)
- 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 eleven 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 five examples of bridged meters. Consumption during the bridged period had been appropriately entered for three ICPs, one ICP did not require bridged consumption to be entered because it switched out effective from the beginning of the bridged period, and one correction was temporarily on hold while a customer account issue was resolved.

One example where a meter had stopped recording was provided. Consumption was appropriately estimated for the period where no reads were available.

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

Where disconnected ICPs are found to have usage, Globug corrects the status to active so that the consumption during the disconnected period will be reported. I reviewed five examples of consumption during disconnection and confirmed that all had their status returned to active, and consumption during the disconnected period was reported.

When a meter reading is found to be transposed, the readings are swapped between registers but left as actual. This is recorded as non-compliance below.

Non-compliance	Description
Audit ref: 8.1 With: 19(1) Schedule 15.2 From/to: entire audit period	Where a meter reading is modified by Globug, including being recorded against a different meter or register or having its value changed, it should be recorded as an estimated reading. Only readings that exactly match the details in the source file should be recorded as actual validated readings. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach Risk Rating:2
Audit Risk Rating	**Rationale for audit risk rating**
Low	In situations where meters are transposed, it is likely that the meter readings are correct. In other cases where reads are changed but remain actual, small volumes are usually involved.

Actions taken to resolve the issue	Completion date	Remedial action Status
We are formalising a new process so that modified readings (for example for transposed or rollback reads) are noted as estimates.	30.09.2017	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refer above comments		

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

If errors are detected during validation of half hour metering information the correction must be as follows:
- if a check meter or data storage device is installed at the metering installation, data from this source may be substituted
- 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.

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

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 Observation

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

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

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.

9. Estimating and validating volume information

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

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. Compliance is confirmed.

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

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. Compliance is confirmed.

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

All meter data that is used for 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 five ICPs per provider from the source files to Globug's systems in **section 6.5**.

Audit Commentary

AMI data provided by AMS and Metrix is truncated on import, readings are recorded to 0 decimal places. The MEP retains the raw, unrounded data. Compliance is confirmed.

9.4 Half hour estimates (Clause 15 Schedule 15.2)

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.

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

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 zero 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. 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.
- 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 also 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 10 ICPs which were vacant with consumption recorded. Disconnected ICPs with consumption are monitored, and if consumption occurs their status is returned to active so that the consumption will be reported.

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

Compliance is confirmed.

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

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

Each validity check of a meter reading obtained by electronic interrogation or an estimated reading must include:
17(4)(a) - checks for missing data
17(4)(b) - checks for invalid dates and times
17(4)(c) - checks of unexpected 0 values
17(4)(d) - comparison with expected or previous flow patterns
17(4)(e) - comparisons of meter readings with data on any data storage device registers that are available
17(4)(f) - a review of 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 AMS and Metrix. This function will be examined as part of their respective audits.

Readings are appropriately labelled. I checked the content of a sample of 20 readings in **section 6.5**, and confirmed that the data held in SAP matched the source files.

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. Event information provided by the MEPs is not investigated or reviewed in accordance with this clause. I recommend the examination of at least the following events:

- generation consumption indicating unknown solar installations (Reverse power)
- phase failure on CT metered installations
- tampering
- large clock discrepancies.

Metering events emailed to Globug by the MEPs are reviewed and actioned. I saw evidence of field service jobs raised with Metrix and AMS as a result of these reviews. In most cases a field services job was raised the day the email was received.

In some cases meter event information and responses to metering jobs raised is directed to the Mercury premise and metering team rather than to Globug. Processes were changed in January 2017, and now Globug receives information directly.

Non-compliance	Description
Audit ref: 9.6 With: Clause 17 of schedule 15.2 From/to: Entire audit period	Full AMI event information not obtained and monitored. Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach Risk Rating: 2
Audit Risk Rating	Rationale for audit risk rating
Low	Globug is monitoring and actioning events emailed by the MEP.

