ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT

For

FLICK ENERGY LIMITED
NZBN: 9429030133211

Prepared by: Bernie Cross

Date audit commenced: 10 October 2022

Date audit report completed: 2 December 2022

Audit report due date: 3 December 2022

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EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Flick Energy Limited (Flick)**, 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 version 7.1.

Flick is a HHR only trader; and has approval to temporarily supply some NHH ICPs as HHR using their HHY profile until they can be upgraded.

Readings and reconciliation

The most significant issue for reconciliation is the replacement of actual accurate HHR interval data with estimates around two scenarios:

- to align with a received CS read estimate where either the read request (RR) has been rejected by the losing trader or a RR was not initiated, and
- to align with received midnight reads as part of the sum check validation where the accuracy of the midnight read has not been determined to be correct.

Flick has now implemented a process to create HHR estimates where there is insufficient history for Telemetry to generate estimates. This has reduced the frequency of ICPs being missed from the reconciliation process due to a lack of data to enable an estimate of consumption to be performed. This new estimation logic does not extend to I flow data which will be required to fully comply with the code.

Flick also applies a zero-value estimation for non-communicating vacant ICPs, however when the ICP remains vacant and non-communicating for a period exceeding the maximum interrogation cycle and no attempt is made to manually read the meter, the estimation no longer meets the reasonable endeavours criteria.

Some other more minor issues were identified for reconciliation, including one backdated switch was initiated by Flick that included periods outside the reconciliation revision window meaning volumes could not be reconciled for Flicks period of supply; the decision regarding how far back to request a switch also needs to consider Flicks ability to fully submit the volumes associated with the ICP and also the losing trader's ability to correct their submissions.

Registry

During the audit period there was an increase in the number of late status and trader updates. Monitoring of field services jobs to ensure that paperwork is received, and updates are processed on time has improved during the audit period.

Switching

Timeliness and accuracy for switching continues to be affected by new staff training and staff absences.

Where NT, AN and CS files are automatically produced by the provisioning system using Telemetry information, I found data was highly accurate and on time, with the exception of CS average daily kWh which is calculated from the average consumption over the last month rather than the last read to read period, and zero is applied if no readings have been received. Flick continues to wait for the amendments to the switching process proposed by the Switch Technical Group to be finalised before making changes to their processes.

Where AN and CS files were issued manually, I found there were some incorrect readings, read types, last actual read dates, and average daily kWh values due to manual data entry errors and misunderstandings. The impact of the incorrect data was low; the largest read differences were resolved through the read renegotiation process, and the other differences had a low impact.

RR and AC files are processed manually; I found a small number of errors and the affected ICPs were corrected or had their switched withdrawn. There were also some manual processing errors for withdrawals, with the wrong ICP sometimes being selected.

Conclusion

Flick have continued with their internal audits, expanding their safety net checks, and improving monitoring of field services jobs. Issues recorded in previous audits relating to inactive consumption have not been resolved, and some inaccuracies continue to occur where data is manually processed.

Flick have a focus on compliance however the audit risk rating is 48 (an increase from 43 in the previous audit), indicating that the next audit be due in six months.

The improvements around HHR estimations where no history is available, and the further automation of the switching process is evidence of Flick's commitment to improving their levels of compliance.

This audit identified 24 non-compliances and makes eight recommendations. Two non compliances have already been cleared prior to the completion of this audit.

Taking this into consideration along with Flick's comments, I recommend that the next audit is completed in a minimum of 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 data is incorrect. Switch estimate reads provided by losing trader not used by Flick for eight ICPs resulting in incorrect submission of 197 kWh. HHR actual data replaced by inaccurate estimate where RR file rejected, and interval data is estimated and scaled to align with CS read estimate. Backdated switch for ICP 0002401989EN1D8 (8 June 2019) resulted in 13,316 kWh not being included in the submission process. Consumption volume not included in submission for ICPs for the day of disconnection. Actual HHR interval data automatically replaced with estimates where check sum validation identifies a difference of more than ± 1 kWh where the accuracy of the received midnight reads is not investigated prior to the data correction. One ICP (0002401989EN1D8) which was assigned HHY profile has not met the terms of the profile, particularly the requirement to be upgraded to HHR profile within 16 weeks. Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate.	Moderate	Medium	4	Investigating
Data transmission	2.3	Clause 20 Schedule 15.2	Consumption volume for ICP 1920003000CHB8E differs between HHRAGGS and the received values from the AMI MEP.	Strong	Low	1	Investigating
Electrical Connection of Point of Connection	2.11	10.33A	15 ICPs did not have their meters certified on reconnection.	Strong	Low	1	Investigating

