ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT

For

GLOBUG LIMITED
NZBN: 9429030265516

Prepared by: Rebecca Elliot

Date audit commenced: 19 July 2021

Date audit report completed: 5 November 2021

Audit report due date: 28 November 2021

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EXECUTIVE SUMMARY

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

This audit is for the GBUG participant code only.

The audit found 24 non-compliance issues. Whilst this is an increase from the 17 non-compliances found in the last audit, this is due to a few issues resulting in multiple non-compliances being recorded. Three recommendations are made.

The main areas of opportunity identified are (two are repeated from the last audit):

- bridged and defective meter estimated volumes have not been processed correctly resulting in the volumes not being reconciled, I have recommended that the process documentation is reviewed, and additional staff training is given,
- the registry is still not being updated for all disconnections if they are for a period of less than one week, Globug are working to correct this,
- consumption information is not submitted for one day for ICPs where Globug cannot supply, and then switch to an alternative trader or in most cases to Mercury, and
- switching automation is causing some incorrect AN and NW files to be sent, the coding is being examined in relation to this.

Validation and submission processes are robust.

Globug continues to review and refine processes. The disconnection process has been reviewed during the audit period and remote disconnections for vacant sites are now being carried out sooner. The issue of CS files being sent for one day too early has been resolved and no evidence of this was found during the audit. No changes requiring a material change have occurred during the audit period.

The indicative audit frequency table indicates the next audit should be in six months. As stated above the higher score is due to the same issue being repeated in multiple sections of the audit. I have considered this result in conjunction with the comprehensive responses from Globug and I recommend that the next audit be in 12 months.

The matters raised are shown in the tables below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	10.6,11.2 & 15.2	Some registry discrepancies. 16 (two transfer and 14 switch move) ICPs sent with incorrect estimated reads. Credit disconnections not updated to the registry unless the duration is longer than one week. Consumption apportioned incorrectly for one of the five disconnected ICPs with consumption sampled. Consumption apportioned incorrectly for one of five disconnected ICPs where final reads were not gained on the date of disconnection. All corrections for the ten bridged ICPs sampled (of a possible 41 bridged meters) had not flowed through to submission resulting in 13,458 kWh of under submission. All corrections for the nine ICPs examined had not flowed through to submission resulting in 2,629 kWh of under submission. Consumption not submitted for one day of ownership for cancelled switches. IntelliHUB does not provide updated actual data to replace estimates if the actual data is obtained more than 15 days after the event date.	Moderate	Medium	4	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Electrical Connection of Point of Connection	2.11	10.33A	69 ICPs reconnected without metering being certified.	Moderate	Low	2	Identified
Changes to registry information	3.3	10 of schedule 11.1	449 (11.66%) late status updates to active. 2,302 (52%) late status updates to inactive. 194 late trader updates. Three late ANZSIC code updates.	Moderate	Low	2	Identified
ANZSIC code	3.6	9(1)(k) Schedule 11.1	12 of 23 (52%) non-residential codes were incorrect.	Strong	Low	1	Identified
Management of "inactive" status	3.9	19 Schedule 11.1	Credit disconnections not updated on the registry or SAP for each full day the ICPs are inactive.	Moderate	Low	2	Identified
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	Incorrect AN code for seven ICPs. Three AN breaches.	Moderate	Low	2	Investigating
Losing trader must provide final information - standard switch	4.3	5 of schedule 11.3	Nine CS breaches. One E2 breach. Five WR breaches. Two transfer switches sent with the incorrect read. One ICP of the sample of five ICPs checked with the zero recorded as the average daily consumption sent with the incorrect average daily consumption. One ICP of the sample of five typical CS files checked sent with the incorrect average daily consumption.	Moderate	Low	2	Identified
Retailers must use same reading - standard switch	4.4	6(1) and 6A Schedule 11.3	One RR breach for a transfer switch.	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	Five of ten ICPs sampled (of a possible 12 ICPs) sent with an incorrect AN response code. Three AN breaches. Two CS breaches. 12 E2 breaches. 16 T2 breaches. 44 WR breaches.	Moderate	Low	2	Identified
Losing trader provision of final information	4.10	11 Schedule 11.3	14 switch move ICPs sent with incorrect estimated reads.	Moderate	Low	2	Investigating
Gaining trader changes to switch meter reading - switch move.	4.11	12 Schedule 11.3	One of the four RRs issued was issued in error and was not supported by two actual reads. Seven RR breaches for switch moves. One AC breach for a switch move.	Strong	Low	1	Identified
Withdrawal of switch requests	4.15	17 & 18 of schedule 11.3	Five of the 20 NW files sampled were sent with the incorrect NW code. One of the three NWUA withdrawals sampled sent in error. 21 NA breaches. Four SR breaches. 15 AW breaches.	Moderate	Low	2	Identified
Metering information	4.16	21 of Schedule 11.3	Two transfer switches sent with the incorrect read. 14 switch move ICPs sent with incorrect estimated reads.	Moderate	Low	2	Investigating
Electricity conveyed	6.1	10.13	Three ICPs with distributed generation present but export metering is present. Energy is not metered and quantified according to the code where meters are bridged.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
NHH meter reading application	6.7	6 Schedule 15.2	Two transfer switches sent with the incorrect read. 14 switch move ICPs sent with incorrect estimated reads.	Moderate	Low	2	Identified
Interrogate meters once	6.8	7(1) and (2) Schedule 15.2	Exceptional circumstances not proven for 71 ICPs not read during period of supply.	Strong	Low	1	Identified
NHH meters interrogated annually	6.9	8(1) & (2) of schedule 15.2	Exceptional circumstances not proven for seven ICPs not read in the past 12 months	Moderate	Low	2	Identified
Identification of readings	9.1	3(3) Schedule 15.2	Two transfer switches sent with the incorrect read.	Moderate	Low	2	Identified
Meter data used to derive volume information	9.3	3(5) Schedule 15.2	Raw meter data is rounded upon receipt and not when volume information is created for IntelliHUB and ARC meters.	Moderate	Low	2	Investigating
Calculation of ICP days	11.2	15.6	Inaccurate ICP days were reported for one ICP.	Strong	Low	1	Identified
Creation of submission information	12.2	15.4	Generation information not submitted for three ICPs with distributed generation present. Consumption information not submitted for one day for ICPs where Globug cannot supply, and then switch to an alternative trader or in most cases to Mercury.	Moderate	Low	2	Identified
Allocation of submission information	12.3	15.5	One ICP recorded with the incorrect NSP.	Strong	Low	1	Identified

Accuracy of submission information	12.7	15.12	Inaccurate submission as follows: • 16 (two transfer and 14 switch move) ICPs sent with incorrect estimated reads resulting in one day of consumption being pushed to the gaining trader (Mercury in most instances). • Consumption apportioned incorrectly for one of the five disconnected ICPs with consumption sampled. • Consumption apportioned incorrectly for one of five disconnected ICPs where final reads were not gained on the date of disconnection. • All corrections for the ten bridged ICPs sampled (of a possible 41 bridged meters) had not flowed through to submission resulting in 13,458 kWh of under submission. • All corrections for the nine ICPs examined had not flowed through to submission resulting in 2,629 kWh of under submission. • Two of the five ICPs with active vacant consumption incorrectly recorded as active from 21/07/21-31/07/21. • Intellihub does not provide raw meter data to replace estimates for periods greater than 15 days. The quantify of	Moderate	Medium	4	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			estimates remaining is unknown.				
Permanence of meter readings for reconciliation	12.8	4 of schedule 15.2	Permanent estimates applied when exceptional circumstances not proven for seven ICPs not read in the past 12 months	Strong	Low	1	Identified
Future Risk Rating						45	

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

RECOMMENDATIONS

Subject	Section	Recommendation
Relevant information	2.1	Review correction process and provide staff training to ensure these are processed correctly.
Use of ICP identifier	2.18	Make ICP available in the Globug application.
ANZSIC codes	3.6	Check all non-residential ANZSIC coded ICPs six monthly to confirm their validity.

ISSUES

Subject	Section	Description	Issue
		Nil	

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

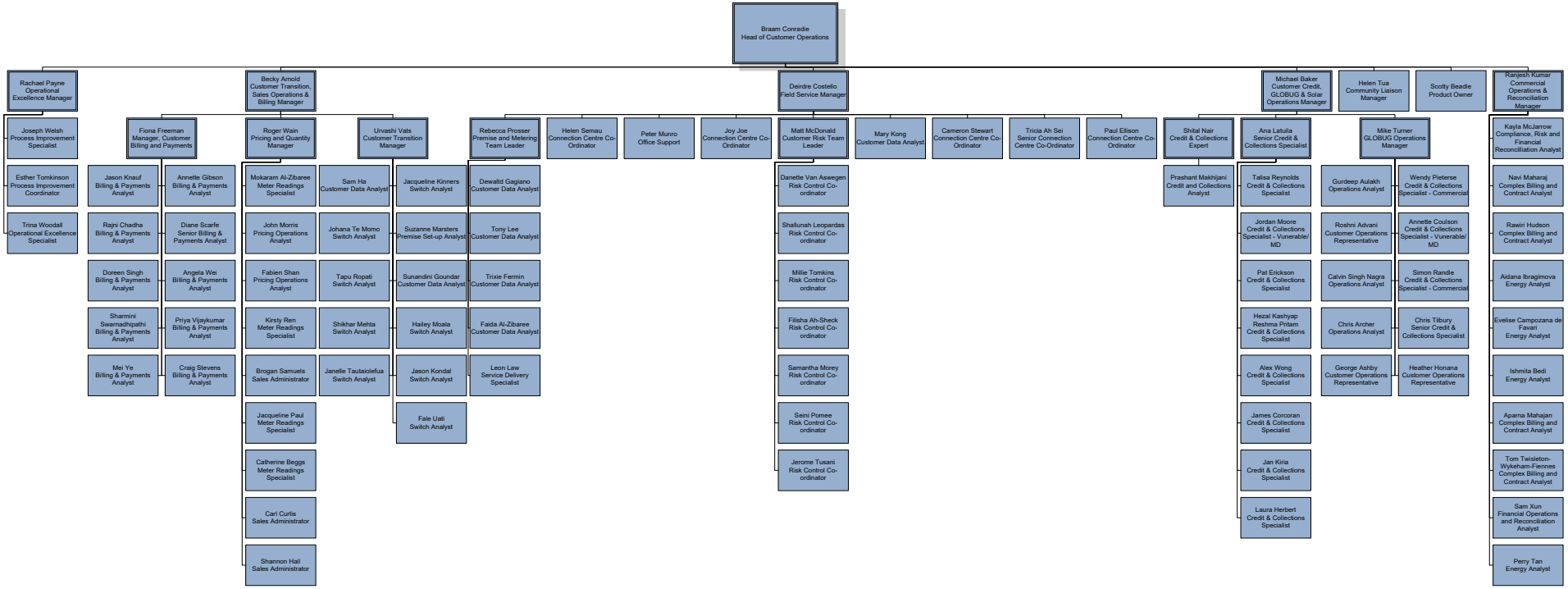
Current code exemptions were reviewed on the Electricity Authority website.

Audit commentary

Globug has no current exemptions relevant to this audit.

1.2. Structure of Organisation

Mercury provided their current organisational structure, which includes Globug:



1.3. Persons involved in this audit

Auditor:

Name	Company
Rebecca Elliot	Veritek Limited

Globug personnel assisting in this audit were:

Name	Title
Aidana Ibragimova	Energy Analyst
Christine Archer	Operations Analyst
Ishmita Bedi	Energy Analyst
Gurdeep Aulakh	Operations Analyst
Janelle Tautaiolefua	Switch Analyst
Kayla McJarrow	Compliance, Risk and Financial Reconciliation Analyst
Leon Law	Service Delivery Specialist
Mokaram Al-Zibaree	Meter Readings Specialist
Mike Turner	Globug Operations Manager
Ranjesh Kumar	Commercial Operations & Reconciliation Manager
Roshni Advani	Customer Operations Representative
Tony Lee	Metering and Network Co-ordinator
Urvashi Vats	Customer Transition Manager

1.4. Use of Agents (Clause 15.34)

Code reference

Clause 15.34

Code related audit information

A reconciliation participant who uses an agent

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

Audit observation

Use of agents was discussed with Globug.

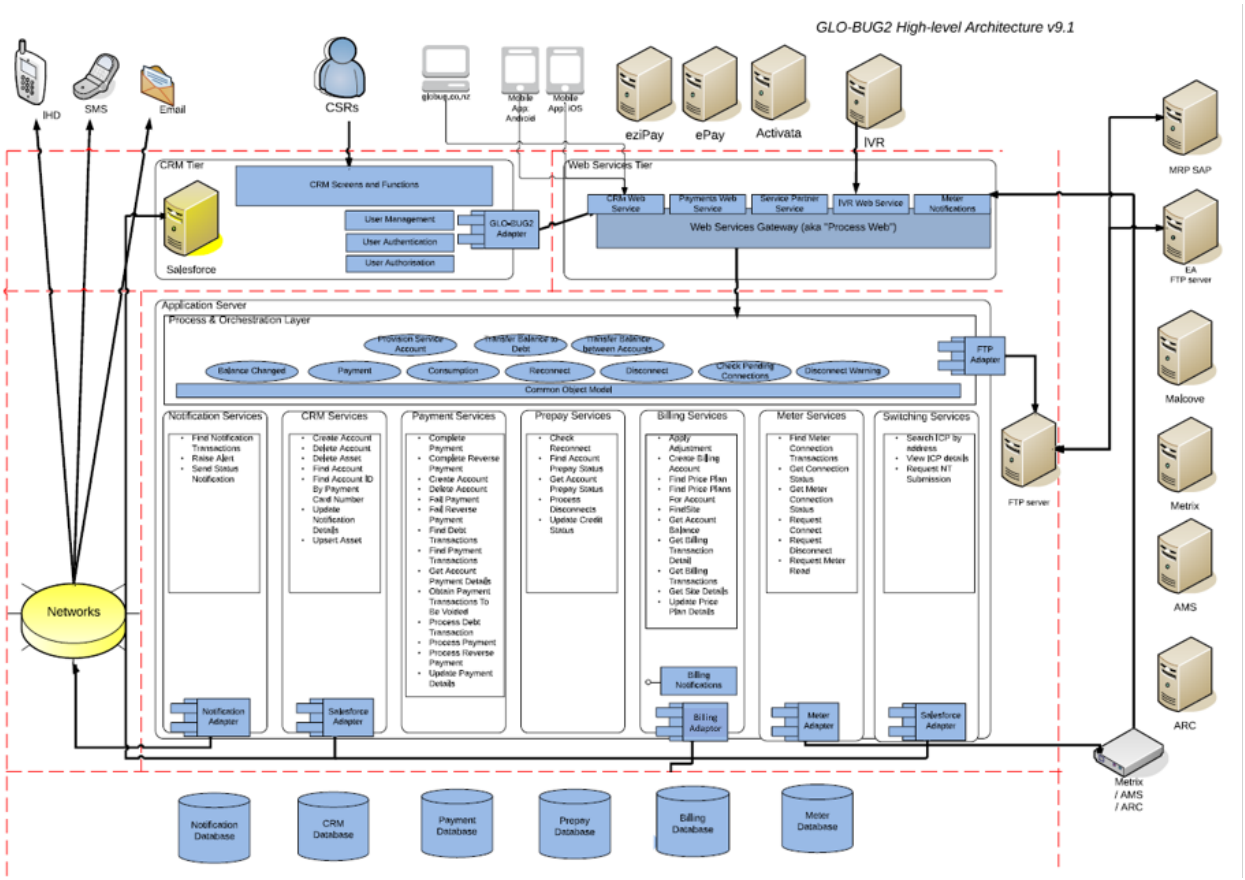
Audit commentary

IntelliHUB provide estimated data as an agent to Globug and an agent report is expected to be submitted as part of this audit.

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

1.5. Hardware and Software

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



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

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

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

Access to data sources is password controlled.

1.6. Breaches or Breach Allegations

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

1.7. ICP Data

All active ICPs are summarised by metering category in the table below. All 14 ICPs with metering category nine had accepted MEP nominations and are awaiting meter asset data on the registry.

Metering Category	2021	2020	2019	2018
1	21,481	22,362	25,046	26,739
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
9	14	0	0	3

Status	Number of ICPs 2021	Number of ICPs 2020	Number of ICPs 2019	Number of ICPs 2018
Active (2,0)	21,495	22,362	25,046	26,742
Inactive – new connection in progress (1,12)	0	0	0	0
Inactive – electrically disconnected vacant property (1,4)	208	157	119	103
Inactive – electrically disconnected remotely by AMI meter (1,7)	616	632	537	705
Inactive – electrically disconnected at pole fuse (1,8)	2	3	4	0
Inactive – electrically disconnected due to meter disconnected (1,9)	0	22	21	12
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0	1
Inactive – electrically disconnected at meter box switch (1,11)	0	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	25	19	12	6
Inactive – reconciled elsewhere (1,5)	0	0	0	0
Decommissioned (3)	1,328	1,077	924	734

1.8. Authorisation Received

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

1.9. Scope of Audit

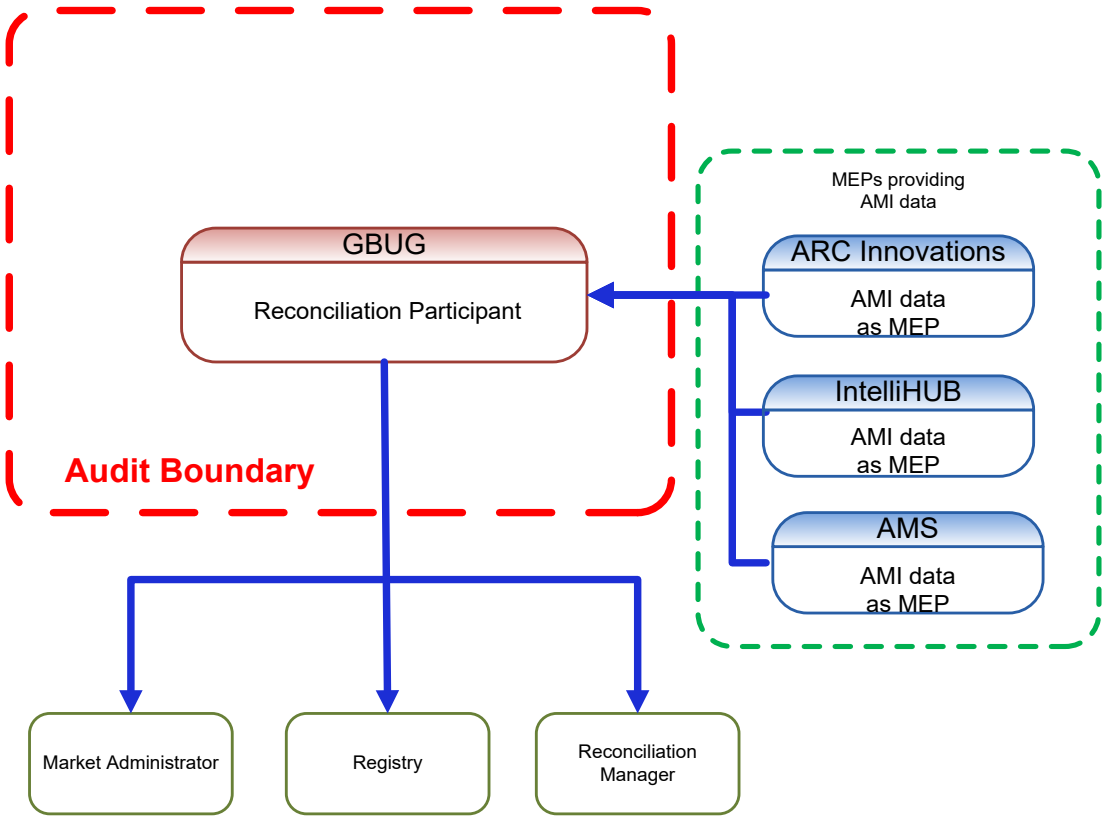
This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of Globug, to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1. The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V 7.2.