Actions taken to resolve the issue	Completion date	Remedial action Status
We have liaised with the MEPs that we were not receiving event logs from and they have confirmed that they are now being sent however there appears to be a technical issue with us receiving them/being able to view them. We are following this up and will resolve.	30.09.2017	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refer above comments		

A no read report is run weekly by Globug to identify any ICPs where reads have not been received for the past seven days. These ICPs are investigated and followed up.

Non-communicating AMI meters are managed through the read attainment process. I investigated a sample of six ICPs where there has not been an AMI reading for more than six months. I found that in three cases older than eight months, Globug had attempted to replace the meter. In the more recent cases no contact with the customer had been made, and no field services jobs had been raised. This has been raised as non-compliance in **section 6.10**.

Read attainment processes are discussed further in **sections 6.9**, **6.10** and **6.11**.

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)

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.

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

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.

10.3 Loss adjustment of HHR metering information (Clause 13.138)

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.

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

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.

11. Provision of submission information for reconciliation

11.1 Buying and selling notifications (Clause 15.3)

Unless an embedded generator has given a notification in respect of the point of connection under clause 15.3, a trader must notify 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. Compliance is confirmed.

11.2 Calculation of ICP days (Clause 15.6)

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.

Audit Observation

The process for the calculation of ICP days was examined by checking five NSPs with a small number of ICPs to confirm the AV110 ICP days calculation was correct.

I reviewed variances for 11 months of GR100 reports, and investigated any large discrepancies.

Audit Commentary

The process for the calculation of ICP days was examined by checking five NSPs with a small number of ICPs. The ICP days calculation was confirmed to be correct.

The following table shows the ICP days difference between Globug files and the RM return file (GR100) for all available revisions for 11 months. Negative percentage figures indicate that the Globug ICP days figures are higher than those contained on the registry. The discrepancies are very small.

Month	Ri	R1	R3	R7	R14
Jul-15	-	-	-	-	-0.03%
Aug-15	-	-	-	-	-0.02%
Sep-15	-	-	-	-0.01%	0.00%
Oct-15	-	-	-	0.01%	-0.01%
Aug-16	0.01%	0.00%	-0.04%	-0.22%	-
Sep-16	-0.04%	-0.03%	-0.17%	-0.31%	-
Oct-16	-0.09%	-0.10%	-0.31%	-0.48%	-
Nov-16	-0.07%	-0.38%	-0.53%	-	-
Dec-16	-0.25%	-0.92%	-1.09%	-	-
Jan-17	-0.74%	-	-1.54%	-	-
Feb-17	-0.73%	-1.30%	-1.47%	-	-

The larger differences appear to relate primarily to NSP changes on the Orion network, and timing differences due to status changes.

Compliance is confirmed.

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

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 five NSPs with a small number of ICPs to confirm the AV120 calculation was correct.

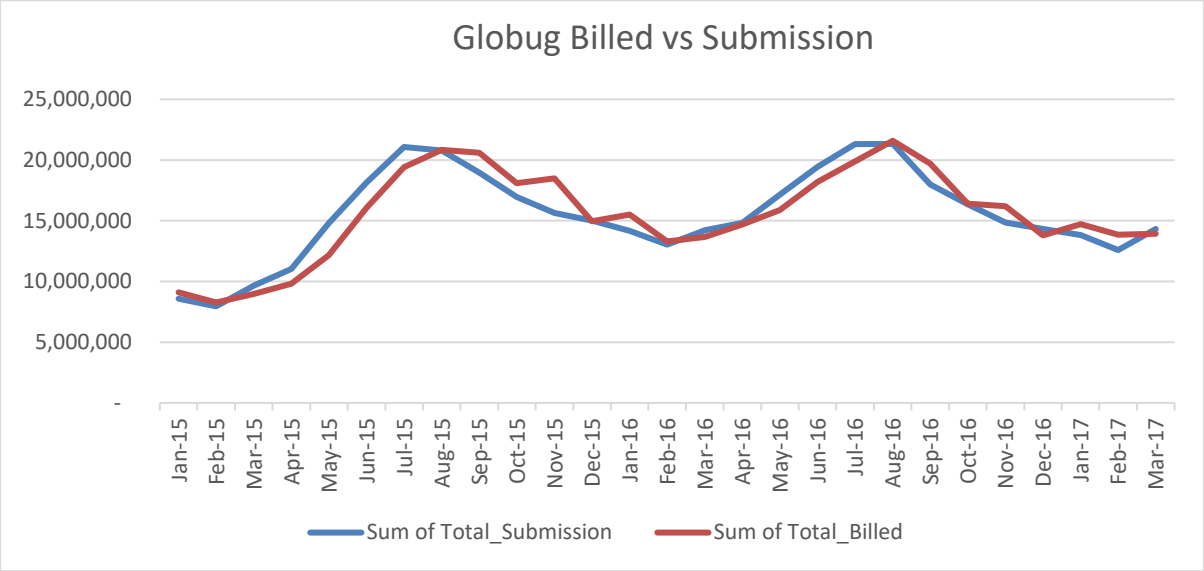
GR130 reports for January 2015 onwards were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

Audit Commentary

The process for calculating and submitting electricity supplied information was examined by checking individual invoices for a typical sample of five 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 0.08% higher than billed data for the two years ended March 2017.

Comparison between Submitted Volumes and Electricity Supplied



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

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.

12. Submission computation

12.1 Daylight saving adjustment (Clause 15.36)

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.

12.2 Creation of submission information (Clause 15.4)

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

Actual AV080 and AV110 submission dates and times on the allocation portal were compared to a list of expected submission dates and times. A typical sample of two months and 10 reports were reviewed.

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 estimate 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. I checked reconciliation submission dates and times on the allocation portal against a list of expected due dates and times for submissions made in March and April 2017. All submissions were made on time.

Vacant consumption is correctly included in submissions as discussed in **section 8.1**. I reviewed all five ICPs with shared unmetered load, and confirmed that consumption was correctly calculated and submitted on the May 2017 submission.

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. I saw evidence of this approval process.

Compliance is confirmed.

12.3 Allocation of submission information (Clause 15.5)

In preparing and submitting submission information, the reconciliation participant must allocate volume information for each ICP to the NSP indicated by the data held by 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 five 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 five NSPs with a small number of ICPs. NHH volume calculation was confirmed to be correct.

GR170 and AV080 files for September - November 2015, April – June 2016, and October – November 2016 were compared, and found to contain the same NSPs, 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.

12.4 Grid owner volumes information (Clause 15.9)

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.

12.5 Provision of NSP submission information (Clause 15.10)

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.

12.6 Grid connected generation (Clause 15.11)

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.

12.7 Accuracy of submission information (Clause 15.12)

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.

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

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 September, October and November 2015 to identify any forward estimate still existing.

Audit Commentary

Forward estimate remained for the September, October and November 2015 14 month revisions. Globug does not replace estimates with permanent estimates by revision 14. This is recorded as non-compliance below.

Non-compliance	Description
Audit ref:12.8 With: Clause 4 of Schedule 15.2 From/to: September, October and November 2015 14 month revisions	Not all meter readings were made permanent estimates by the 14 month revision. Forward estimate remained for the September, October and November 2015 14 month revisions. Potential impact: Low Actual impact: Unknown Audit history: Four times previously Controls: Moderate Breach Risk Rating:2
Audit Risk Rating	**Rationale for audit risk rating**
Low	The forward estimate amount was 352,138 kWh across the three revisions checked.

Actions taken to resolve the issue	Completion date	Remedial action Status
We have changed our process to make the estimated reading a permanent estimate. This was done in January, backdated 14 months, going forward should be correct.	Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refer above comments		

12.9 Creation of submission information (Clause 2 Schedule 15.3)

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)):
- half hour volume information for the ICP; or
- non half hour volumes information calculated under clauses 4 to 6 (as applicable).
- 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 on 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):
- for each ICP, the compensation factor that is recorded in the registry (clause 2(3)(a))
- 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.

Compliance is confirmed.