The audit was carried out remotely via Teams due to the COVID 19 pandemic from 5 October 2021 to 12 October 2021.

Analysis was completed on:

- a registry list snapshot report as of 9 August 2021, and
- a registry list, AC020 report, and event detail report for 1 August 2020 to 31 July 2021.

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



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

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs providing AMI data
(a) - Maintaining registry information and performing customer and embedded generator switching		
(b) – Gathering and storing raw meter data	IntelliHUB (MTRX)- AMI estimates	IntelliHUB AMS ARC Innovations
(c)(iii) - Creation and management of HHR and NHH volume information		
(d) – Calculation of ICP days		
(da) - delivery of electricity supplied information under clause 15.7		
(db) - delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8		
(e) – Provision of submission information for reconciliation		

ARC Innovations, AMS and IntelliHUB conduct AMI data collection as MEPs and not as agents to reconciliation participants, except for the AMI estimates that are sent from IntelliHUB. The IntelliHUB agent audit is expected to be submitted with this audit.

1.10. Summary of previous audit

Globug provided a copy of their previous audit report conducted in August 2020 by Steve Woods of Veritek Limited. The summary tables below show that some of the issues have been resolved and some are still existing. Further comment is made in the relevant sections of this report.

Table of non-compliance

Subject	Section	Clause	Non-Compliance	Status
Material change audits	1.11	16A.11	Material change audit not conducted for switching automation or EDM implementation.	Cleared
Relevant information	2.1	10.6,11.2 & 15.2	Some registry discrepancies. Credit disconnections not updated to the registry unless the duration is longer than one week. Consumption apportioned incorrectly for eight disconnected ICPs. Switch event meter readings incorrect in many CS files.	Still existing Still existing Still existing Cleared

Subject	Section	Clause	Non-Compliance	Status
			Consumption not submitted for one day of ownership for cancelled switches. Unmetered load not submitted for one ICP.	Still existing Cleared
Electrical Connection of Point of Connection	2.11	10.33A	20 ICPs reconnected without metering being certified.	Still existing
Changes to registry information	3.3	10 of schedule 11.1	Registry not updated within 5 business days of the event for some reconnections, disconnections and MEP changes.	Still existing
Management of "inactive" status	3.9	19 Schedule 11.1	Credit disconnections not updated on the registry or SAP for each full day the ICPs are inactive.	Still existing
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	Incorrect AN code for six ICPs.	Still existing
Losing trader must provide final information - standard switch	4.3	5 of schedule 11.3	2 late CS files. Incorrect switch event meter reading for 4 of 5 CS files.	Still existing
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	12 incorrect AN response codes.	Still existing
Losing trader provision of final information	4.10	11 Schedule 11.3	Incorrect switch event meter reading for 3 of 5 CS files.	Cleared
Gaining trader changes to switch meter reading - switch move.	4.11	12 Schedule 11.3	6 late RR files.	Still existing
Withdrawal of switch requests	4.15	17 & 18 of schedule 11.3	7 late AW files. 38 late NW files. 2 incorrect NW rejections.	Still existing
Maintaining shared unmetered load.	5.1	11.14	Registry not updated with shared unmetered load details for two ICPs.	Cleared

Subject	Section	Clause	Non-Compliance	Status
Electricity conveyed	6.1	10.13	Energy is not metered and quantified according to the code where meters are bridged.	Still existing
Interrogate meters once	6.8	7(1) and (2) Schedule 15.2	Exceptional circumstances not proven for 20 ICPs not read during period of supply.	Still existing
Meter data used to derive volume information	9.3	3(5) Schedule 15.2	Raw meter data is rounded upon receipt and not when volume information is created.	Cleared for AMS Still existing for IntelliHUB and ARC
Creation of submission information	12.2	15.4	Consumption information not submitted for one day for ICPs where Globug cannot supply, and which then switch to Mercury.	Still existing
Historical estimate reporting to RM	13.3	10 of Schedule 15.3	80% HE threshold not met for two NSPs.	Cleared

Table of recommendations

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

2. OPERATIONAL INFRASTRUCTURE

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

Code reference

Clause 10.6, 11.2, 15.2

Code related audit information

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

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

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

Audit observation

The processes to find and correct incorrect information was examined. The registry validation processes were examined in detail in relation to the achievement of this requirement.

The registry list and AC020 reports were examined to identify any registry discrepancies, and to confirm that all information was correct and not misleading.

Audit commentary

Registry and static data accuracy

Registry management processes are managed on a weekly basis. Globug provides the Mercury field services team with a weekly report of all updates conducted in Salesforce (with the exception of credit disconnections which are detailed below). This report is loaded to the registry. Any files with errors are returned to be resolved by the Globug support team. Once the file is successfully loaded to the registry a file of the changes is uploaded to SAP to update all the affected ICPs. Due this process only being run once a week this can cause updates to be made to the registry late.

Globug indicated in the last audit that the operations team and the ICT team were working deploy additional discrepancy reporting to identify salesforce/SAP/registry mismatches and increase the frequency of the reporting. This is still in progress as this has proven to be more complex than originally thought. This is also discussed in **sections 3.3** and **3.9**.

Analysis of the AC020 report and registry list found:

Issue	2021 Qty	2020 Qty	2019 Qty	2018 Qty	Comments
Active ICPs with cat 9 metering	15	0	0	2	14 ICPs had accepted MEP nominations and are awaiting meter asset data on the registry. One was a timing difference and meter asset data was populated on the registry after the reports were run.
Blank ANZSIC codes	0	0	0	0	Compliant.
ANZSIC "T999" not stated	0	0	0	0	Compliant.

Issue	2021 Qty	2020 Qty	2019 Qty	2018 Qty	Comments
ANZSIC "T994" don't know	0	0	0	0	Compliant.
Incorrect status 1,4 - Disconnected Vacant	0	0	0	103	Sample of five ICPs checked, and the status reason was correct.
Incorrect status 1,8 - Disconnected at pole fuse	1	0	0	0	Compliant.
Incorrect status 1,7 – Disconnected AMI remote disconnection	122	0	3	705	122 ICPs had the AMI flag set to no with had 1,7 (Electrically disconnected remotely by AMI meter) status. All had the AMI metering flag updated after being disconnected.
Incorrect status 1,9 - Disconnected due to meter disconnected	0	0	0	12	Sample of five ICPs checked, and the status reason was correct.
Incorrect status 1,10 - Disconnected meter fuse box	0	0	0	1	None found in this audit.
Incorrect status 1,12 - New connection in progress	0	0	0	0	Globug does not complete new connections. None found in this audit.
ICPs with the incorrect active date recorded	0	0	0	0	Sample checked confirmed dates were aligned.
AMI = No	164	103	77	106	A sample of 25 were checked and confirmed a meter change was underway after they had switched in or the ICP had since been disconnected or switched away.
Distributed Generation profile not recorded on the registry	3	0	0	0	Three ICPs where distributed generation was not being quantified. This is detailed in **section 6.1**.

The last audit noted that Globug do not update the registry in relation to credit disconnections in every instance and due to the nature of the customer base there is high level of activity. Globug investigated the sending of daily updates to the registry, but testing found that this was not producing the expected outcome and further work is required before this can be put into production. This is recorded as non-compliance.

Switching data accuracy

As recorded in **section 4**, 16 ICPs (two transfer and two switch move ICPs) were with Globug for one day of supply, but these were sent with the same reads they were gained on. This will result in the volume for the one day of supply to be pushed to the gaining trader (in most cases this is Mercury) and the volume will be reconciled for the incorrect period.

Read and volume data accuracy

As recorded in **section 12.2**, consumption information is not submitted for one day for ICPs where Globug cannot supply, and which then switch to an alternative trader (usually Mercury).

I checked a sample of NHH corrections as described in the table below:

Defective meters	The process is described in **section 8.1**. I checked nine examples and found the volumes were estimated correctly for the defective period but did not flow through to submission as the meter reprogram process was not followed. This is described in detail in the bridged meter section below. This will have resulted in 2,629 kWh of under submission.
Incorrect multipliers	Globug does not have any ICPs with multipliers.
Bridged meters	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 are expected to follow a meter reprogram process. The bridged meter is expected to be 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. 41 ICPs were bridged during reconnection. I reviewed ten examples of bridged meters with the largest volumes. Each example had a worksheet to estimate the consumption during the bridged period and these were confirmed to be calculated correctly. The meter reprogram process was not followed and the meter read was entered sometimes against the old meter and sometimes against the new meter but as the meter was not "uninstalled" with the bridged volume and then reinstalled, the bridged volume was effectively cancelled out with the next actual read applied. This will have resulted in 13,548 kWh of under submission for the ten checked. If all 41 bridged metered ICPs were not correctly processed this will potentially have resulted in 19,771 kWh of under submission. I reviewed the process documentation and found it was not detailed enough to ensure that staff were processing these correctly and recommend below, that this is reviewed, and staff training provided to correct this.
Active vacant consumption	A check of five ICPs with active vacant consumption found ICP 0410861030LC959 was disconnected on 21 July 2021, but no disconnection read was provided, and instead the volume was incorrectly applied through to the next read date which was 31 July 2021.
Consumption while inactive	Where disconnected ICPs have consumption, SAP submits this consumption automatically. • Eight of the ICPs were returned to active status for the period of consumption prior to the audit. • Four were confirmed not to have genuine consumption. • Two of the ICPs switched to another retailer for the period of consumption. • ICP 0000503171CEDDD was confirmed to have a small amount of genuine consumption (6.8 kWh). The registry records this as inactive from 30 July 2021 to 14 September 2021 but the submission was for the period 13 July 2021 to 31 August 2021.
Unmetered load corrections	The last audit identified one correction. I confirmed this has been processed and unmetered load has been confirmed as being correct.
Replacement of estimated data	IntelliHUB does not provide updated actual data to replace estimates if the actual data is obtained more than 15 days after the event date.

Description	Recommendation	Audited party comment	Remedial action
Relevant information	Review correction process and provide staff training to ensure these are processed correctly.	We will be reviewing our process documentation and providing training to staff to ensure the corrections are processed correctly and that volume submission is accurate.	Identified

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: 10.6,11.2 & 15.2 From: 05-Aug-20 To: 14-Jul-21	Some registry discrepancies. 16 (two transfer and 14 switch move) ICPs sent with incorrect estimated reads. Credit disconnections not updated to the registry unless the duration is longer than one week. Consumption apportioned incorrectly for one of the five disconnected ICPs with consumption sampled. Consumption apportioned incorrectly for one of five disconnected ICPs where final reads were not gained on the date of disconnection All corrections for the ten bridged ICPs sampled (of a possible 41 bridged meters) had not flowed through to submission resulting in 13,458 kWh of under submission. All corrections for the nine ICPs examined had not flowed through to submission resulting in 2,629 kWh of under submission. Consumption not submitted for one day of ownership. IntelliHUB does not provide updated actual data to replace estimates if the actual data is obtained more than 15 days after the event date. Potential impact: Medium Actual impact: Medium Audit history: Multiple Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The audit risk rating is assessed to be medium due to the potential kWh of under submission.

Actions taken to resolve the issue	Completion date	Remedial action status
16 (two transfer and 14 switch move) ICPs sent with incorrect estimated reads. Detailed comments recorded in section 4. **Credit disconnections not updated to the registry unless the duration is longer than one week.** Detailed comments recorded in 3.9. **Consumption apportioned incorrectly for one of the five disconnected ICPs with consumption sampled.** ICP: 0000503171CEDDD 6 kWh was recorded between 2 August 21 and 01 September 21. There was no disconnection read in SAP which is why submission was spread from 13 July 21 – 31 Aug 21. We will review this case to determine why no disconnection reading was entered and whether the status needs to be corrected for the period where usage was recorded. **Consumption apportioned incorrectly for one of five disconnected ICPs where final reads were not gained on the date of disconnection** ICP: 0410861030LC959 no disconnection read was entered for this ICP which caused the vacant usage to be incorrectly apportioned through to the next read rather than to the disconnection date. We will have a disconnection read entered to ensure revision submissions are correct and will investigate why the disconnection read was not entered initially. **All corrections for the ten bridged ICPs sampled (of a possible 41 bridged meters) had not flowed through to submission resulting in 13,458 kWh of under submission.** **All corrections for the nine ICPs examined had not flowed through to submission resulting in 2,629 kWh of under submission.** Detailed comments recorded in 12.7. **Consumption not submitted for one day of ownership.** Detailed comments recorded in 12.2. **IntelliHUB does not provide updated actual data to replace estimates if the actual data is obtained more than 15 days after the event date.** Detailed comments recorded in 12.7.	N/A	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Consumption apportioned incorrectly for one of the five disconnected ICPs with consumption sampled. **Consumption apportioned incorrectly for one of five disconnected ICPs where final reads were not gained on the date of disconnection** We are currently working on multiple changes with regards to disconnection updates and will also be reviewing our processes for loading disconnections reads to ensure volumes are submitted correctly in all instances.	May 22	

2.2. Provision of information (Clause 15.35)

Code reference

Clause 15.35

Code related audit information

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

2.3. Data transmission (Clause 20 Schedule 15.2)

Code reference

Clause 20 Schedule 15.2

Code related audit information

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

Audit observation

Meter reads used to produce Globug electricity reconciliation reports and as billed data are imported into SAP. I reviewed the method to receive meter reading information and traced a sample of reads for two ICPs per provider from the source files to SAP.

Audit commentary

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

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

Audit outcome

Compliant

2.4. Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

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

The audit trail must include details of information:

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

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

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

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

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10.4

Code related audit information

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

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

Audit observation

I reviewed Globug's current terms and conditions.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

The trader must use its best endeavours to provide access:

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

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

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

Audit observation

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

Audit commentary

Globug's contract with their customers includes consent to access for authorised parties for the duration of the contract. Globug confirmed that they have used best endeavours to arrange access for other parties when requested. There has been one ICP (0000567586HBEC2) where they have been unable to arrange access and the Police are going to have to be involved to progress this.

Audit outcome

Compliant

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

Code reference

Clause 10.35(1)&(2)

Code related audit information

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

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 11.15B

Code related audit information

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

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

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

Audit observation

I reviewed Globug's current terms and conditions.

Audit commentary

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

Audit outcome

Compliant

2.9. Connection of an ICP (Clause 10.32)

Code reference

Clause 10.32

Code related audit information

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

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

Audit observation

Globug does not complete new connections. The AC020 report, event detail report, and registry list were examined to confirm no new connections were completed and check compliance.

Audit commentary

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

Review of the AC020 report and registry list identified 15 ICPs which had a metering category 9. Of those:

- 14 ICPs had accepted MEP nominations, and are awaiting meter asset data on the registry, and
- one was a timing difference and meter asset data was populated on the registry after the reports were run.

Audit outcome

Compliant

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

Code reference

Clause 10.33(1)

Code related audit information

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

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

Audit observation

Globug does not complete new connections. The AC020 report, event detail report, and registry list were examined to confirm no new connections were completed and check compliance.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10.33A(1)

Code related audit information

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

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

Audit observation

Processes were examined in detail to evaluate the strength of controls.

The AC020 reports were examined to confirm process compliance and that controls are functioning as expected.

Audit commentary

New Connections

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

Reconnections

All Globug customers must have an AMI meter. A meter change is ordered at the time of reconnection if the site is not an AMI metered site.

Analysis of the AC020 report identified that 69 ICPs were not recertified within five business days of reconnection. I checked the five oldest and five 50-150 days after event and found that:

- for eight ICPs that the meter was replaced or attempted to be replaced but none were able to be completed within five business days, and
- no attempt was made for the remaining two ICPs.

Bridged meters

41 ICPs were bridged during reconnection and were recertified on un-bridging.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.11 With: 10.33A From: 28-Aug-20 To: 21-Jul-21	69 ICPs reconnected without metering being certified. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate as uncertified meters are replaced with AMI meters, but this can sometimes take more than five business days from reconnection to be completed. The audit risk rating is low because although there is a higher possibility of inaccurate metering, there were only 69 ICPs affected.

Actions taken to resolve the issue	Completion date	Remedial action status
This non-compliance is due to the non-compliance of the MEP. We have weekly reporting to identify uncertified meters which we also share with MEPs. The 2 ICPs where no attempt was made have switched to other providers.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We have advised MEPs to contact us in the case there is an issue with a customer and will continue to work with MEPs to ensure timely meter certification.	Ongoing	

2.12. Arrangements for line function services (Clause 11.16)

Code reference

Clause 11.16

Code related audit information

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

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

Audit observation

The process to ensure an arrangement is in place before trading commences on a network was examined. The registry list with history was reviewed to identify networks which Globug traded on during the audit period.

Audit commentary

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

Audit outcome

Compliant

2.13. Arrangements for metering equipment provision (Clause 10.36)

Code reference

Clause 10.36

Code related audit information

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

Audit observation

The process to ensure an arrangement is in place with the metering equipment provider before an ICP can be created or switched in was checked. The registry list with history was reviewed to identify MEPs used by Globug during the audit period.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10.33B

Code related audit information

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

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

Audit observation

The process for reconnecting ICPs in the process of switching in was examined.

I matched reconnections to withdrawal acknowledgements to identify ICPs which had been reconnected and then undergone a withdrawal and checked compliance.

Audit commentary

Reconnections are not completed until the switch has completed. If the customer subsequently decides not to proceed, the customer must go to another trader and is switched away.

I checked all 91 ICPs which were reconnected and also had a withdrawal processed during the audit period. In all cases the status was updated before the withdrawal was initiated, or after the withdrawal process was complete. Globug was the trader at the time of reconnection.

Audit outcome

Compliant

2.15. Electrical disconnection of ICPs (Clause 10.33B)

Code reference

Clause 10.33B

Code related audit information

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

Audit observation

The disconnection process was examined.

Traders are only able to update ICP status for event dates where they are responsible for the ICP on the registry. The event detail report was reviewed to identify all ICPs which were disconnected during the audit period where an NT was received from another trader during the audit period, and compliance was checked.

Audit commentary

Globug will only initiate disconnection for ICPs that they are responsible for.

I checked all 118 ICPs which were disconnected and received an NT from another trader during the audit period. In all cases Globug was the trader on the disconnection date.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

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

Audit observation

Policies and processes for removal and breakage of seals were reviewed.

A sample of disconnections, reconnections, additions of export metering, and bridged meters were checked for compliance.

Audit commentary

All activities which could result in seals being removed or broken are completed by the MEP, or subcontractors to the MEP. Globug will raise a service request to the MEP. Once the work is completed the service order is returned and Globug uses this information to confirm the correct ICP attributes including status and profile, and update Salesforce, SAP and the registry.

The majority of Globug's reconnections and disconnections are done remotely. I checked a sample of requested information on seals for a sample of 15 reconnections and 21 disconnections. Of the reconnections, only one reconnection was not remotely and of the disconnections only one was not disconnected remotely. Both were reconnected/disconnected via the pole fuse, so no seals were broken.

Audit outcome

Compliant

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

Code reference

Clause 10.33C and 2A of Schedule 15.2

Code related audit information

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

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

If the trader bridges a meter, the trader must:

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

The trader must determine meter readings as follows:

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

Audit observation

The process for bridging meters was discussed and a sample of bridged meters were reviewed.

Audit commentary

Bridged meters are identified through returned work completion paperwork.

Globug only allows meters to be bridged where an urgent reconnection is required, and it is not possible to reconnect without bridging the meter. When an onsite reconnection is requested for an AMI meter, the technician will call the MEP while on site to attempt a soft reconnection, and only bypasses the meter if that fails.

The correction calculations were checked and were calculated correctly but the processing of these in SAP was not carried out correctly. This resulted in the volumes not flowing through to submission. I reviewed the process documentation and found it was not detailed enough to guide staff to operate the process correctly. This is recorded as non-compliance in **sections 2.1** and **12.7**.

Audit outcome

Compliant

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

Code reference

Clause 11.30

Code related audit information

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

Audit observation

Globug is prepaid service offering so invoices are not produced as such. The Globug application was reviewed.

Audit commentary

The customer's ICP number is not visible in the application but is present when they download a budget report from the website. I recommend that the ICP number is made visible within the application.

Description	Recommendation	Audited party comment	Remedial action
Use of ICP Identifier	Make ICP available in the Globug application.	Globug will review what is required to act on this recommendation.	Investigating

Audit outcome

Compliant

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

Code reference

Clause 11.30A

Code related audit information

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

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

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

Audit observation

The process to ensure that information on Utilities Disputes is provided to customers was discussed, and a sample of communications were reviewed to determine compliance.

Audit commentary

Clear and prominent information on Utilities Disputes is provided:

- in Globug's terms and conditions,
- on Globug's website, and
- as part of the email footer for outbound emails.

Globug has clear and prominent information on Utilities Disputes displayed on their website, on their outbound communications, and in their terms and conditions.

Audit outcome

Compliant

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

Code reference

Clause 11.30B

Code related audit information

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

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

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

Audit observation

The process to ensure that information on Powerswitch is provided to customers was discussed, and a sample of communications were reviewed to determine compliance.

Audit commentary

Clear and prominent information on Powerswitch is provided:

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

Audit outcome

Compliant

3. MAINTAINING REGISTRY INFORMATION

3.1. Obtaining ICP identifiers (Clause 11.3)

Code reference

Clause 11.3

Code related audit information

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

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

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

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

Audit observation

Globug does not complete new connections. The AC020 report, event detail report, and registry list were examined to confirm no new connections were completed and check compliance.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 11.7(2)

Code related audit information

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

Audit observation

Globug does not complete new connections. The AC020 report, event detail report, and registry list were examined to confirm no new connections were completed and check compliance.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 11.1

Code related audit information

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

Audit observation

The process to manage status changes is discussed in detail in **sections 3.8** and **3.9** below. The process to manage MEP nominations and trader updates was discussed.

The AC020 report was reviewed. A sample of late status updates, trader updates, and MEP nominations were checked as described in the audit commentary.

Audit commentary

The AC020 trader compliance report was reviewed to determine the timeliness of registry updates.

Status updates

The process to manage changes to the registry was examined. Globug provides the Mercury field services team with a report of all updates conducted in Salesforce on a weekly basis. This report is loaded to the registry. Any files with errors are returned to be resolved by the Globug support team. Once the file is successfully loaded to the registry a file of the changes is uploaded to SAP to update all affected ICPs. This process is only being run once a week and this can cause late updates to the registry.

Globug indicated in the last audit that the operations team and the ICT team were working to deploy additional discrepancy reporting to identify salesforce/SAP/registry mismatches and increase the frequency of updates to the registry. This is still in progress as this has proven to be more complex than originally thought. This is also discussed in **sections 2.1** and **3.9**. The timeliness of reconnection updates to the registry has improved since the last audit from 80.38% to 88.34% but has only improved marginally for disconnected ICPs from 42.2% to 47.39%. The low achievement percentage for disconnections is evidence of the delays caused by the weekly update process.

The accuracy of updates is discussed in **sections 3.8** and **3.9.** As noted in **section 2.1**, the process for the updating of credit disconnections is not compliant and this is recorded as non-compliance in **section 3.9**.

The timeliness of status updates to active (for reconnections) is set out in the table below.

Event	Year	ICPs notified greater than 5days	Average notification days	Percentage compliant
Active status updates	2018	134	3.2	90%
	2019	463	4	90%
	2020	920	6.5	80.38%
	2021	**449**	**3.91**	**88.34%**

354 late updates were made within ten business days of the event date, and 427 were within 30 business days of the event date. The latest update was 945 business days after the event date. I checked the 15 latest updates and found:

- 12 late updates were due to a system issue leading to some ICPs not being included in the automated file from Salesforce; this was identified in the last audit and new reporting is being built to correct this. This is being rolled out in stages. The first part will be in place by December 2021,
- two late updates were caused by another trader changing the status for their period of ownership prior to Globug's period of ownership, causing the Globug status to be incorrect; these were identified and corrected via the BAU weekly discrepancy process, and
- one late update was due to revenue assurance activity which backdated a site to the date the ICP started consuming to ensure the volumes were reconciled.

The timeliness of status updates to inactive (for disconnections) is set out in the table below.

Event	Year	ICPs notified greater than 5days	Average notification days	Percentage compliant
Inactive status updates	2018	817	6.1	49.7%
	2019	2,876	7	42.7%
	2020	2,883	11	42.2%
	2021	**2,302**	**7.03**	**47.39%**

2,213 (99%) late updates were made within ten business days of the event date, and 2,289 were within 30 business days of the event date. The latest update was 820 business days after the event date. I checked the five latest (or all late) updates per status reason code and found:

Disconnection reason	Findings
Vacant	All were late due to not being notified to the registry maintenance team to update the status due to human error.
Remote disconnection	• Three were due to the weekly file management process. If these are missed in the first report due to the Registry Management team then they are not processed for another week which in these cases resulted in the event being backdated 19 days. • Two were backdated 820 and 772 days respectively. These were both notified to the Registry Management team via email late. The person who sent the emails has since left the business and there are no notes as to why these were backdated to disconnected.
Disconnected at pole fuse (1 only)	This was an emergency disconnection and was notified late by the Network.
Meter disconnected	Globug undertook site visits for all long term active vacant ICPs in the Auckland area. This identified some ICPs that have had their meters removed and in some instances the house has been demolished. Globug have not had any request for these ICPs to be decommissioned by the property owner or the network, hence in these instances the ICP is set to this status.
Ready for decommissioning	• Four were backdated due to late notification from the network. • One was notified to the registry management team late.

The timeliness of trader updates is set out in the table below.

Event	Year	ICPs notified greater than 5days	Average notification days	Percentage compliant
Trader updates	2020	62	2	93.12%
	2021	**194**	**2.25**	**89.66%**

173 (87%) late updates were made within ten business days of the event date, and 192 were within 30 business days of the event date. The latest update was 69 business days after the event date.

193 of the 194 late updates were indicated to be MEP changes, and the other was an ANZSIC code change. The ANZSIC code was updated late due to this being a backdated switch in. It was updated as soon as the switch completed and is therefore a technical non-compliance. Examination of the ten latest MEP nominations found:

- five late notifications were due to backdated switches,
- three late notifications were due to a processing issue,
- one MEP nomination had to be reloaded due to the previous trader loading a trader event for their time slice which removed Globug's nomination, and
- the incorrect MEP was nominated in the first instance hence a backdated nomination was loaded to correct this.

The AC020 also identified three switched in ICPs where the ANZSIC code was not populated within 20 business days. All three had backdated CS files, and the ANZSIC codes were updated by Globug within one week of switch in.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.3 With: 10 Schedule 11.1 From: 05-Aug-20 To: 14-Jul-21	449 (11.66%) late status updates to active. 2,302 (52%) late status updates to inactive. 194 late trader updates. Three late ANZSIC code updates. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate overall, but the weekly processing of disconnection requests is impacting the timeliness of these updates to the registry. The audit risk rating is assessed to be low as submission occurs regardless of the ICP status, but this will affect ICP days and line charge billing.

Actions taken to resolve the issue	Completion date	Remedial action status
449 (11.66%) late status updates to active. **2,302 (52%) late status updates to inactive.** Majority of our late status updates are caused by our weekly processing of disconnection updates + a small number of ICPs missing from our reporting. With improvements to our status reporting, we expect to see a significant improvement in the timeliness of our updates. **Three late ANZSIC code updates.** All three were backdated switches and Globug updated the ANZSIC code within one week of switching in.	N/A	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
449 (11.66%) late status updates to active. **2,302 (52%) late status updates to inactive.** Globug has been working on new reporting to improve registry status updates for some time now. This has proven to be more difficult than first expected. We have however made progress and we are looking to implement new reporting in multiple stages. The specifications of the reporting are still being worked through with our developer, however, we expect the final reporting to identify all discrepancies between Salesforce and the registry, provide us the ability to run registry updates multiple times a week (if not daily) and will update disconnections for each full day of no power. **194 late trader updates.** We will look into what can be done to improve our timeliness of trader updates.	Dec 21 – Mar 21	

3.4. Trader responsibility for an ICP (Clause 11.18)

Code reference

Clause 11.18

Code related audit information

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

A trader ceases to be responsible for an ICP if:

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

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

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

Audit observation

The connection, MEP nomination and decommissioning processes were reviewed, and the registry list and audit compliance reports were examined to confirm process compliance.

A sample of MEP nomination rejections and decommissioned ICPs were examined.

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**.

All active ICPs have an MEP recorded. Review of the AC020 report and registry list identified 15 ICPs which had a metering category 9. Of those:

- 14 ICPs had accepted MEP nominations and are awaiting meter asset data on the registry, and
- one was a timing difference and meter asset data was populated on the registry after the reports were run.

MEP rejections are reviewed by the Mercury registry management team if received and would be forwarded to Globug to resolve. None of the 1,818 MEP nominations issued which received an MN response were rejected.

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 electrical disconnection. The Mercury field services team manage this process on behalf of Globug and they advise the MEP responsible that a site is to be decommissioned.

A sample of five ICPs was examined which confirmed an attempt to read the meter was made at the time of removal.

Audit outcome

Compliant

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

Code reference

Clause 9 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

Globug does not complete new connections. The AC020 report, event detail report, and registry list were examined to confirm no new connections were completed and check compliance.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 9 (1(k) of Schedule 11.1

Code related audit information

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

Audit observation

The process to capture and manage ANZISC codes was examined. The registry list and AC020 reports were reviewed and ANZSIC codes were checked for a sample of ICPs to determine compliance.

Audit commentary

The Mercury field services team checks these on a bi-monthly basis and any missing or "T9"- unknown coded ICPs are passed to Globug to investigate.

The validity of ANZSIC codes was checked using the AC020 report:

- no ICPs had blank or unknown (T99 series) ANZSIC codes, and
- no ICPs have a meter category of two or higher.

Globug mainly deals with residential customers and all but 23 ICPs ANZSIC codes are "residential". I checked a sample of 40 ICP ANZSIC codes (including the 23 ICPs with non-residential codes) by comparing them to Google streetview and the registry property name information and found 12 (52%) of the 23 ICPs with a non-residential code were incorrect. These have been corrected. I recommend that a 6-monthly check is undertaken of all non-residential coded ICPs is undertaken to confirm their validity.

Description	Recommendation	Audited party comment	Remedial action
ANZISC codes	Check all non-residential ANZSIC coded ICPs six monthly to confirm their validity.	We will be looking at building some reporting to identify these ICPs and as a minimum will be reviewing 6 monthly.	Investigating

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.6 With: 9(1)(k) Schedule 11.1 From: 05-Aug-20 To: 14-Jul-21	12 of 23 (52%) non-residential codes were incorrect. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong overall as this is checked as ICPs join Globug. I recommend that non-residential codes are checked to confirm their validity. The audit risk rating is assessed to be low as this field is a static data table and has no direct impact on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
12 of 23 (52%) non-residential codes were incorrect. As recommended by the auditors, we will look into building some reporting to identify these ICPs and as a minimum will be reviewing 6 monthly.	Jun 22	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above.	As above.	

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

Code reference

Clause 9(1)(f) of Schedule 11.1

Code related audit information

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

- *the code ENG - if the load is profiled through an engineering profile in accordance with profile class 2.1 (clause 9(1)(f)(i)); or*
- *the daily average kWh of unmetered load at the ICP - in all other cases (clause 9(1)(f)(ii)).*

Audit observation

The process to manage unmetered load was examined. The registry list and AC020 reports were examined to determine compliance.

Audit commentary

Globug supplies four ICPs with shared unmetered load, and no ICPs with standard or distributed unmetered load.

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

The AC020 report and registry list were reviewed, and no discrepancies were identified:

- no ICPs had unmetered load recorded by the distributor and not by Globug,
- no ICPs had unmetered load recorded by Globug and not the distributor,
- no ICPs had unmetered load is indicated but the unmetered daily kWh set to zero or blank, and
- Globug's daily unmetered kWh matched the value calculated from the distributor information within ±0.1 kWh for all ICPs where calculation could be completed.

No unmetered builder's temporary supplies are present.

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 11.1

Code related audit information

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

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

Before an ICP is given the "active" status, the trader must ensure that:

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

Audit observation

Globug does not complete new connections. The AC020 report, event detail report, and registry list were examined to confirm no new connections were completed and check compliance.

The reconnection process was examined using the AC020 and event detail reports. The timeliness of data for reconnections is assessed in **section 3.3**, and a sample of 15 updates were checked for accuracy.

Audit commentary

Salesforce and SAP will not allow more than one party per ICP, nor will it allow an ICP to be set up without a meter.

Arrangements are made for ICPs to be reconnected if they switch in at an inactive status and the status is updated in Salesforce once the site is confirmed to be reconnected. A weekly update file is generated from Salesforce and provided to the Mercury field services team to update the registry. They create an upload file to the registry. This report is loaded to the registry. Any files with errors are returned to be resolved by the Globug support team. Once the file is successfully loaded to the registry a file of the changes is uploaded to SAP to update all affected ICPs, so all systems should align.

My analysis of 15 ICPs found that the "active" status was recorded correctly.

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

Audit outcome

Compliant

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

Code reference

Clause 19 Schedule 11.1

Code related audit information

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

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

Audit observation

The disconnection process was examined using the AC020 and event detail reports. The timeliness of data for disconnections is assessed in **section 3.3**, and a sample of updates were checked for accuracy.

Audit commentary

Disconnection information accuracy

The status of "inactive" is only used once a Globug approved contractor has confirmed that the ICP has been disconnected.

A weekly update file is generated from Salesforce and provided to the Mercury field services team to update the registry. They create an upload file to the registry. This report is loaded to the registry. Any files with errors are returned to be resolved by the Globug support team. Once the file is successfully loaded to the registry a file of the changes is uploaded to SAP to update all affected ICPs, so all systems should align. My analysis of the inactive statuses for 21 ICPs confirmed that all had the correct status applied. The timeliness of these updates is discussed in **section 3.3**.

Globug indicated in the last audit that the operations team and the ICT team were working deploy additional discrepancy reporting to identify salesforce/SAP/registry mismatches and increase the frequency of the reporting. This is still in progress as this has proven to be more complex than originally thought.

122 ICPs had the AMI flag set to no with 1,7 (Electrically disconnected remotely by AMI meter) status. All had the AMI metering flag updated after being disconnected.

Globug does not complete new connections, and no ICPs are at "inactive new connection in progress" status.

A check of five ICPs with active vacant consumption were checked and found ICP 0410861030LC959 was disconnected on 21 July 2021, but no disconnection read was provided, and instead the volume was incorrectly applied through to the next read date which was 31 July 2021. This is recorded as non-compliance in **sections 2.1** and **12.7**.