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

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

Review 15 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 15 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.

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

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
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.	Not compliant

Test	Scenario	Test expectation	Result
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.	Has not occurred
M	ICP Starts on 1st and Ends on Last day of month.	Consumption is calculated for each day of responsibility.	Has not occurred
N	Rollover Reads	Consumption is calculated correctly in the instance of meter rollovers.	Has not occurred

Compliance is confirmed for all scenarios tested, except where an ICP switches back to Globug after switching out to another retailer. In these cases, the SASV calculation does not include the second (or subsequent) switch in date. For any site that switches in, we expect part of the period's consumption to be apportioned to this opening read date. While Globug will still capture all consumption that occurred during the period of supply, it may not be recorded within the correct consumption period. This is recorded as non-compliance below.

Non-compliance	Description
Audit ref:12.11 With: Clause 4 and 5 of Schedule 15.3 From/to: entire audit period	Historic estimate is not calculated correctly for the switch in month, where an ICP has switched back to Globug after being supplied by another retailer. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach Risk Rating: 2
Audit Risk Rating	**Rationale for audit risk rating**
Low	All consumption will be reported, but some consumption may not be reported in the correct period. All other historic estimate scenarios were compliant, and this scenario is not common.

Actions taken to resolve the issue	Completion date	Remedial action Status
We have identified this as a system issue and are currently scoping resource to rectify.	First half of 2018	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refer above comments		

12.12 Forward estimate process (Clause 6 Schedule 15.3)

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
- 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 most revisions. Non-compliance is recorded below.

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

Month	Revision 1	Revision 3	Revision 7	Revision 14	Total
Sept 2015	0	1	1	1	225
Oct 2015	1	2	2	2	201
Nov 2015	1	1	1	1	203
Jun 2016	2	1	2	-	210
Jul 2016	1	1	1	-	210
Aug 2016	0	0	0	-	213
Sep 2016	0	0	-	-	216
Oct 2016	0	0	-	-	226
Nov 2016	0	0	-	-	227

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

Month	Revision 1	Revision 3	Revision 7	Revision 14
Sept 2015	2.12%	3.83%	4.29%	4.52%
Oct 2015	5.93%	8.57%	8.86%	9.11%
Nov 2015	4.35%	5.53%	5.93%	5.80%
Jun 2016	4.95%	4.33%	4.71%	-
Jul 2016	3.19%	3.40%	3.61%	-
Aug 2016	0.18%	0.03%	0.33%	-
Sep 2016	0.61%	0.84%	-	-
Oct 2016	1.26%	2.06%	-	-
Nov 2016	0.92%	1.21%	-	-

I checked some balancing area specific variations and in most cases, the issues relate to areas where there are frequent NSP changes, or where forward estimates were later replaced with actuals.

Non-compliance	Description		
Audit ref: 12.12 With: Clause 6 of Schedule 15.3 From/to: Sep 15, Oct 15, Nov 15, Jun 16 and Jul 16	FE accuracy threshold not met for some balancing areas. Potential impact: Low Actual impact: Low Audit history: Four times previously Controls: Moderate Breach Risk Rating: 2		
Audit Risk Rating	Rationale for audit risk rating		
Low	Initial data is replaced with revised data, and washed up.		
Actions taken to resolve the issue		Completion date	Remedial action Status
A robust process is in place; we will monitor and review the process as required. Some variance is to be expected due to no reads or estimated reads on the initial submission. To some extent, these variances are unavoidable (for example, as a result of a small numbers of ICPs having seasonal consumption only) and should be considered likely to recur.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Refer above comments			

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

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. Compliance is confirmed.

13. Submission format and timing

13.1 Market Administrator Meter Reading Reports (Clauses 8 & 9 of Schedule 15.2)

Provision of meter read frequency reports to the Authority, no later than 20 business days after the end of the month.

Audit Observation

I reviewed meter reading reports for March to May 2017, to confirm that they meet the meter reading frequency report requirements.