Inactive ICPs with consumption

Globug provided a list of 15 ICPs with consumption during an inactive period:

- eight of the ICPs were returned to active status for the period of consumption prior to the audit,
- four were confirmed not to have genuine consumption,
- two of the ICPs switched to another retailer for the period of consumption, and
- ICP 0000503171CEDDD was confirmed to have a small amount of genuine consumption; the registry records this as inactive from 30 July 2021 to 14 September 2021 but the minor amount of submission was for the period 13 July 2021 to 31 August 2021 which is recorded as non-compliance in **sections 2.1** and **12.7**.

Previous audit issues

Issues identified during the previous audit were followed up:

Previous audit issue	Comment
There is an issue where Globug believes a remote disconnection has occurred, but it turns out the remote disconnection was not successful. I recommend Globug investigates this matter to identify whether there is some reporting available from the MEP confirming whether the disconnection was successful or not.	Reporting has been put in place at the beginning of October 2021 to identify this.
Globug do not update the registry in relation to credit disconnections in every instance. Due to the nature of the customer base, there is high level of activity, and they are under the understanding the Electricity Authority do not require this to be updated until seven consecutive days of an ICP being disconnected. In this audit I noted that when the disconnection is updated it is made effective from the seventh day of no power. This needs to be corrected and the status updated for every full day of no power.	In this audit I clarified and confirmed that when an ICP has been disconnected for more than seven days the correct date of disconnection is recorded but the update does not reach the registry until seven days has elapsed. The late updates are recorded as noncompliance in **section 3.3**. The issue that remains is that when an ICP is disconnected and then reconnected for a period of less than seven days, these are not updated on the registry. Globug investigated the sending of daily updates to the registry, but testing found that this was not producing the expected outcome, and further work is required before this can be put into production.
Disconnection reads are not consistently entered.	The list of disconnections is sent out every Tuesday. These are entered into SAP when received. The sample of disconnected and ICPs decommissioned confirmed that these are entered if available.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.9 With: 19 of schedule 11.1 From: 01-Aug-20 To: 31-Jul-21	Credit disconnections not updated on the registry or SAP for each full day the ICPs are inactive. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate as they will mitigate risk most of the time, but the updating of statuses and credit disconnections requires some improvement. The audit risk is rated as low as the volumes will be submitted but will be allocated across the incorrect period.

Actions taken to resolve the issue	Completion date	Remedial action status
Due to the nature of Globug this has always been a difficult issue to resolve. We have explored many options over the past 12 months and a fix has proven more difficult than first anticipated. We are currently working with our developer to create new reporting to resolve this issue.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are looking to implement new reporting in multiple stages. The specifications of the reporting are still being worked through with our developer, however, we expect the final reporting to identify all discrepancies between Salesforce and the registry, provide us the ability to run registry updates multiple times a week (if not daily) and will update disconnections for each full day of no power.	Dec 21 – Mar 22	

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

Code reference

Clause 15 Schedule 11.1

Code related audit information

If an ICP has had the status of "New" or "Ready" for 24 calendar months or more, the distributor must ask the trader whether it should continue to have that status and must decommission the ICP if the trader advises the ICP should not continue to have that status.

Audit observation

Globug does not complete new connections. The AC020 report, event detail report, and registry list were examined to confirm no new connections were completed and check compliance.

Audit commentary

Globug has not dealt with any new connections, and do not intend to. No ICPs are at “new” or “ready” status.

Audit outcome

Compliant

4. PERFORMING CUSTOMER AND EMBEDDED GENERATOR SWITCHING

4.1. Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3)

Code reference

Clause 2 Schedule 11.3

Code related audit information

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

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

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

Audit observation

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

Audit commentary

Globug's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files are sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind. Globug is offered as an alternative service when customers are facing payment difficulties. The Globug product is not actively marketed.

It is confirmed with the customer if they are transferring their ICP or moving into a new property when they join Globug.

Review of the event detail report found 1,553 transfer switch NTs were issued. All the ICPs had metering category 1.

The five NT files checked had the correct switch type applied and were requested within two business days of pre-conditions being cleared.

Audit outcome

Compliant

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

Code reference

Clauses 3 and 4 Schedule 11.3

Code related audit information

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

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

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

Audit observation

The event detail report was reviewed to:

- identify AN files issued by Globug during the audit period,
- assess compliance with the requirement to meet the setting of event dates requirement, and
- check a diverse sample ANs to determine whether the codes had been correctly applied.

The switch breach history report was examined for the audit period.

Audit commentary

AN file production has been automated since 12 December 2019. This is not working as expected in all instances specifically to the application of PD code. This affected approximately 5% of the AN files sent. This is discussed further below.

Globug trade mostly on AMI metered sites. 248 AN files were issued, of those:

- 211 had the AD (advanced metering) response code applied and the AMI flag was set to yes,
- 35 had the PD (premises electrically disconnected) response code applied; 11 were disconnected on the registry at the time of the switch, and the other 24 were active on the registry - I checked a sample of ten of these and found four were correctly sent as they had been electrically disconnected but the status hadn't been updated on the registry while the remaining six ICPs were sent with the incorrect code which is recorded as non-compliance below, and
- two had the AA (acknowledge and accept) response code applied; for one ICP the code was correctly applied but the ICP 0000185002CTEB4 should have been sent with the AD code as it has AMI metering.

The event detail report was reviewed for all 248 transfer ANs to assess compliance with the setting of event dates requirements:

- 245 ANs (98.7%) had proposed event dates within five business days of the NT receipt date, and
- all 248 ANs had proposed event dates within ten business days of the NT receipt date.

Three AN breaches were recorded on the switch breach history report. These were examined and found all were sent to the registry after the registry open hours which are 7:00 AM - 7:30PM causing these to be a day late.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.2 With: Clauses 3 and 4 Schedule 11.3 From: 12-Jan-21 To: 12-Jan-21	Incorrect AN code for seven ICPs. Three AN breaches. Potential impact: Low Actual impact: Low Audit history: Once previously Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as moderate as the automation works most of the time, but incorrect codes were sent for a small number of ICPs indicating there is room for improvement. The audit risk rating is assessed to be low as there is a risk that a gaining trader will incur costs for those sent with the incorrect PD code when the ICP is already connected but the number of ICPs affected is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Incorrect AN code for seven ICPs. We are engaging with our ICT team to determine why the correct code is not being used in all instances. We expect our initial investigation to be complete by Dec 21. **Three AN breaches.** These 3 breaches were simply due to our team completing the processing outside of the registry hours.	Dec 21	Investigating

Preventative actions taken to ensure no further issues will occur	Completion date	
Incorrect AN code for seven ICPs. Once our investigation is complete and the root cause has been identified, we will be working with ICT to test and implement a fix to ensure our code logic is identifying and using the correct AN code. **Three AN breaches.** We have reminded the team of the registry hours to prevent this from recurring and will also be conducting a process review to identify further areas for improvement and more timely processing. This review is due to be completed in December 21.	Mar 22 Dec 21	

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

Code reference

Clause 5 Schedule 11.3

Code related audit information

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

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

Audit observation

The event detail report 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 records. The content checked included:

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

CS files with average daily kWh that was negative, zero, or over 200 kWh were identified. A sample of these CS files were checked to determine whether the average daily consumption was correct.

The process to manage the sending of the CS file within five business days of the event date was examined, and the switch breach history report for the audit period was reviewed to identify late CS files.

Audit commentary

CS timeliness

The creation of 60% of all CS files is automated. If the CS file does not meet all validation requirements in the automated process these are sent to an exception work queue and reviewed manually before they are released.

The switch breach history report recorded the following breaches for transfer switches:

- nine CS breaches - all backdated transfer switches where the AN file indicated a later event date than requested, but the CS file was sent for the earlier requested event date, which caused the CS file to be sent more than five business days after the event date,
- one E2 breach for ICP 0000006644UNE8F, where the CS actual transfer date was more than ten business days after receipt of the NT which was caused by the automation incorrectly sending a NWMI due to a mismatch of zeroes for the meter number between the registry and SAP; this withdrawal was rejected but the switch breach reporting in place at the time did not identify that a CS file was needing to be sent, and
- five WR breaches where the AN and/or CS is delivered more than two business days after AW rejection which were caused due to the same issue as the E2 breach discussed above, and it appears that the switch breach reporting was not pulling these incidents through.

Globug are reviewing the breach reporting to ensure that all breach types are being reported and therefore can be identified and resolved. The number of ICPs affected is small so the issue identified is not causing a large volume of discrepancies.

CS content

The methodology of calculating the average daily consumption was checked. It is being calculated from the last two actual reads, which is compliant. Analysis estimated daily kWh provided in CS files on the event detail report identified:

Average daily kWh	Count of files	Findings
Negative	-	Compliant.
Zero	3	The average daily kWh was confirmed to be consistent with the last read to read period except for ICP 0225602857LCE71 where the average should have been recorded as 38 kWh. This was due to human error as the CS file was manually released and the incorrect figure was sent.
More than 200 kWh	-	Compliant.

I checked the consistency of last actual read dates and switch event read types. All ICPs with a last actual read dates prior to the last day of supply were sent with an estimated reading. Two transfer switches had a last actual read date on the last day of supply and were sent with an estimated switch event reading. These were both manually released CS files and the read from the day before was sent as an estimate read. Both ICPs had a read for the day of supply but these were not used resulting in a small amount of volume being pushed to the gaining trader. This is recorded as non-compliance.

I also checked the content of a further five CS files. The final reads were confirmed to be accurate for these as the final read in SAP is being used and Salesforce as was found in the last audit. I found one with the incorrect average daily consumption figure. This was due to human error as the CS file was manually released.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.3 With: Clause 5 of Schedule 11.3 From: 17-Jun-20 To: 14-Jul-21	Nine CS breaches. One E2 breach. Five WR breaches. Two transfer switches sent with the incorrect read. One ICP of the sample of five ICPs checked with the zero recorded as the average daily consumption sent with the incorrect average daily consumption. One ICP of the sample of five typical CS files checked sent with the incorrect average daily consumption. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate. The errors found related to manually released CS files. Further training has been provided to resolve this. The audit risk rating is assessed to be low as the volume of late files and incorrect information in the CS files will have a minor effect on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
Nine CS breaches. These CS files were exceptions to our automated process and were manually released. The breaches are due to human error. **One E2 breach.** **Five WR breaches.** An automation issue caused NWMIs to be sent incorrectly for these ICPs. An issue with our breach reporting meant the team were unaware CS files needed to be sent following the rejection of the NW from the other retailer which caused the delay. We identified this issue and implemented new reporting in August to pick these up and have not had any further issues since. **Two transfer switches sent with the incorrect read.** These CS files were exceptions to our automated process and were manually released. The incorrect reads were sent due to human error. **One ICP of the sample of five ICPs checked with the zero recorded as the average daily consumption sent with the incorrect average daily consumption.** **One ICP of the sample of five typical CS files checked sent with the incorrect average daily consumption.** These two examples were manually released CS files and the average Daily Consumption was incorrect due to human error.	N/A	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Nine CS breaches. Refresher training will be provided to staff to ensure the correct procedures are followed for manually released files. **One E2 breach.** **Five WR breaches.** We have introduced a step for staff to review NWMIs on the same day. We will also be reviewing this part of our automated process to correct the logic to ensure NWMIs are not sent erroneously. **Two transfer switches sent with the incorrect read.** Refresher training will be provided to staff to ensure the correct procedures are followed for manually released files. **One ICP of the sample of five ICPs checked with the zero recorded as the average daily consumption sent with the incorrect average daily consumption.** **One ICP of the sample of five typical CS files checked sent with the incorrect average daily consumption.** We will be reviewing our manual processes and aligning these with our automated processes to ensure correct meter reads are retrieved and the correct average daily consumption is calculated and sent.	Dec 21 May 22 Dec 21 May 22	

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

Code reference

Clause 6(1) and 6A Schedule 11.3

Code related audit information

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

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

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

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

Audit observation

The process for the management of read change requests was examined. The event detail report was analysed to identify all read change requests and acknowledgements during the audit period, and a sample were checked.

I also checked for CS files with estimated readings provided by other traders where no RR was issued.

The switch breach history report for the audit period was reviewed.

Audit commentary

RR

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.

Globug issued seven RR files for transfer switches. Five were accepted and one was rejected. There was a genuine reason for the RRs to be issued, they were based on reads confirmed by the other trader, and SAP reflected the correct outcome of the RR process.

The switch breach history report recorded one RR breach for a transfer switch. ICP 0000014545TR0B0 required investigation before the RR could be sent and this caused it to be issued late.

AC

All RR requests are evaluated and validated against the ICP information. If the request is within validation requirements these are accepted. Once accepted the AC response is loaded directly to the registry. The reads are entered into SAP by the switching team and into Salesforce by the Globug operations team.

One AC file was issued for a transfer switch, which accepted the other trader's RR. The switch was later withdrawn.

The switch breach history report did not record any AC breaches for transfer switches.

CS files with estimated readings where no RR is issued

Five switch move CS files with estimated reads where no RR was issued were reviewed, and I confirmed the correct readings were applied in SAP.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.4 With: Clauses 6(1) and 6A Schedule 11.3 From: 30-Mar-21 To: 30-Mar-21	One RR breach for a transfer switch. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong. These are managed on a case-by-case basis with robust controls. The audit risk rating is low as there was only one late RR sent this was within the 14-month revision cycle so the volumes will be reconciled correctly.

Actions taken to resolve the issue	Completion date	Remedial action status
ICP: 0000014545TR0B0 required investigation which caused delay in sending the RR. There were multiple retailers involved and control reads were required before the RR could be sent.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
This was a one-off case. We have strong processes in place to mitigate the risk of RR breaches.	N/A	

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

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

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

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

Audit observation

The event detail report was reviewed to identify all read change requests and acknowledgements where clause 6(2) and (3) of schedule 11.3 applied.

Audit commentary

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

Globug received and accepted one RR where clause 6(2) and (3) of schedule 11.3 applied. The switch was later withdrawn.

Globug did not issue any read change requests where clause 6(2) and (3) of schedule 11.3 applied.

Audit outcome

Compliant

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

Code reference

Clause 7 Schedule 11.3

Code related audit information

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 9 Schedule 11.3

Code related audit information

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

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

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

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

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

Audit observation

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

Audit commentary

Globug's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. NT files are sent as soon as all pre-conditions are met, and the withdrawal process is used if the customer changes their mind. Globug is offered as an alternative service when customers are facing payment difficulties. The Globug product is not actively marketed.

It is confirmed with the customer if they are transferring their ICP or moving into a new property when they join Globug.

Review of the event detail report found 7,035 switch move NTs were issued. All the ICPs had metering category 1.

The ten NT files checked had the correct switch type applied and were requested within two business days of pre-conditions being cleared.

Audit outcome

Compliant

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

Code reference

Clause 10(1) Schedule 11.3

Code related audit information

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

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

Audit observation

The event detail report was reviewed to:

- identify AN files issued by Globug during the audit period,
- assess compliance with the requirement to meet the setting of event dates requirement, and
- a diverse sample ANs were checked to determine whether the codes had been correctly applied.

The switch breach history report was examined for the audit period.

Audit commentary

AN content

AN file production has been automated since 12 December 2019. This is not working as expected in all instances specifically to the application of PD code. This affected approximately 2.5% of the AN files sent. This is discussed further below.

Globug trade mostly on AMI metered sites. 208 AN files were issued, of those:

- 175 had the AD (advanced metering) response code applied and the AMI flag was set to yes,
- 28 had the PD (premises electrically disconnected) response code applied; 16 were disconnected on the registry at the time of the switch, and the other 12 were active on the registry - I checked a sample of ten of these and found five were correctly sent as they had been electrically disconnected but the status hadn't been updated on the registry, while the remaining five ICPs were sent with the incorrect code and should have been sent with an AD code which is recorded as non-compliance below, and
- five had the AA (Acknowledge and accept) response code applied correctly.

The event detail report was reviewed for all 208 switch move ANs to assess compliance with the setting of event dates requirements:

- all 208 ANs had proposed event dates within ten business days of the NT receipt date, and
- no ANs had proposed event dates before the gaining trader's proposed event date.

AN and CS timeliness

The switch breach history report recorded the following breaches for switch moves:

- three AN breaches were recorded on the switch breach history report; two were due to human error and one was due to being sent to the registry on the correct date after 7:30 pm which is after the registry open hours and was therefore recorded as received the next day,
- two CS breaches were recorded, where the CS event date was different to the requested date and the CS file was sent more than ten business days after the NT received date,
- 12 E2 breaches where the NT proposed transfer date and actual transfer date did not match, and the CS event date was earlier than the gaining trader's proposed event date; one was not genuine because the CS event date matched the NT proposed event date while the remaining 11 incidents were due to the CS file being manually released and the event date was earlier than the requested and proposed date in all instances (staff have been provided additional training to ensure that the switch move ICPs are not backdated),
- 16 T2 breaches where the CS arrived more than five business days after the NT - I checked the five latest files and found that these breaches were not being reported on the breach report to the team, so they were not being monitored (reporting has been put in place to ensure that these are identified and actioned), and

- 44 WR breaches where the AN and/or CS is delivered more than two business days after AW rejection - I checked the five latest and found this was caused by the automation incorrectly sending a NWMI due to a mismatch of zeroes for the meter number between the registry and SAP; this withdrawal was rejected but the reporting in place at the time did not identify that a CS file was needing to be sent.

As detailed in **section 4.3**, Globug are reviewing the breach reporting to ensure that all breach types are being reported and therefore can be identified and resolved.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.8 With: Clause 10(1) Schedule 11.3 From: 12-Jan-21 To: 29-Jun-21	Five of ten ICPs sampled (of a possible 12 ICPs) sent with an incorrect AN response code. Three AN breaches. Two CS breaches. 12 E2 breaches. 16 T2 breaches. 44 WR breaches. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as moderate as the automation works most of the time, but incorrect codes were sent for a small number of ICPs indicating there is room for improvement. The audit risk rating is assessed to be low as there is a risk that a gaining trader will incur costs for those sent with the incorrect PD code when the ICP is already connected, but the number of ICPs affected is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Five of ten ICPs sampled (of a possible 12 ICPs) sent with an incorrect AN response code. We are engaging with our ICT team to determine why the correct code is not being used in all instances. We expect our initial investigation to be complete by Dec 21. **Three AN breaches.** Two of these breaches were due to human error miscalculating public holiday timings. One was due to our team completing the processing outside of the registry hours. **Two CS breaches.** **12 E2 breaches.** These CS files were exceptions to our automated process and were manually released. The breaches are due to human error. **16 T2 breaches.** These breaches were not being monitored as they were not reported on our breach reporting. We have reviewed our reporting and confirm these are now being reported to the team. **44 WR breaches.** An automation issue caused NWMIs to be sent incorrectly for these ICPs. An issue with our breach reporting meant the team were unaware CS files needed to be sent following the rejection of the NW from the other retailer which caused the delay. We identified this issue and implemented new reporting in August to pick these up and have not had any further issues since.	Dec 21	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Five of ten ICPs sampled (of a possible 12 ICPs) sent with an incorrect AN response code. Once our investigation is complete and the root cause has been identified, we will be working with ICT to test and implement a fix to ensure our code logic is identifying and using the correct AN code.	Mar 22	
Three AN breaches. We have reminded the team of the registry hours to prevent this from recurring and will also be conducting a process review to identify further areas for improvement and more timely processing.	Dec 21	
Two CS breaches. **12 E2 breaches.** Refresher training will be provided to staff to ensure the correct procedures are followed for manually released files. We will also be conducting a process review to identify further areas for improvement and more timely processing. This will include exploring options to incorporate system alerts/notifications where incorrect dates are entered to alert agents to these errors when manually processing a file.	May 22	
16 T2 breaches. We have addressed this issue and can confirm the breaches are now included in our breach reporting. We will also be reviewing our breach reporting processes to ensure all breaches are being filtered correctly.	Mar 22	
44 WR breaches. We have introduced a step for staff to review NWMIs on the same day. We will also be reviewing this part of our automated process to correct the logic to ensure NWMIs are not sent erroneously.	May 22	

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

Code reference

Clause 10(2) Schedule 11.3

Code related audit information

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

- *the event date proposed by the losing trader; and*
- *a valid switch response code; and*
- *final information as required under clause 1.*

Audit observation

The event detail report was reviewed to identify AN files issued by Globug during the audit period, and assess compliance with the requirement to meet the setting of event dates requirement.

Audit commentary

Analysis found all 208 switch move ANs had a valid switch response code, and compliant proposed event dates. Non-compliance is recorded in **section 4.8** for the 12 ICPs where the CS was sent for an earlier date than requested and proposed.

Audit outcome

Compliant

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

Code reference

Clause 11 Schedule 11.3

Code related audit information

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

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

Audit observation

The event detail report 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 records. The content checked included:

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

CS files with average daily kWh that was negative, zero, or over 200 kWh were identified. A sample of these CS files were checked to determine whether the average daily consumption was correct.

The process to manage the sending of the CS file within five business days of the event date was examined, and the switch breach history report for the audit period was reviewed to identify late CS files.

Audit commentary

The creation of 60% of all CS files is automated. If the CS file does not meet all validation requirements in the automated process these are sent to an exception work queue and reviewed manually before they are released.

The methodology of calculating the average daily consumption was checked. It is being calculated from the last two actual reads, which is compliant. Analysis estimated daily kWh provided in CS files on the event detail report identified:

Average daily kWh	Count of files	Findings
Negative	-	Compliant.
Zero	27	A sample of five files were checked and the average daily kWh was confirmed to be consistent with the last read to read period.
More than 200 kWh	-	Compliant.

I checked the consistency of last actual read dates and switch event read types. All ICPs with a last actual read dates prior to the last day of supply were sent with an estimated reading. 14 switch moves had a last actual read date on the last day of supply and an estimated switch event reading. A sample of five ICPs were checked and found they were all manually released CS files. All were ICPs that had switched into Globug, but an AMI meter couldn't be installed so they switched to another trader (mostly Mercury) for the next day with the same read as the Globug gain read. Volumes from the one day of supply with Globug are pushed to gaining trader and then reconciled on the incorrect day. This is recorded as non-compliance.

I also checked the content of a further five CS files and found the content was correct.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.10 With: Clause 11 Schedule 11.3 From: 17-Jun-20 To: 14-Jul-21	14 switch move ICPs sent with incorrect estimated reads. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate. The errors found related to manually released CS files. Further training has been provided to resolve this. The audit risk rating is assessed to be low as the volume of files with incorrect information in the CS files is small.

Actions taken to resolve the issue	Completion date	Remedial action status
Where Globug cannot supply an ICP due to metering issues, we work to switch the ICP out immediately. In most cases the ICP is with Globug for only one day and the switch out read is the same as the switch in read. The switch in read is recorded as an actual however as this read would technically be from the day prior to the switch in (previous trader's last day of supply) we send these as estimated reads.	N/A	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will review our processes to see how we can comply with the code requirements.	Mar 21	

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

Code reference

Clause 12 Schedule 11.3

Code related audit information

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

- *if the switch meter reading established by the gaining trader differs by less than 200 kWh from that provided by the losing trader, both traders must use the switch event meter reading provided by the gaining trader (clause 12(2)(a)); or*

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

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

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

Audit observation

The process for the management of read change requests was examined. The event detail report was analysed to identify all read change requests and acknowledgements during the audit period, and a sample were checked.

I also checked for CS files with estimated readings provided by other traders where no RR was issued.

The switch breach history report for the audit period was reviewed.

Audit commentary

RR

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.

Globug issued 81 RR files for switch moves. 50 were accepted and 31 were rejected. I checked a sample of five accepted and five rejected RRs. There was a genuine reason for the RRs to be issued except for ICP 0000006644UNE8F. This was sent in error and was not supported by two actual reads. It was rejected by the other trader. The remaining four ICPs were based on reads confirmed by the other trader, and SAP reflected the correct outcome of the RR process.

The switch breach history report recorded seven RR breaches for switch moves. These were examined and found:

- four were issued late as they were part of a chain of RRs to correct reads for several traders,
- two were late due to the investigation needed before the RR could be sent, and
- ICP 0000147396TR2CC was late due to late notification from the Globug operations team.

AC

All RR requests are evaluated and validated against the ICP information. If the request is within validation requirements these are accepted. Once accepted the AC response is loaded directly to the registry. Once accepted the AC response is loaded directly to the registry. The reads are entered into SAP by the switching team and into Salesforce by the Globug operations team.

Four AC files were issued for switch moves, which accepted the other trader's RRs. The switches were later withdrawn.

The switch breach history report recorded one AC breach for switch move. The AC response for ICP 0005202987WECE4 was sent late due to human error over the Christmas period.

CS files with estimated readings where no RR is issued

Five switch move CS files with estimated reads where no RR was issued were reviewed, and I confirmed the correct readings were applied in SAP.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.11 With: Clause 12 Schedule 11.3 From: 12-Jan-21 To: 19-Jul-21	One of the four RRs issued was issued in error and was not supported by two actual reads. Seven RR breaches for switch moves. One AC breach for a switch move. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong. These are managed on a case-by-case basis with robust controls. The audit risk rating is low as all seven late RRs sent t and all were within the 14-month revision cycle so the volumes will be reconciled correctly.

Actions taken to resolve the issue	Completion date	Remedial action status
One of the four RRs issued was issued in error and was not supported by two actual reads. This RR was issued incorrectly due to human error. **Seven RR breaches for switch moves.** Four were issued late as there were several traders involved and could not be avoided. Two required investigation prior to sending a final RR and one was identified late by our GBUG operations team following some reconnection paperwork. **One AC breach for a switch move.** This breach was due to human error, miscalculating public holiday timings.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
One of the four RRs issued was issued in error and was not supported by two actual reads. This was a one-off case due to human error. We have strong processes in place to process RRs. **Seven RR breaches for switch moves.** In some cases, investigations are required prior to completing an RR and delays are unavoidable. We have implemented some changes with the Globug Operations team to ensure any investigations required for an RR are completed as efficiently as possible and unnecessary delays are avoided.	Completed	

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

Code reference

Clause 13 Schedule 11.3

Code related audit information

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

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

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

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

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

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

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

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

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

Audit observation

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

Audit commentary

Not applicable

Audit outcome

Not applicable

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

Code reference

Clause 15 Schedule 11.3

Code related audit information

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

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

Audit observation

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

Audit commentary

Not applicable

Audit outcome

Not applicable

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

Code reference

Clause 16 Schedule 11.3

Code related audit information

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

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

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

Audit observation

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

Audit commentary

Not applicable

Audit outcome

Not applicable

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

Code reference

Clauses 17 and 18 Schedule 11.3

Code related audit information

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

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

- *for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*
  - *the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and*
  - *the withdrawal advisory code published by the Authority (clause 18(c)(ii))*
- *within 5 business days after receiving notice from the registry manager of a switch, the trader receiving the withdrawal must advise the registry manager that the switch withdrawal request is accepted or rejected. A switch withdrawal request must not become effective until accepted by the trader who received the withdrawal (clause 18(d))*

- *on receipt of a rejection notice from the registry manager, in accordance with clause 18(d), a trader may re-submit the switch withdrawal request for an ICP in accordance with clause 18(c). All switch withdrawal requests must be resolved within 10 business days after the date of the initial switch withdrawal request (clause 18(e))*
- *if the trader requests that a switch request be withdrawn, and the resolution of that switch withdrawal request results in the switch proceeding, within two business days after receiving notice from the registry manager in accordance with clause 22(b), the losing trader must comply with clauses 3,5,10 and 11 (whichever is appropriate) and the gaining trader must comply with clause 16 (clause 18(f)).*

Audit observation

An event detail report was reviewed to:

- identify all switch withdrawal requests issued by Globug and check the content of a sample of at least three (or all) ICPs from the event detail report for each withdrawal code,
- identify all switch withdrawal acknowledgements issued by Globug, and check a sample, and
- check the timeliness of NW files.

The switch breach history report was checked for any late NWs and AWs.

Audit commentary

NW

The switch withdrawal process is automated for the NWUA and NWMI withdrawal codes and is managed through the registry and the interaction is tracked in Salesforce for all other codes. As detailed in **sections 4.3** and **4.10**, some of the "MI" automated switch withdrawals are being sent incorrectly due to a mismatch of zeroes for the meter number between the registry and SAP.

64 (20%) of the 320 NWs issued by Globug were rejected by the other trader. A diverse sample of 20 NWs were checked, including all response codes applied. 17 of these were rejected. The NW content was confirmed to be correct in 15 of these. Five were sent with incorrect codes. All three NWDFs sampled were not requested to be transferred ten days in advance and ICP 1001100082LCFA7 was sent as NWCE but should have been sent as NWCX. One of the three NWUA files sampled (ICP 1002111460LCB13) was incorrectly sent automatically as a withdrawal should not have been sent. These are recorded as non-compliance below.

The switch breach history report recorded:

- 21 NA breaches; the ten latest were examined and found:
  - five were due to being the wrong property and were withdrawn as soon as this was discovered,
  - three were due to being part of a double withdrawal,
  - ICP 0000066637TRF92 was backdated as it had been gained for the incorrect date, and
  - ICP 0000191817TR15C was withdrawn due to an AMI meter not being able to be installed. This took a longer time than usual to be determined.
- four SR breaches; these were examined and found:
  - two were part of a double withdrawal and took time to be resolved,
  - ICP 1002067722LC125 was due to investigation required before the withdrawal could be resolved, and
  - ICP 10000010345TR036 was late due to resource constraints.

AW

The processing of AW files is managed manually with each NW reviewed prior to the AW response being sent.

29 (5.2%) of the 554 AWs issued by Globug were rejections. One was later accepted on reissue with a different NW code, and nine were later accepted on reissue with the same code. I checked a sample of ten rejections and confirmed that nine were appropriately rejected based on the information available at the time. ICP 0000101332UNF54 was rejected in error. Globug then issued a NWWP and this was accepted by the other trader.

The switch breach history recorded 15 AW breaches where the AW arrival date was more than five business days after receipt of the NW. I checked an extreme sample of five files and found:

- three were late due to human error over the Christmas period, and
- two were late due to them arriving at the registry outside of the opening hours resulting in them being counted as a day late.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.15 With: Clause 17 of Schedule 11.3 From: 16-Oct-20 To: 09-Aug-21	Five of the 20 NW files sampled were sent with the incorrect NW code. One of the three NWUA withdrawals sampled sent in error. 21 NA breaches. Four SR breaches. 15 AW breaches. 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 rated as moderate as the controls will mitigate risk most of the time, but the automation of the MI switch withdrawals needs review due to the meter digit mismatch causing incorrect NWMI requests to be issued. 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
Five of the 20 NW files sampled were sent with the incorrect NW code. The incorrect codes have been sent due to human error. The team have been reminded of the correct use for each code. **One of the three NWUA withdrawals sampled sent in error.** ICP: 1002111460LCB13 had been flagged as an ICP that should not be switched out. On further review, we determined the ICP could in fact switch out and the switch was completed. **21 NA breaches.** NA breaches are often unavoidable and must be completed in the best interest of the customer. We believe our current processes mitigate breach risk as best as possible. **Four SR breaches.** Due to the small number of breaches, we believe our current processes are strong. There will often be instances that require investigation or involvement from multiple traders that can cause unavoidable delay. **15 AW breaches.** These breaches appear to be due to human error in miscalculating public holiday timing and processing outside of registry hours. We have reminded the team of the registry hours to prevent this from recurring and will also be conducting a process review to identify further areas for improvement and more timely processing.	Nov 21	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
15 AW breaches. We have reminded the team of the registry hours to prevent this from recurring and will also be conducting a process review to identify further areas for improvement and more timely processing.	Dec21	

4.16. Metering information (Clause 21 Schedule 11.3)

Code reference

Clause 21 Schedule 11.3

Code related audit information

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

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

Audit observation

The meter reading process in relation to meter reads for switching purposes was examined.

Audit commentary

The reads applied in switching files were examined in **section 4.3** for transfer switches, **section 4.10** for switch moves, and **sections 4.4** and **4.11** for read changes. The meter readings used in the switching process are validated meter readings or permanent estimates.

As detailed in **section 4.3**, two transfer switches had a last actual read date on the last day of supply and an estimated switch event reading. These were both manually released CS files and the read from the day before was sent as an estimate read. Both ICPs had a read for the day of supply but these were not used resulting in a small amount of volume being pushed to the gaining trader. This is recorded as non-compliance.

As detailed in **section 4.10**, there were 14 switch moves that were with Globug for one day of supply, but these were sent with the same reads they were gained on. This will result in the volume for the one day of supply to be pushed to the gaining trader (in most cases this is Mercury) and the volume will be reconciled for the incorrect period. This is recorded as non-compliance.

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

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.16 With: Clause 21 of Schedule 11.3 From: 17-Jun-20 To: 14-Jul-21	Two transfer switches sent with the incorrect read. 14 switch move ICPs sent with incorrect estimated reads. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate. The error found related to manually released CS files. Further training has been provided to resolve this. The audit risk rating is assessed to be low as there were only a small number of CS files sent with the incorrect last read and this will have a minor effect on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
Two transfer switches sent with the incorrect read. These CS files were exceptions to our automated process and were manually released. The incorrect reads were sent due to human error. **14 switch move ICPs sent with incorrect estimated reads.** Where Globug cannot supply an ICP due to metering issues, we work to switch the ICP out immediately. In most cases the ICP is with Globug for only one day and the switch out read is the same as the switch in read. The switch in read is recorded as an actual however as this read would technically be from the day prior to the switch in (previous trader's last day of supply) we send these as estimated reads.	N/A	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Two transfer switches sent with the incorrect read. Refresher training will be provided to staff to ensure the correct procedures are followed for manually released files. **14 switch move ICPs sent with incorrect estimated reads.** We will review our processes to see how we can comply with the code requirements.	Dec 21 Mar 21	

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

Code reference

Clause 11.15AA to 11.15AC

Code related audit information

A losing retailer (including any party acting on behalf of the retailer) must not initiate contact to save or win back any customer who is switching away or has switched away for 180 days from the date of the switch.

The losing retailer may contact the customer for certain administrative reasons and may make a counteroffer only if the customer initiated contacted with the losing retailer and invited the losing retailer to make a counteroffer.

The losing retailer must not use the customer contact details to enable any other retailer (other than the gaining retailer) to contact the customer.

Audit observation

Win-back processes were discussed. The event detail report was analysed to identify all withdrawn switches with a CX code applied 180 days of switch completion.

Audit commentary

34 NWs with the CX (customer cancellation) withdrawal reason code were issued within 180 days of switch completion where Globug was the losing trader. None of the files were rejected by the other trader.

I checked a sample of ten files and found all withdrawal requests were confirmed to be from the customer or the other trader, and Globug did not make any offers or enticements.

Audit outcome

Compliant

5. MAINTENANCE OF UNMETERED LOAD

5.1. Maintaining shared unmetered load (Clause 11.14)

Code reference

Clause 11.14

Code related audit information

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

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

Audit observation

The processes to identify and monitor shared unmetered load were discussed. The registry lists and AC020 reports were reviewed to identify all ICPs with shared unmetered load and assess compliance.

Audit commentary

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

Globug supplies four ICPs with shared unmetered load, and no ICPs with standard or distributed unmetered load. The AC020 report and registry list were reviewed, and no discrepancies were identified:

- no ICPs had unmetered load recorded by the distributor and not by Globug,
- no ICPs had unmetered load recorded by Globug and not the distributor,
- no ICPs had unmetered load is indicated but the unmetered daily kWh set to zero or blank, and
- Globugs daily unmetered kWh matched the value calculated from the distributor information within ±0.1 kWh for all ICPs where calculation could be completed.

The previous audit found that submission was incorrect for ICP 0005058899RNB60 because incorrect values were recorded in SAP. This has been corrected and revisions made.

Audit outcome

Compliant

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

Code reference

Clause 10.14 (2)(b)

Code related audit information

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

Audit observation

The AC020 reports were examined to identify all unmetered load over 3,000 kWh per annum.

Audit commentary

No ICPs with standard unmetered load were found.

Audit outcome

Compliant

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

Code reference

Clause 10.14 (5)

Code related audit information

If the unmetered load limit is exceeded the retailer must:

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

Audit observation

The AC020 reports were examined to identify all unmetered load over 3,000 kWh per annum.