I reviewed processes to ensure the reports are accurate and submitted on time, and the timeliness of submission for a sample of three reports.

Audit Commentary

I reviewed meter reading reports for March to May 2017, and confirmed that they met the meter reading frequency report requirements and were sent before the 20th business day of each month.

I saw the Energy Services task schedule, which has submission of these reports listed to be completed by day 20.

Compliance is confirmed.

13.2 Provision of submission information to the RM (Clause 8 Schedule 15.3)

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 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 five NSPs on the May 2017 AV080 report, and found that the AV080 was aggregated correctly. Compliance with the requirement to use correct aggregation factors is confirmed.

13.3 Reporting resolution (Clause 9 Schedule 15.3)

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

13.4 Historical estimate reporting to RM (Clause 10 Schedule 15.3)

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 nine 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 all revisions. Read attainment rates are discussed in **sections 6.9, 6.10 and 6.11** and appear to be improving. This improvement is expected to flow through to the historical estimates reported in future months.

Quantity of NSPs where revision targets were met.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Sep 2015	-	134	54	315
Oct 2015	-	136	59	291
Nov 2015	-	134	50	294
April 2016	135	133	-	300
May 2016	133	133	-	300
Jun 2016	133	135	-	302
Oct 2016	133	-	-	318
Nov 2016	133	-	-	318
Dec 2016	131	-	-	323

The table below shows that the percentage HE at a summary level is below the required targets for some 12 month revisions.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Sep 2015	-	98.89%	99.21%
Oct 2015	-	98.99%	99.44%
Nov 2015	-	98.91%	99.32%
Apr 2016	99.02%	99.42%	-
May 2016	98.98%	99.68%	-
Jun 2016	99.32%	100.00%	-
Oct 2016	99.81%	-	-
Nov 2016	99.82%	-	-
Dec 2016	99.78%	-	-

Non-compliance	Description		
Audit ref: 13.4 With: Clause 10 of Schedule 15.3 From/to: Sep-Nov 2015, Apr-Jun 2016 and Oct-Dec 2016	Historic estimate targets were not met for all revisions. Potential impact: Low Actual impact: Low Audit history: Four times previously Controls: Moderate Breach Risk Rating: 2		
Audit Risk Rating	Rationale for audit risk rating		
Low	Globug were close to the target in all cases.		
Actions taken to resolve the issue		Completion date	Remedial action Status
The improvements that we are implementing in terms of read attainment should be reflected in higher compliance in this area.		Before end of 2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Refer above comments			

6. Conclusions

This audit found 21 non-compliance issues, and one recommendation is made. This is two less non-compliances than recorded than last year. This is a good result when considering the new audit format contains more sections. Globug have made good progress in relation to the management of registry validation since the last audit. A weekly process is run to manage alignment between Salesforce, SAP and the registry. The area of switching has also improved with no switch breaches recorded for the audit period.

The non-compliances with the highest impact relate to:

- the inaccuracies found in the content of CS files which will be effecting other participants
- the misalignment of active dates recorded on the registry, SAP and Salesforce
- some forward estimates remained at the 14 month revision.

Overall Globug has made good progress during the audit period. The indicative audit frequency table indicates the next audit should be in 12 months and I agree with this recommendation.

The matters raised are shown in the tables below:

Table of Non-Compliance

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	11.2 of part 11	Some registry discrepancies.	Moderate	Low	2	Investigating
Changes to registry	3.3	10 of schedule 11.1	Registry not updated within 5 business days of the event.	Moderate	Low	2	Identified
ANZSIC codes	3.6	9(1)(k) of schedule 11.1	4 active ICPs with an incorrect ANZSIC codes assigned.	Strong	Low	1	Cleared
Active status	3.8	17 of schedule 11.1	Incorrect active date recorded for three reconnected ICPs.	Moderate	Low	2	Investigating
Inactive status	3.9	19 of schedule 11.1	Incorrect active date recorded for seven disconnected ICPs. Credit disconnections not recorded for all inactive days.	Weak	Low	3	Investigating
Change of MEP	3.11	10.22(1)(a)	2 incorrect MEPs nominated.	Strong	Low	1	Identified
Switching	4.2	3 & 4 of schedule 11.3	Incorrect sending of the "PD" AN response code for transfer switches.	Moderate	Low	2	Identified
	4.3	5 of schedule 11.3	Incorrect last read date, incorrect read and average daily consumption figures being sent in some instances.	Moderate	Low	2	Investigating
	4.8	10 of	Incorrect codes sent for two	Strong	Low	1	Identified