Audit commentary

No ICPs with standard unmetered load were found.

Audit outcome

Compliant

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

Code reference

Clause 11 Schedule 15.3, Clause 15.37B

Code related audit information

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

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

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

Audit observation

The AC020 reports were examined to identify any distributed unmetered load ICPs

Audit commentary

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

Audit outcome

Compliant

6. GATHERING RAW METER DATA

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

Code reference

Clause 10.13, Clause 10.24 and Clause 15.13

Code related audit information

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

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

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

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

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

Audit observation

Processes to ensure metering is installed and unmetered load is quantified were examined.

The AC020 trader compliance report, meter event details report, and registry list files were reviewed to determine compliance.

Audit commentary

Metering installations installed

All active ICPs have an MEP recorded. Review of the AC020 report and registry list identified 15 ICPs which had a metering category 9. Of those:

- 14 ICPs had accepted MEP nominations and are awaiting meter asset data on the registry, and
- one was a timing difference and meter asset data was populated on the registry after the reports were run.

Globug does not complete new connections, and no submission information is determined by subtraction.

Distributed generation

Globug does not accept ICPs with distributed generation present. Examination of the list file identified three ICPs with distributed generation indicated by the distributor, which have RPS profile assigned. These were examined and have all been confirmed to have generation present as detailed below:

ICP	Date generation added	Date switched away	Comments
0000129386UN821	12/05/21	13/05/21	1 day during Globug's period of supply where generation was present.
0000103718WABBD	21/07/20	11/09/20	52 days during Globug's period of supply where generation was present.
0000146511UN732	11/05/17	Still with Globug	The network updated generation on the registry on 17/03/21 but backdated this to 11/05/2017. This site is expected to be switching away.

This is recorded as non-compliance below. Globug have put reporting in place to identify any ICPs which have distributed generation added during their period of supply. Any found are switched away as soon as possible. The three ICPs with distributed generation present and no generation submitted are recorded as non-compliance.

Bridged meters

41 ICPs were bridged during reconnection and were recertified on un-bridging. Consumption during the bridged period was estimated however the volumes were not submitted as the correction process was not completed as expected. This is discussed further in **section 2.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.1 With: Clause 10.13 From: 04-Aug-20 To: 06-Aug-21	Three ICPs with distributed generation present but export metering is present. Energy is not metered and quantified according to the code where meters are bridged. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate as they will mitigate risk most of the time but there is room for improvement. The volume of ICPS with distributed generation and bridged meters is small therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Three ICPs with distributed generation present but export metering is present. Globug does not switch in ICPs that have generation present. The 3 ICPs identified in the audit, had generation added after switching to Globug and Globug was not notified by the Network or MEP of this change. Two ICPs have since switched out and we will be arranging for the other to switch. **Energy is not metered and quantified according to the code where meters are bridged.** Globug will continue to bridge meters on an as need basis in the best interest of our customers. It is evident that some steps in the corrections process have been missed. We will be reviewing our process documentation and providing training to staff to ensure the corrections are processed correctly and that volume submission is accurate.	Jan 22	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Three ICPs with distributed generation present but export metering is present. We will be more proactive in identifying these sites in our new reporting to ensure we can work with customers on switching to another provider when required. **Energy is not metered and quantified according to the code where meters are bridged.** We will be reviewing our process documentation and providing training to staff to ensure the corrections are processed correctly and that volume submission is accurate.	Jan 22	

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

Code reference

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

Code related audit information

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

- *provide to the grid owner a copy of the metering installation design (before ordering the equipment)*
- *provide at least three months for the grid owner to review and comment on the design*
- *respond within three business days of receipt to any request from the grid owner for additional details or changes to the design*
- *ensure any reasonable changes from the grid owner are carried out.*

The participant responsible for the metering installation must:

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

Audit observation

The network supply points table was reviewed to determine whether Globug is responsible for any GIPs.

Audit commentary

Review of the network supply points table confirmed that Globug does not supply any GIPs.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

Audit observation

The registry list and AC020 trader compliance report were reviewed to determine compliance.

Audit commentary

Globug has only used the RPS profile, and control devices are not used for reconciliation purposes.

Audit outcome

Compliant

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

Code reference

Clause 10.43(2) and (3)

Code related audit information

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

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

Audit observation

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

Audit commentary

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

Upon identifying a possible defective meter, Globug raises a field services job to investigate or correct the issue. I reviewed nine examples of defective metering installations. In all cases a field services job was raised, and the MEP was advised where they were not the party alerting Globug.

Audit outcome

Compliant

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

Code reference

Clause 2 Schedule 15.2

Code related audit information

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

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

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

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

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

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

2(6) – The interrogation systems must record:

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

Audit observation

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

Audit commentary

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

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

Audit outcome

Compliant

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

Code reference

Clauses 3(1), 3(2) and 5 Schedule 15.2

Code related audit information

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

All validated meter readings must be derived from meter readings.

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

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

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

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

Audit observation

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

Audit commentary

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

Readings are appropriately labelled.

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

Audit outcome

Compliant

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

Code reference

Clause 6 Schedule 15.2

Code related audit information

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

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

Audit observation

The process of the application of meter readings was examined.

Audit commentary

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

Application of reads was reviewed as part of the historic estimate checks and is discussed in **section 12.11**, and reads were traced from the source files to SAP in **section 6.5**. The content of CS and RR files was examined in **sections 4.3**, **4.4**, **4.10** and **4.11.** There were 16 ICPs with incorrect switch event meter readings sent.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.7 With: Clause 6 Schedule 15.2 From: 05-Aug-20 To: 14-Jul-21	Two transfer switches sent with the incorrect read. 14 switch move ICPs sent with incorrect estimated reads. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate. The error found related to manually released CS files. Further training has been provided to resolve this. The audit risk rating is assessed to be low as there were only a small number of CS files sent with the incorrect last read and this will have a minor effect on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
Two transfer switches sent with the incorrect read. These CS files were exceptions to our automated process and were manually released. The incorrect reads were sent due to human error. **14 switch move ICPs sent with incorrect estimated reads.** Where Globug cannot supply an ICP due to metering issues, we work to switch the ICP out immediately. In most cases the ICP is with Globug for only one day and the switch out read is the same as the switch in read. The switch in read is recorded as an actual however as this read would technically be from the day prior to the switch in (previous trader's last day of supply) we send these as estimated reads.	N/A	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Two transfer switches sent with the incorrect read. Refresher training will be provided to staff to ensure the correct procedures are followed for manually released files. **14 switch move ICPs sent with incorrect estimated reads.** We will review our processes to see how we can comply with the code requirements.	Dec 21 Mar 21	

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

Code reference

Clause 7(1) and (2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

The process to manage missed reads was examined, including review of reports used in the process and evidence of action taken on unread ICPs.

A sample of ICPs not read during the period of supply were reviewed.

Audit commentary

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

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

There is weekly liaison between Globug and the MEPs regarding ICPs without readings.

The vacancy process has been reviewed during the audit period and it is expected to commence as soon as the property becomes vacant. A letter is sent prompting the next occupant to register with Globug seven days after the property becomes vacant. A second letter is sent seven days after the first letter and if no response has been received within seven days then a remote disconnection is arranged. If there are no communications to the site, a site visit is arranged to check for occupancy.

There are often site visits conducted to change non-AMI meters to AMI meters. The last audit recommended that meter readings be obtained during these visits to assist with the accuracy of invoices, submission and switch out reads. This has been put in place with all MEPs.

A list of 71 ICPs not read during the period of supply was provided. 61 (86%) were switched out for the following day as they could not be supplied by Globug. The switch out read was the same as the gain read in these instances. This is discussed in **sections 4.3,4.10,4.16** and **6.7**.

The remaining ten ICPs with a period of supply more than one day were examined and found all were ICPs where they could not be supplied. All were switched out on an estimate as an actual read couldn't be gained. The average daily consumption received in the CS file was used to estimate the volume for the intervening period.

The last audit recommended that the reporting was reviewed as the not read during the period of supply report was over reporting the volume of ICPs affected. This has been completed during the audit period and all ICPs reported were genuine.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.8 With: 7(1) & (2) of schedule 15.2 From: 17-Jun-20 To: 14-Jul-21	Exceptional circumstances not proven for 71 ICPs not read during period of supply. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong as Globug use AMI meters, and if an AMI meter cannot be installed these ICPs are switched away. The audit risk rating is low as the volume of ICPs affected by this is small.

Actions taken to resolve the issue	Completion date	Remedial action status
Under Globug, there will often be periods of short supply where AMI metering installation is not possible and ICPs are to be switched out. Our processes to identify these ICPs and switch these out ASAP are strong.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above	N/A	

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

Code reference

Clause 8(1) and (2) Schedule 15.2

Code related audit information

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

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

Audit observation

The meter reading process was examined. Monthly reports for March 2021 to June 2021 were provided and reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2.

A sample of unread ICPs on the NSPs where less than 100% read attainment was achieved for June 2021 were reviewed to determine whether exceptional circumstances existed.

Audit commentary

As discussed in **section 6.8**, there are processes in place to monitor read attainment, and attempt to resolve issues preventing read attainment.

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
March 2021	125	8	10	99.94%
April 2021	124	7	8	99.95%
May 2021	123	6	6	99.96%
June 2021	124	9	9	99.94%

Globug have undertaken a clean-up of all active vacant ICPs in the Auckland area. I reviewed all nine ICPs not read in the 12 months ending June 2021 and I found seven were outside of Auckland. These are long term active vacant sites which require a site visit to determine if these are active or should be disconnected. None had had any action taken on them since 2020 therefore best endeavours have not been proven. Globug is arranging site visits for these, so they are expected to be resolved. The remaining two ICPs were incorrectly recorded on the list and reads are being gained for these sites.

The reports reviewed for March 2021 to June 2021 all met the reporting requirements and were submitted on time.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.9 With: 8(1) & (2) of schedule 15.2 From: 17-Jun-20 To: 14-Jul-21	Exceptional circumstances not proven for seven ICPs not read in the past 12 months Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate as they will mitigate risk most of the time but there is room for improvement particularly for those unread that are outside of Auckland. The audit risk rating is low as the volume of ICPs affected by this is small.

Actions taken to resolve the issue	Completion date	Remedial action status
Exceptional circumstances not proven for seven ICPs not read in the past 12 months Our process is to raise site visits following any exception to a remote disconnection. Due to human error, this was missed for seven ICPs. Site visits have now been raised for these ICPs.	Dec 2021	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
The correct procedures have been reiterated to staff to ensure site visits are raised when required. We will look into what process or reporting improvements are needed in this area.	May 22	

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

Code reference

Clause 9(1) and (2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

The meter reading process was examined. Monthly reports for March 2021 to June 2021 were reviewed.

Unread ICPs on the NSPs where less than 90% read attainment was achieved for June 2021 were reviewed to determine whether exceptional circumstances existed.

Audit commentary

As discussed in **section 6.8**, there are processes in place to monitor read attainment, and attempt to resolve issues preventing read attainment. 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
March 2021	128	0	54	99.71%
April 2021	128	0	55	99.70%
May 2021	128	0	37	99.80%
June 2021	129	0	37	99.79%

All NSPs had at least 90% of ICPs read in the previous four months.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 11(1) Schedule 15.2

Code related audit information

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

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

Audit observation

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

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

Code reference

Clause 11(2) Schedule 15.2

Code related audit information

The following information is collected during each interrogation:

> *11(2)(a) - the unique identifier of the data storage device*
>
> *11(2)(b) - the time from the data storage device at the commencement of the download unless the time is within specification and the interrogation log automatically records the time of interrogation*
>
> *11(2)(c) - the metering information, which represents the quantity of electricity conveyed at the point of connection, including the date and time stamp or index marker for each half hour period. This may be limited to the metering information accumulated since the last interrogation*
>
> *11(2)(d) - the event log, which may be limited to the events information accumulated since the last interrogation*
>
> *11(2)(e) - an interrogation log generated by the interrogation software to record details of all interrogations.*

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

Audit observation

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

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

Code reference

Clause 11(3) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

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

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

7. STORING RAW METER DATA

7.1. Trading period duration (Clause 13 Schedule 15.2)

Code reference

Clause 13 Schedule 15.2

Code related audit information

The trading period duration, normally 30 minutes, must be within ±0.1% (±2 seconds).

Audit observation

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

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

Code reference

Clause 18 Schedule 15.2

Code related audit information

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

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

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

Audit observation

Processes to archive and store raw meter data were reviewed. Raw meter data from 2016 was reviewed to ensure that it is retained.

Audit commentary

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

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

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

No paper-based readings are received.

Audit outcome

Compliant

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

Code reference

Clause 21(5) Schedule 15.2

Code related audit information

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

Audit observation

Globug does not deal with any non-metering information.

Audit commentary

Globug does not deal with any non-metering information.

Audit outcome

Compliant

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

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

Code reference

Clause 19(1) Schedule 15.2

Code related audit information

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

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

Audit observation

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

Audit commentary

Where errors are detected during validation of non-half hour meter readings, the read is checked against other AMI data for the ICP. If an original meter reading cannot be confirmed as correct, an estimated reading is used. The processing of the estimated reads is discussed in **sections 2.1** and **12.7**.

Audit outcome

Compliant

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

Code reference

Clause 19(2) Schedule 15.2

Code related audit information

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

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

Audit observation

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

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

Code reference

Clause 19(3) Schedule 15.2

Code related audit information

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

Audit observation

Processes for error and loss compensation were discussed.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 22(1) and (2) Schedule 15.2

Code related audit information

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

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

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

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

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

22(2)(d) - the half-hour metering data or the non-half hour metering data corrected or altered, and the total difference in volume of such corrected or altered data

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

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

Audit observation

Corrections are discussed in **sections 2.1** and **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 **sections 2.1** and **8.1**. The correction journals and audit trails were compliant with the requirements of this clause.

Audit outcome

Compliant

9. ESTIMATING AND VALIDATING VOLUME INFORMATION

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

Code reference

Clause 3(3) Schedule 15.2

Code related audit information

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

Audit observation

A sample of reads and volumes were traced from the source files to Meridian's systems in **section 2.3.**

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.

In **sections 4.3,** two transfer switches had a last actual read date on the last day of supply and an estimated switch event reading. These were both manually released CS files and the read from the day before was sent as an estimate read. Both ICPs had a read for the day of supply but these were not used resulting in a small amount of volume being pushed to the gaining trader.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.1 With: Clause 3(3) Schedule 15.2 From: 17-Jun-20 To: 14-Jul-21	Two transfer switches sent with the incorrect read. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate. The errors found related to manually released CS files. Further training has been provided to resolve this. The audit risk rating is assessed to be low as the volume of late files and incorrect information in the CS files will have a minor effect on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
These CS files were exceptions to our automated process and were manually released. The incorrect reads were sent due to human error.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Refresher training will be provided to staff to ensure the correct procedures are followed for manually released files.	Dec 21	

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

Code reference

Clause 3(4) Schedule 15.2

Code related audit information

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

3(4)(a) - validated meter readings

3(4)(b) - estimated readings

3(4)(c) - permanent estimates.

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 3(5) Schedule 15.2

Code related audit information

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

Audit observation

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

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

Audit commentary

AMI data is not rounded for AMS provided reads but is being rounded for IntelliHUB and ARC AMI data provided by MEPs. The IntelliHUB and ARC readings are rounded to zero decimal places. The MEP retains the raw data with all decimals recorded. Rounding should not occur until volume information is created; therefore, non-compliance exists. Data is not rounded or truncated for AMS meters. Overall, there is little impact because all submission is NHH, therefore any minor over or under submissions in a month will be corrected in the next month.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.3 With: Clause 3(5) Schedule 15.2 From: 01-Jul-19 To: 16-Jun-20	Raw meter data is rounded upon receipt and not when volume information is created for IntelliHUB and ARC meters. Potential impact: Low Actual impact: None Audit history: Twice Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate and will mitigate risk to an acceptable level but there is room for improvement. There is very little impact because no metered consumption information is "missing", therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
We will continue to explore options to address this issue however as the market impact from this non-compliance is virtually zero, we are currently focussing time and resource on more impactful changes and improvements.	Ongoing	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above.	N/A	

9.4. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

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

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

Audit observation

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

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

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

Code reference

Clause 16 Schedule 15.2

Code related audit information

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

> *16(2)(a) - confirmation that the meter reading or estimated reading relates to the correct ICP, meter, and register*
>
> *16(2)(b) - checks for invalid dates and times*
>
> *16(2)(c) - confirmation that the meter reading or estimated reading lies within an acceptable range compared with the expected pattern, previous pattern, or trend*
>
> *16(2)(d) - confirmation that there is no obvious corruption of the data, including unexpected 0 values.*

Audit observation

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

Audit commentary

The read data validation process includes:

- checks that the data relates to an ICP, meter and register held within the system,
- checks for missing data and that reads are loaded against orders, any outstanding orders are investigated to determine why a read was not received,
- the read import process identifies reads with invalid dates and times, or a date that does not match the expected read order date, it will also identify obvious data corruption,
- billing validations, including checks for high reads and reads lower than previous will identify consumption not in line with the history for the ICP or unexpected zero values, and
- it is not possible to enter a read for a period which has already been billed.

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

Globug store their reads in the EDM database. This contains all readings received from MEPs and it accepts estimated readings from IntelliHUB and it has its own estimation capability. These estimates are validated in the same way as actual readings.

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

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

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 15.2

Code related audit information

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

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

> *17(4)(a) - checks for missing data*
>
> *17(4)(b) - checks for invalid dates and times*
>
> *17(4)(c) - checks of unexpected zero values*
>
> *17(4)(d) - comparison with expected or previous flow patterns*
>
> *17(4)(e) - comparisons of meter readings with data on any data storage device registers that are available*
>
> *17(4)(f) - a review of the meter and data storage device event log for any event that could have affected the integrity of metering data must be investigated.*
>
> *17(4)(g) – a review of the relevant metering data where there is an event that could have affected the integrity of the metering data*

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

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

Audit observation

I reviewed and observed the AMI data validation processes, including checking a sample of data validations and validation setting documentation.