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
		schedule 11.3	ICPs sampled.				
	4.9	10 (2) of schedule 11.3	35 ICPs of 5,202 move switches processed where the event date was either set earlier than the gaining traders or greater than 10 days from the gaining traders request date.	Strong	Low	1	Identified
	4.10	11 of schedule 11.3	Incorrect last read date and average daily consumption figures being sent in some instances. Estimated reads not sent for the event date.	Moderate	Low	2	Investigating
	4.15	17 of schedule 11.3	5 switch withdrawals sent later than 2 months of the event date.	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	Identified
Interrogate meters once	6.8	7(1) & (2) of schedule 15.2	No reporting in place to quantify ICPs not interrogated at least once during the period of supply.	Weak	Low	3	Identified
90% read target	6.10	9 of schedule 15.2	For four ICPs without an actual read for four months, exceptional circumstances could not be confirmed, and there was insufficient evidence that the best endeavours requirement was met.	Moderate	Low	2	Identified
Correction of NHH meter readings	8.1	19(1) Schedule 15.2	Where a meter reading is modified by Mercury, including being recorded against a different meter or register or having its value changed, it should be recorded as an estimated reading. Only readings that exactly match the details in the source file should be recorded as actual validated readings.	Moderate	Low	2	Identified

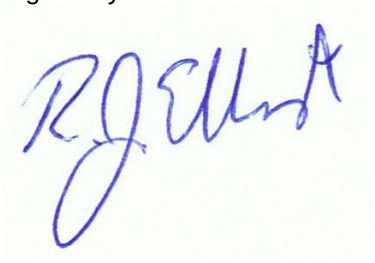
Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Event logs	9.6	17 of schedule 15.2	AMI event information not adequately obtained and monitored.	Moderate	Low	2	Investigating
Permanence of meter readings	12.8	4 of schedule 15.2 and clause 15.2 of part 15	Not all meter readings were made permanent estimates by the 14 month revision. Forward estimate remained for the September, October and November 2015 14 month revisions.	Moderate	Low	2	Identified
Historic Estimate Process	12.11	4 & 5 of Schedule 15.3	Historic estimate is not calculated correctly for the switch in month, where an ICP has switched back to Globug after being supplied by another retailer	Moderate	Low	2	Investigating
Forward estimate accuracy	12.12	6 of Schedule 15.3	FE accuracy threshold not met for some balancing areas.	Moderate	Low	2	Identified
HE targets	13.4	10 of Schedule 15.3	Historic estimate targets were not met for all revisions.	Moderate	Low	2	Identified
				Future Risk Rating	39		
				Indicative Next Audit Frequency	12 months		

Future risk rating	0	1-3	4-14	16-40	41-55	55+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

Table of Recommendations

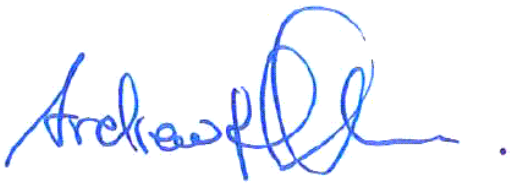
Subject	Section	Clause	Recommendation	Remedial action
Interrogate meters once	6.8	7(1) & (2) of schedule 15.2	Develop reporting to measure ICPs not reads during period of supply.	Identified

Signed by:



Rebecca Elliot
Veritek Limited
Electricity Authority Approved Auditor

Signed by:



Andrew Peckham
Operations Manager

7. Globug Response

Globug have reviewed this report and their comments are recorded within the report. No further comments were provided.