Audit commentary

AMI data is validated using the validation process described in **section 9.5.**

NHH AMI data is provided by MEPs via SFTP. Meter event information is provided and reviewed as follows:

MEP	Provided by	Meter event information provided and reviewed
ARC	ARC	Arc review their meter events and provide load side voltage events and meter communication issues to Globug.
AMS	AMS	Full event information is provided via SFTP. AMS raise their own service requests for any events that require action and Globug are advised of this via email.
IntelliHUB (MTRX)	IntelliHUB	Full event information is provided via SFTP. Any events that require action by Globug are advised via email so a service request can be raised.

Audit outcome

Compliant

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

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

Code reference

Clause 13.136

Code related audit information

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

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

Audit observation

The NSP table on the registry was reviewed.

Audit commentary

Globug is not responsible for any NSPs. No information is provided to the pricing manager in accordance with this clause.

Audit outcome

Not applicable

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

Code reference

Clause 13.137

Code related audit information

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

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

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

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

Audit observation

The NSP table on the registry was reviewed.

Audit commentary

Globug is not responsible for any NSPs. No information is provided to the pricing manager in accordance with this clause.

Audit outcome

Not applicable

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

Code reference

Clause 13.138

Code related audit information

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

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

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

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

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

Audit observation

The NSP table on the registry was reviewed.

Audit commentary

Globug is not responsible for any NSPs. No information is provided to the pricing manager in accordance with this clause.

Audit outcome

Not applicable

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

Code reference

Clause 13.140

Code related audit information

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

Audit observation

The NSP table on the registry was reviewed.

Audit commentary

Globug is not responsible for any NSPs. No information is provided to the pricing manager in accordance with this clause.

Audit outcome

Not applicable

11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

11.1. Buying and selling notifications (Clause 15.3)

Code reference

Clause 15.3

Code related audit information

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

11.2. Calculation of ICP days (Clause 15.6)

Code reference

Clause 15.6

Code related audit information

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

> *15.6(1)(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*
>
> *15.6(1)(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

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

Audit observation

The process for the calculation of NHH ICP days was examined by checking 50 NSPs for the June 2021 revision 1 submission to confirm the AV110 ICP days calculation was correct.

I reviewed GR100 reports from February 2020 to June 2021 and investigated a diverse sample of ten NSP level ICP days differences, to determine why the difference had occurred.

Alleged breaches were reviewed.

Audit commentary

The process for the calculation of ICP days was examined by checking 50 NSPs with a small number of ICP days for the June 2021 initial submission. 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 17 months. Negative percentage figures indicate that the Globug ICP days figures are higher than those contained on the registry.

Month	r0	r1	r3	r7	r8	r14
Feb 2020	-0.44%	-1.06%	-1.09%	-1.34%	-	-1.31%
Mar 2020	-0.82%	-0.98%	-1.04%	-1.31%	-	-1.29%
Apr 2020	-0.26%	-0.97%	-1.07%	-1.30%	-	-1.27%
May 2020	-0.28%	-0.86%	-1.03%	-1.27%	-	-1.24%
Jun 2020	-0.36%	-1.12%	-1.28%	-1.53%	-	-
Jul 2020	-0.91%	-1.05%	-1.18%	-1.44%	-	-
Aug 2020	-0.72%	-1.00%	-1.24%	-1.43%	-	-
Sep 2020	-0.88%	-1.06%	-1.22%	-1.43%	-	-
Oct 2020	-0.83%	-1.06%	-1.19%	-	-1.42%	-
Nov 2020	-	-1.00%	-1.19%	-1.31%	-	-
Dec 2020	-0.93%	-1.09%	-1.28%	-1.34%	-	-
Jan 2021	-0.54%	-1.26%	-1.38%	-	-	-
Feb 2021	-0.45%	-1.13%	-1.23%	-	-	-
Mar 2021	-0.96%	-1.11%	-1.03%	-	-	-
Apr 2021	-0.95%	-1.15%	-1.08%	-	-	-
May 2021	-0.82%	-0.97%	-	-	-	-
Jun 2021	-0.86%	-0.93%	-	-	-	-

I reviewed a sample of six differences between the registry and retailer ICP days for HHR and NHH ICPs and found they all related to timing differences, and the current registry days for each period NSP and submission type matched the latest submission data.

I examined ten NSPs with differences remaining at revision 7 or later. The ICP days differences for nine NSPs was due to submission occurring correctly and the ICP day count was correct, but the ICP was at the incorrect status on the registry. This is because if there is consumption for a day on an ICP where the registry shows it as being disconnected, SAP will calculate one ICP day because there is consumption.

ICP 0000307381MPC94 was recorded against the incorrect NSP. The network updated the NSP on 22 February 2021 for an effective date 22 February 2021. Then on 29 March 2021 the network reversed this event and backdated the NSP change to 18 August 2020. SAP failed to pick this up as the current time slice was already matching the registry. Another incident of this occurring was identified in the Mercury audit. A fix is being put in place and additional reporting checks are being run until the fix can be deployed to identify any further incidents.

No breaches were alleged for late provision of submission information.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.2 With: Clause 15.6 From: 29-Mar-21 To: 21-Jul-21	Inaccurate ICP days were reported for one ICP. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are currently rated as strong as they will mitigate risk to an acceptable level. The impact is assessed to be low because only one discrepancy was identified and was identified and corrected prior to revision 14.

Actions taken to resolve the issue	Completion date	Remedial action status
ICP 0000307381MPC94 is a singular case and the NSP has since been corrected and backdated to August 2020.	Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We have been working on a fix for the same issue under MEEN and will be implementing this fix for both MEEN and GBUG. We have some reporting in place which is being run weekly until this fix is put into production to identify any further NSP mismatches. To date, no further examples have been found.	May 2022	

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

Code reference

Clause 15.7

Code related audit information

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

> *15.7(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*
>
> *15.7(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

Audit observation

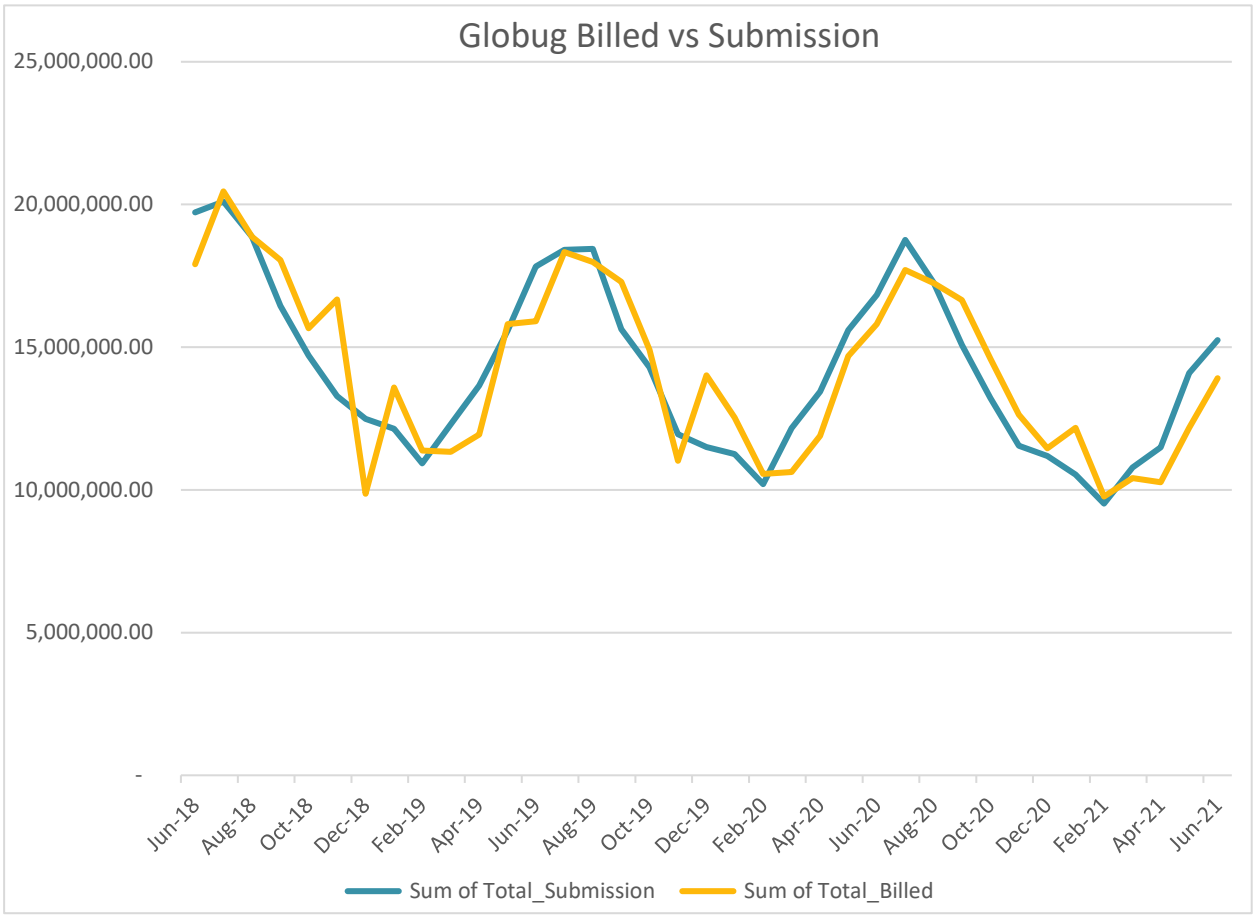
The process for the calculation of as billed volumes was examined by checking five NSPs with a small number of ICPs to confirm the AV120 calculation was correct.

GR130 reports for June 2018 to June 2021 were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

Audit commentary

The process for the calculation of as billed volumes was examined by checking five NSPs with a small number of ICPs against Globug's invoice information for July 2021. The file is correct for the sample checked.

The table below shows a comparison between submissions and electricity supplied information. At an aggregate level, submitted data is 0. 2% lower than billed data for the year ended June 2021 and 0.1% lower than billed date for the two years ended June 2021.



Audit outcome

Compliant

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

Code reference

Clause 15.8

Code related audit information

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

> *15.8(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period*
>
> *15.8(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.*

Audit observation

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

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

12. SUBMISSION COMPUTATION

12.1. Daylight saving adjustment (Clause 15.36)

Code reference

Clause 15.36

Code related audit information

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

Audit observation

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

Audit commentary

Globug does not deal with any HHR data.

Audit outcome

Not applicable

12.2. Creation of submission information (Clause 15.4)

Code reference

Clause 15.4

Code related audit information

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

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

Audit observation

A sample of NHH ICPs were checked to make sure they are handled correctly, and corrections were reviewed in **sections 2.1** and **8.1**.

Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late.

Audit commentary

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

Globug prepares submission information using SAP. A sample of NHH ICPs were checked to make sure they are handled correctly, including vacant, disconnected, and unmetered ICPs.

Vacant ICPs with consumption

I checked a sample of five ICPs with vacant consumption. The consumption was correctly submitted for four ICPs. ICP 0410861030LC959 was disconnected on 21 July 2021, but no disconnection read was provided, so the volume was allocated up to 31 July 2021. This is recorded as non-compliance in **sections 2.1** and **12.7**.

Inactive ICPs with consumption

I checked all five ICPs with inactive consumption where the status had not been returned to active prior to the audit. Four were confirmed not to have any genuine consumption. ICP 0000503171CEDDD was confirmed to have a small amount of genuine consumption (6.8 kWh). The registry records this as inactive from 30 July 2021 to 14 September 2021 but the submission was for the period 13 July 2021 to 31 August 2021. This is recorded as non-compliance in **sections 2.1** and **12.7.**

Unmetered load

I checked all ICPs with unmetered load and confirmed that volumes are being correctly submitted.

Distributed generation

I checked all three ICPs with distributed generation indicated by the distributor and found that no generation volumes have been submitted as there was no import export metering installed as this is incompatible with the Globug product. This is discussed in **section 6.1**.

ICPs supplied for one day

The previous audit found that where ICPs switched out after one day of supply (usually due to being unable to install AMI metering) Globug applied the incoming switch read for the previous day as the outgoing CS read. I identified 592 ICPs with a 1-day period of supply and checked the incoming and outgoing CS files for a sample of 50. For three CS files the outgoing CS read was higher than the incoming CS reading, but for the other 47 files the incoming and outgoing readings matched. Globug ideally wants the customers to switch from the previous trader straight to an alternative trader or in most cases to Mercury, but the other traders are not compelled to accept a withdrawal and then a new switch request from an alternative trader or Mercury. This will result in one day of consumption being pushed to the gaining trader and reconciled in the incorrect period.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.2 With: Clause 15.4 From: 01-Jul-19 To: 23-Jul-21	Generation information not submitted for three ICPs with distributed generation present. Consumption information not submitted for one day for ICPs where Globug cannot supply, and then switch to an alternative trader or in most cases to Mercury. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact on settlement and participants is minor therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Generation information not submitted for three ICPs with distributed generation present. Globug does not switch in ICPs that have generation present. The 3 ICPs identified in the audit, had generation added after switching to Globug and Globug was not notified by the Network or MEP of this change. Two ICPs have since switched out and we will be arranging for the other to switch. **Consumption information not submitted for one day for ICPs where Globug cannot supply, and then switch to an alternative trader or in most cases to Mercury.** Where Globug cannot supply an ICP due to metering issues, we work to switch the ICP out immediately. In most cases the ICP is with Globug for only one day. Ideally in these cases the Globug trader timeslice would be removed entirely however this would cause further delay and create additional work for participants. We believe our current process has minimal impact on the market and other participants.	Jan 22	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Generation information not submitted for three ICPs with distributed generation present. We will be more proactive in identifying these sites in our new reporting to ensure we can work with customers on switching to another provider when required.	Jan 22	

12.3. Allocation of submission information (Clause 15.5)

Code reference

Clause 15.5

Code related audit information

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

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

Audit observation

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

The process to ensure that AV080 submissions are accurate was discussed, and reports used in the process were viewed.

The process for aggregating the AV080 was examined by checking the total submitted against each aggregation factor combination against detailed ICP level information for the June 2021 revision 1 submission.

The GR170 to AV080 files for nine revision submissions were compared, 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. The NHH volume calculation was confirmed to be correct.

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.

There was one example of an ICP being reconciled against an incorrect NSP. The network updated the NSP on 22 February 2021 for an effective date 22 February 2021 for ICP 0000307381MPC94. On 29 March 2021 the network reversed this event and backdated the NSP change to 18 August 2020. SAP failed to pick this up as the current time slice was already matching the registry. Another incident of this occurring was identified in the Mercury audit. A fix is being put in place and additional reporting checks are being run until the fix can be deployed to identify any further incidents. There have been only two identified across both codes so this is an exceptional circumstance.

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 and 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, and

- 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 Commercial Operations & Reconciliation Manager, who provides approval via email.

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

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.3 With: Clause 15.5 From: 29-Mar-21 To: 21-Jul-21	One ICP recorded with the incorrect NSP. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as strong, because risks are controlled to an acceptable level. The audit risk rating is low, as this affected only one ICP, and this was corrected in the next revision.

Actions taken to resolve the issue	Completion date	Remedial action status
This is a singular case and has since been corrected.	Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We have been working on a fix for the same issue under MEEN and will be implementing this fix for both MEEN and GBUG. We have some reporting in place which is being run weekly until this fix is put into production to identify any further NSP mismatches. To date, no further examples have been found.	May 2022	

12.4. Grid owner volumes information (Clause 15.9)

Code reference

Clause 15.9

Code related audit information

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

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.9(a))*
- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period (clause 15.9(b)).*

Audit observation

The registry list and NSP table were reviewed.

Audit commentary

Globug is not a grid owner, and compliance was not assessed.

Audit outcome

Not applicable

12.5. Provision of NSP submission information (Clause 15.10)

Code reference

Clause 15.10

Code related audit information

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

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

Audit observation

The registry list and NSP table were reviewed.

Audit commentary

Globug is not a local or embedded network owner, and compliance was not assessed.

Audit outcome

Not applicable

12.6. Grid connected generation (Clause 15.11)

Code reference

Clause 15.11

Code related audit information

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

- *submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period (clause 15.11(a))*
- *revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period (clause 15.11(b)).*

Audit observation

The registry list and NSP table were reviewed.

Audit commentary

Globug is not responsible for any grid connected generation, and compliance was not assessed.

Audit outcome

Not applicable

12.7. Accuracy of submission information (Clause 15.12)

Code reference

Clause 15.12

Code related audit information

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

Audit observation

Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late. Corrections were reviewed in **sections 8.1** and **8.2**.

Audit commentary

Late provision of submission information

No alleged breaches were recorded for late submission data during the audit period.

Accuracy of submission data

There were some submission inaccuracies identified.

- 41 bridged meters were identified. I checked a sample of the ten with the largest volumes. The calculation for the bridged period was correct but these were not processed correctly in SAP resulting in the correction not flowing through to submission resulting in 13,548 kWh of under submission for all those checked. If all 41 bridged meters have not been processed correctly this will have potentially resulted in 19,771 kWh of under submission. I reviewed the process documentation and found it was not detailed enough to ensure that staff were processing these correctly and recommend in **section 2.1**, that this is reviewed, and staff training is provided to correct this.
- I checked nine ICPs with defective meters and found that the same process had been followed as for the bridged meters and whilst the missing volumes were calculated correctly, they have not flowed through to submission resulting in 2,629 kWh of under submission.
- As recorded in **section 2.1**, ICP 0000503171CEDDD was confirmed to have a small amount of genuine consumption (6.8 kWh). The registry records this as inactive from 30 July 2021 to 14 September 2021 but the submission was for the period 13 July 2021 to 31 August 2021.
- As detailed in **sections 3.9 and 12.2**, a check of five ICPs with active vacant consumption were checked and found ICP 0410861030LC959 was disconnected on 21 July 2021, and no disconnection read was provided, so the volume was allocated to 31 July 2021.
- As detailed in **sections 4.3** and **4.10**. There were 16 ICPs with incorrect switch event meter readings sent resulting in one day of consumption being pushed to the gaining trader (Mercury in most instances).
- IntelliHUB does not provide updated actual data to replace estimates if the actual data is obtained more than 15 days after the event date. This is non-compliance because more accurate information is available but is not used.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.7 With: Clause 15.12 From: 05-Aug-20 To: 14-Jul-21	Inaccurate submission as follows: • 16 (two transfer and 14 switch move) ICPs sent with incorrect estimated reads resulting in one day of consumption being pushed to the gaining trader (Mercury in most instances). • Consumption apportioned incorrectly for one of the five disconnected ICPs with consumption sampled. • All corrections for the ten bridged ICPs sampled (of a possible 41 bridged meters) had not flowed through to submission resulting in 13,458 kWh of under submission. • All corrections for the nine ICPs examined had not flowed through to submission resulting in 2,629 kWh of under submission. • One of the five ICPs with active vacant consumption with consumption allocated after the disconnection date due to no disconnection read being recorded. • Intellihub does not provide raw meter data to replace estimates for periods greater than 15 days. The quantify of estimates remaining is unknown. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	Controls are rated as moderate overall but there is room for improvement. The audit risk rating is assessed to be medium due to the potential kWh of under submission.

Actions taken to resolve the issue	Completion date	Remedial action status
16 (two transfer and 14 switch move) ICPs sent with incorrect estimated reads resulting in one day of consumption being pushed to the gaining trader (Mercury in most instances). Detailed comments recorded in section 4.		Identified
Consumption apportioned incorrectly for one of the five disconnected ICPs with consumption sampled. ICP: 0000503171CEDDD 6 kWh was recorded between 2 August 21 and 01 September 21. There was no disconnection read in SAP which is why submission was spread from 13 July 21 – 31 Aug 21. We will review this case to determine why no disconnection reading was entered and whether the status needs to be corrected for the period where usage was recorded.	Jan 22	
One of the five ICPs with active vacant consumption with consumption allocated after the disconnection date due to no disconnection read being recorded. ICP: 0410861030LC959 no disconnection read was entered for this ICP which caused the vacant usage to be incorrectly apportioned through to the next read rather than to the disconnection date. We will have a disconnection read entered to ensure revision submissions are correct and will investigate why the disconnection read was not entered initially.	Jan 22	
All corrections for the ten bridged ICPs sampled (of a possible 41 bridged meters) had not flowed through to submission resulting in 13,458 kWh of under submission. **All corrections for the nine ICPs examined had not flowed through to submission resulting in 2,629 kWh of under submission.** It is evident that some steps in the corrections process have been missed. We will be reviewing our process documentation and providing training to staff to ensure the corrections are processed correctly and that volume submission is accurate.	Feb 22	
Intellihub does not provide raw meter data to replace estimates for periods greater than 15 days. The quantify of estimates remaining is unknown. We have engaged with Intellihub who are currently working on an implementation plan to extend this window to 60 days.	Mar 22	

Preventative actions taken to ensure no further issues will occur	Completion date	
Consumption apportioned incorrectly for one of the five disconnected ICPs with consumption sampled. **One of the five ICPs with active vacant consumption with consumption allocated after the disconnection date due to no disconnection read being recorded.** We are currently working on multiple changes with regards to disconnection updates and will also be reviewing our processes for loading disconnections reads to ensure volumes are submitted correctly in all instances.	May 22	
All corrections for the ten bridged ICPs sampled (of a possible 41 bridged meters) had not flowed through to submission resulting in 13,458 kWh of under submission. **All corrections for the nine ICPs examined had not flowed through to submission resulting in 2,629 kWh of under submission.** We will be reviewing our process documentation and providing training to staff to ensure the corrections are processed correctly and that volume submission is accurate.	Jan 22	

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

Code reference

Clause 4 Schedule 15.2

Code related audit information

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

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

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

Audit observation

AV080 14-month revisions were reviewed for January, February and March 2020 to identify any forward estimate still existing.

Audit commentary

The process is that all estimates are made permanent at six months, prior to the 7-month revision. All 7 and 14-month revisions have 100% HE recorded. This clause requires Globug to use reasonable endeavours to obtain a meter reading before an estimate can be made permanent. In **section 6.9**, it is recorded that the reasonable endeavours threshold has not been met to obtain meter readings at the 12-month point for seven ICPs.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.8 With: 4 of schedule 15.2 From: 17-Jun-20 To: 14-Jul-21	Permanent estimates applied when exceptional circumstances not proven for seven ICPs not read in the past 12 months Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong overall and will mitigate risk to an acceptable level. The audit risk rating is low as the volume of ICPs affected by this is small.

Actions taken to resolve the issue	Completion date	Remedial action status
Our current processes for permanent estimates are strong.	Dec 2021	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Our current processes for permanent estimates are strong. To ensure reasonable endeavours are met in all instance to obtain a reading, procedures have been reiterated to staff to ensure site visits are raised when required. We will look into what process or reporting improvements are needed in this area.	May 22	

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

Code reference

Clause 2 Schedule 15.3

Code related audit information

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

- *half hour volume information for each ICP notified in accordance with clause 11.7(2) for which there is a category 3 or higher metering installation (clause 2(1)(a))*
- *for each ICP about which information is provided under clause 11.7(2) for which there is a category 1 or category 2 metering installation (clause 2(1)(b)):*
  a) half hour volume information for the ICP; or
  b) non half hour volumes information calculated under clauses 4 to 6 (as applicable).

c) *unmetered load quantities for each ICP that has unmetered load associated with it derived from the quantity recorded in the registry against the relevant ICP and the number of days in the period, the distributed unmetered load database, or other sources of relevant information (clause 2(1)(c))*

- *to create non half hour submission information a reconciliation participant must only use information that is dependent on a control device if (clause 2(2)):*
  a) *the certification of the control device is recorded in the registry; or*
  b) *the metering installation in which the control device is location has interim certification.*
- *to create submission information for a point of connection the reconciliation participant must apply to the raw meter data (clause 2(3):*
  a) *for each ICP, the compensation factor that is recorded in the registry (clause 2(3)(a))*
  b) *for each NSP the compensation factor that is recorded in the metering installations most recent certification report (clause 2(3)(b)).*

Audit observation

Aggregation and content of reconciliation submissions was reviewed.

Audit commentary

Compliance with this clause was assessed:

- all ICPs have metering category 1 and are submitted as NHH,
- unmetered load submissions were checked in **section 12.2** and found to be compliant,
- no profiles requiring a certified control device are used,
- no loss or compensation arrangements are required, and
- aggregation of the AV080 and AV110 reports is compliant.

Audit outcome

Compliant

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

Code reference

Clause 3 Schedule 15.3

Code related audit information

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

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

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

Audit observation

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

Audit outcome

Compliant

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

Code reference

Clauses 4 and 5 Schedule 15.3

Code related audit information

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

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

Audit observation

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

Audit commentary

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

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

Test	Scenario	Test expectation	Result
a	ICP becomes Active part way through a month	Consumption is only calculated for the Active portion of the month.	Compliant
b	ICP becomes Inactive part way through a month.	Consumption is only calculated for the Active portion of the month.	Compliant
c	ICP become Inactive then Active again within a month.	Consumption is only calculated for the Active portion of the month.	Compliant
d	ICP switches in part way through a month on an estimated switch reading	Consumption is calculated to include the 1st day of responsibility.	Compliant

Test	Scenario	Test expectation	Result
e	ICP switches out part way through a month on an estimated switch reading	Consumption is calculated to include the last day of responsibility.	Compliant
f	ICP switches out then back in within a month	Consumption is calculated for each day of responsibility.	Compliant
g	Continuous ICP with a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Compliant
h	Continuous ICP without a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Compliant
i	Rollover Reads	Consumption is calculated correctly in the instance of meter rollovers.	Compliant
j	Unmetered load for a full month	Consumption is calculating based on daily unmetered kWh for full month.	Compliant
k	Unmetered load for a part month	Consumption is calculating based on daily unmetered kWh for active days of the month.	Compliant
l	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
m	ICP with a customer read during the month	Customer reads are not used to calculate historic estimate, unless they have been validated against a set of validated readings from another source	Not Found
n	ICP with a photo read during the month	Photo reads are not used to calculate historic estimate, unless they have been validated against a set of validated readings from another source	Not Found
o	ICP has a meter with a multiplier greater than 1	The multiplier is applied correctly	No meters have a multiplier greater than one

Compliance is confirmed for all scenarios tested.

Audit outcome

Compliant

12.12. Forward estimate process (Clause 6 Schedule 15.3)

Code reference

Clause 6 Schedule 15.3

Code related audit information

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

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

Audit observation

The process to create forward estimates was reviewed.

Forward estimates were checked for accuracy by analysing the GR170 file for variances between revisions for 14 months.

Audit commentary

Globug's forward estimates are based on either:

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

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

Globug uses the EDM database for meter readings. This database contains all readings received from MEPs and when a reading is required, a "meter reading order" will attempt to get a read from EDM for the date of the order, or from two days either side. This broader window will improve meter reading attainment. EDM accepts estimated readings from IntelliHUB and EDM also has an estimation capability. If there is no estimate from IntelliHUB or by EDM (due to no history) then SAP creates an estimate. The estimation methodology for EDM is explained in a document called "ADR-007 Enhancement Design" which was provided to me. The estimation methodology uses historic consumption, with a weighting factor depending on the average temperature in the relevant region the ICP is located in. There are a number of validations in place to ensure incorrect estimates are not created. As mentioned above, if EDM cannot create an estimate, SAP will estimate. The validations are as follows:

1. Profile is not defined as cumulative.
2. Interval length is not DAY.
3. Date range parameter is not valid.
4. Last known profile value could not be found.
5. Yearly periodic consumption could not be determined.
6. Fixed consumption per day is negative.
7. Temperature area not assigned to Installation.
8. No weighting could be determined.
9. Consumption per degree day weight is negative.

If an ICP is vacant and an estimate is supplied by an MEP, the estimate will fail validation and will be manually changed to zero.

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

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

Month	Revision 1	Revision 3	Revision 7	Revision 14	Total Balancing Areas
Feb 2020	0	0	0	0	302
Mar 2020	0	0	0	0	303
Apr 2020	0	0	0	0	304
May 2020	0	0	0	0	304
Jun 2020	0	0	0		308
Jul 2020	0	0	0		308
Aug 2020	0	0	0		309
Sep 2020	0	0	0		311
Oct 2020	0	0	0		311
Nov 2020	0	0	0		312
Dec 2020	0	0	0		312
Jan 2021	0	0			316
Feb 2021	0	0			294
Mar 2021	0	0			293
Apr 2021	0				295
May 2021	0				295
Jun 2021	0				300

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

Month	Revision 1	Revision 3	Revision 7	Revision 14
Feb 2020	4.45%	2.08%	2.18%	2.29%
Mar 2020	-0.33%	-4.38%	-4.59%	-4.51%
Apr 2020	-2.71%	-6.41%	-6.46%	-6.42%
May 2020	0.02%	-3.93%	-4.10%	-4.05%
Jun 2020	-1.24%	-2.80%	-2.97%	
Jul 2020	-0.35%	-1.99%	-2.16%	
Aug 2020	-1.32%	-3.00%	-3.07%	
Sep 2020	-0.13%	-1.29%	-1.47%	
Oct 2020	0.17%	-1.84%	-1.01%	
Nov 2020	-0.73%	-1.02%	-1.08%	
Dec 2020	-1.66%	-3.40%	-3.35%	
Jan 2021	0.75%	-0.45%		
Feb 2021	-1.13%	-1.72%		
Mar 2021	-0.72%	-0.56%		
Apr 2021	-2.24%			
May 2021	-2.46%			
Jun 2021	-0.45%			

Audit outcome

Compliant

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

Code reference

Clause 7 Schedule 15.3

Code related audit information

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

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

Audit observation

The registry list, event detail report, and AC020 trader compliance report were reviewed to determine compliance.

Audit commentary

Globug has only used the RPS profile and there have been no profile changes. In the event of a profile change, Globug will use a validated meter reading or a permanent estimate on the day that the change is effective.

Audit outcome

Compliant

13. SUBMISSION FORMAT AND TIMING

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

Code reference

Clause 8 Schedule 15.3

Code related audit information

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

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

Audit observation

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

Aggregation of NHH volumes is discussed in **section 12.3**.

Audit commentary

Submission information is provided to the reconciliation manager in the appropriate format and is aggregated to the following level:

- NSP code,
- reconciliation type,
- profile,
- loss category code,
- flow direction,
- dedicated NSP, and
- trading period for half hour metered ICPs and consumption period or day for all other ICPs.

NHH volumes aggregation was confirmed to be compliant. The submitted data was also compared to billed data in **section 11.3** and appeared reasonable.

Audit outcome

Compliant

13.2. Reporting resolution (Clause 9 Schedule 15.3)

Code reference

Clause 9 Schedule 15.3

Code related audit information

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

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

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

Audit observation

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

Audit commentary

Submission information is rounded to no more than two decimal places.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.3

Code related audit information

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

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

- *at least 80% for revised data provided at the month 3 revision (clause 10(3)(a))*
- *at least 90% for revised data provided at the month 7 revision (clause 10(3)(b))*
- *100% for revised data provided at the month 14 revision (clause 10(3)(c)).*

Audit observation

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

I reviewed nine months of AV080 reports to determine whether 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 met for all revisions. Historic estimate is 100% from the 7-month revision on, because Globug is making all estimates permanent at the 6-month point. This is discussed further in **section 12.8**.

Quantity of NSPs where revision targets were met.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Feb 2020	-		394	394
Mar 2020	-		394	394
Apr 2020	-		393	393
Oct 2020	127	400	-	400
Nov 2020	128	400	-	400
Dec 2020	128	401	-	401
Jan 2021	404	-	-	404
Feb 2021	383	-	-	383
Mar 2021	382	-	-	382

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

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Feb 2020	-	-	100.00%
Mar 2020	-	-	100.00%
Apr 2020	-	-	100.00%
Oct 2020	-	100.00%	-
Nov 2020	-	100.00%	-
Dec 2020	-	100.00%	-
Jan 2021	99.73%	-	-
Feb 2021	99.74%	-	-
Mar 2021	99.84%	-	-

Audit outcome

Compliant

14. GLOSSARY OF TERMS

AC breach	AC arrival date is more than 5 business days after receipt of replace switch reading (RR) where the switch re-read is rejected.
AN breach for switch move	AN arrival date is more than 5 business days after receipt of the NT, where the AN arrives immediately after the NT
AN breach for transfer switch	AN arrival date is more than 3 business days after the NT arrival date, where the AN arrives immediately after the NT
AW breach	AW arrival date is more than 5 business days after receipt of the NW
CS breach for switch move	CS arrival date is more than 5 business days after receipt of the NT AND, before delivery of the CS and No NW notice has been provided, AND no AN notice has been provided OR an AN notice is provided, and the NT Proposed Transfer Date matches the AN Expected Transfer Date).
CS breach for transfer switch	Where a CS is received after an AN AND the CS arrival date is more than 5 business days of the CS actual transfer date AND no NW has been provided
E2 breach for switch move	NT Proposed Transfer Date and CS Actual Transfer date do not match; AND CS Actual Transfer Date is a) earlier than the NT Proposed Transfer Date; OR b) more than 10 business days after receipt of the NT.
E2 breach for transfer switch	CS Actual Transfer Date is more than 10 business days after receipt of the NT.
NA breach	NW arrival date is more than 2 calendar months after the CS Actual Transfer Date.
RR breach	RR arrival date is more than 4 calendar months from the CS Actual Transfer Date.
SR breach	NW arrival date is more than 10 business days after the initial NW for the same trader requesting the withdrawal. The trader sending the corresponding AW (either accepting or rejecting the withdrawal) only receives a breach on the AW if it is sent more than 5 days after the latest NW as in the original rule.
T2 breach for switch move	CS arrival date is more than 5 business days after receipt of the NT AND, before delivery of the CS No NW notice has been provided, AND (no AN notice has been provided OR an AN notice is provided, and the NT Proposed Transfer Date matches the AN expected Transfer Date).
WR breach	An AN or CS arrival date (whichever is applicable, may be one or both) are delivered by the losing Trader more than 2 business days of the arrival date of the AW rejecting the withdrawal; AND a subsequent NW is not provided before delivery of the AN or CS.

CONCLUSION

The audit found 24 non-compliance issues. Whilst this is an increase from the 17 non-compliances found in the last audit, this is due to few issues resulting in multiple non-compliances being recorded. Three recommendations are made.

The main areas of opportunity identified are (two are repeated from the last audit):

- bridged and defective meter estimated volumes have not been processed correctly resulting in the volumes not being reconciled, I have recommended that the process documentation is reviewed, and additional staff training is given,
- the registry is still not being updated for all disconnections if they are for a period of less than one week, Globug are working to correct this,
- consumption information is not submitted for one day for ICPs where Globug cannot supply, and then switch to an alternative trader or in most cases to Mercury, and
- switching automation is causing some incorrect AN and NW files to be sent, the coding is being examined in relation to this.

Validation and submission processes are robust.

Globug continues to review and refine processes. The disconnection process has been reviewed during the audit period and remote disconnections for vacant sites are now being carried out sooner. The issue of CS files being sent for one day too early has been resolved and no evidence of this was found during the audit. No changes requiring a material change have occurred during the audit period.

The indicative audit frequency table indicates the next audit should be in six months. As stated above the higher score is due to the same issue being repeated in multiple sections of the audit. I have considered this result in conjunction with the comprehensive responses from Globug and I recommend that the next audit be in 12 months.

PARTICIPANT RESPONSE

Globug is already in the process of addressing a number of the issues raised in this audit. Our work on status updates, particularly disconnections has proven more difficult than expected however we are committed to resolving the multiple issues that surround this. This includes:

- Updating the registry inactive status for each full day of no power.
- Providing timely registry updates
- Ensuring all ICPs are captured in our new reporting
- Ensuring disconnections reads are entered in all cases

For bridged and defective meter corrections, we will be reviewing our processes from start to finish and ensuring process documentation is current and accurate and that staff have full training to complete these corrections.

In the switching area we have a small number of breaches which are due to human error. We will be reviewing our processes particularly where manual release of a file is required to ensure the correct procedures are followed and that staff have all the necessary knowledge to enter valid and accurate information. The team is working with our ICT team to investigate and resolve some minor automation issues to ensure this is working in line with The Code's switching requirements.

The increased breach risk rating and increased total number of non-compliances is not reflective of the work that Globug has undertaken throughout this audit period and our continued work and commitment to improvements.