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Changes to registry information	3.3	10 Schedule 11.1	29 late status updates to "active" status. 13 late status updates to "inactive" status. 36 late trader updates. One late ANZSIC code update for a switched in ICP.	Moderate	Low	2	Identified
Provision of information to the registry manager	3.5	9 Schedule 11.1	13 late status updates for new connections. Six ICPs had incorrect active status events dates that required correction. ICP 0007207864RNB92 has an outstanding misalignment between IECD and active status event date.	Strong	Low	1	Identified
ANZSIC codes	3.6	9 (1)(k) of Schedule 11.1	The ANZSIC code for 13 ICPs were confirmed as being incorrect. The code was corrected during the audit.	Moderate	Low	2	Identified
Management of "active" status	3.8	17 Schedule 11.1	Six ICPs initially had incorrect active status event dates which were subsequently corrected.	Moderate	Low	2	Cleared
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	Four ICPs where the OC (Occupied) response code was incorrectly applied for transfer switches.	Moderate	Low	2	Identified
Losing trader must provide final information - standard switch	4.3	5 Schedule 11	At least three transfer CS files contained average daily kWh inconsistent with the requirements of the registry functional specification. Seven CS files had an incorrect last actual read date. Four CS files had an incorrect CS event read. One transfer switch (ICP 0045147391PC9C6) had a last actual read date after the switch event date.	Moderate	Low	2	Identified
Retailers must use same reading - standard switch	4.4	6(1) and 6A Schedule 11.3	For four ICPs the actual received read and interval data from the AMI MEP was used for submission purposes and the CS file estimate read was not used.	Moderate	Low	2	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	Seven ET breaches for switch moves. One E2 breach for switch moves. One AN did not have the correct AN response code applied.	Moderate	Low	2	Identified
Losing trader must provide final information - switch move	4.10	11 Schedule 11.3	At least two CS files contained average daily kWh inconsistent with the requirements of the registry functional specification. 16 CS files had incorrect last actual read dates.	Moderate	Low	2	Identified
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	Switch estimate reads provided by losing trader not used by Flick for two ICPs resulting in incorrect submission of 16 kWh. For four ICPs the actual received read and interval data from the AMI MEP was used for submission purposes and the CS file estimate read was not used.	Moderate	Low	2	Identified
Withdrawal of switch requests	4.15	17 and 18 Schedule 11.3	Seven NA breaches. Four NWs were issued in error by Flick and rejected by the other trader.	Moderate	Low	2	Identified
Metering information	4.16	21 Schedule 11.3	For four CS files issued by Flick, the switch event readings did not reflect the actual reading or estimated reading on the last day of supply.	Moderate	Low	2	Identified
Electricity conveyed & notification by embedded generators	6.1	10.13 and clause 15.2	Four bridged meters were identified during the audit period. Energy was not quantified in accordance with the code during the bridged periods.	Strong	Low	1	Identified
Collection of information by certified reconciliation participant	6.5	2 Schedule 15.2	100 (NGCM AMI MEP) ICPs where the time correction exceeded the maximum permitted error, and no review of the raw meter data was conducted to determine if any corrections were required. 156 (ARC AMI MEP) ICPs where the time correction exceeded 1,500 seconds and this time correction was then reverted at the next interrogation. 19 ICPs not interrogated within the maximum interrogation cycle.	Moderate	Low	2	Identified
NHH meter reading application	6.7	6 Schedule 15.2	For four CS files issued by Flick, the switch event readings did not reflect the actual reading or estimated reading on the event date.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Half hour estimates	9.4	15 Schedule 15.2	Reasonable endeavours not met for ten active long term vacant and non-communicating AMI metered ICPs where zero value estimations are provided for more than 12 months. Flick did not provide their best estimate for at least ten ICPs which did not have estimates generated because there was insufficient history for Telemetry to create an estimate at the time. One ICP (0005003083RNFC5) had a difference of 9.4 kWh between the interval data consumption and the meter reads for the month of the meter change.	Moderate	Low	2	Investigating
Electronic meter readings and estimated readings	9.6	17 Schedule 15.2	Meter event logs not consistently reviewed, and no formal process is in place to ensure complete reviews are conducted.	Moderate	Low	2	Identified
Calculation of ICP days	11.2	15.6	ICP days are not provided for trading periods which do not have estimated or actual data, or where there was a ICP to NSP mapping issue.	Strong	Low	1	Cleared
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR estimates are not generated where there is insufficient history for Telemetry to generate an estimate. At least five ICPs did not have estimates generated because there was insufficient history for Telemetry to create an estimate.	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Creation of submission information	12.2	15.4	Switch estimate reads provided by losing trader not used by Flick for eight ICPs resulting in incorrect submission of 197 kWh. Backdated switch for ICP 0002401989EN1D8 (8 June 2019) resulted in 13,316 kWh not being included in the submission process. Actual HHR interval data automatically replaced with estimates where check sum validation identifies a difference of more than ± 1 kWh where the accuracy of the received midnight reads is not investigated prior to the data correction. Same reading not used by Flick for two ICPs resulting in 10 kWh under submission. Consumption volume not included in submission for ICPs for the day of disconnection.	Moderate	Medium	4	Identified
Accuracy of submission information	12.7	15.12	Switch estimate reads provided by losing trader not used by Flick for eight ICPs resulting in incorrect submission of 197 kWh. HHR actual data replaced by inaccurate estimate where RR file rejected, and interval data is estimated and scaled to align with CS read estimate. Reasonable endeavours not met for ten active long term vacant and non-communicating AMI metered ICPs where zero value estimations are provided for more than 12 months Backdated switch for ICP 0002401989EN1D8 (8 June 2019) resulted in 13,316 kWh not being included in the submission process. Actual HHR interval data automatically replaced with estimates where check sum validation identifies a difference of more than ± 1 kWh where the accuracy of the received midnight reads is not investigated prior to the data correction.	Moderate	Medium	4	Investigating

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			Consumption volume not included in submission for ICPs for the day of disconnection. Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate.				
Future Risk Rating						48	

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

RECOMMENDATIONS

Subject	Section	Description	Recommendation
Relevant information	2.1	Estimates for I flow registers	To meet the reasonable endeavours requirements for I flow meter registers, Flick should extend the estimation process to include I flow meter registers until actual data is received.
Changes to registry information	3.3	Inactive consumption reporting	Recommend that the inactive consumption safety net reporting is enhanced to provide additional attributes to support users root cause analysis to identify potential incorrect registry status values as opposed to ICPs that have started to consume post physical disconnection.
Provision of information to the registry manager	3.5	Monitor IECD and active status dates for new connections	Recommend that Flick investigates including an additional check within safety net to compare distributors IECD value with the Flicks active status date populated on the registry to improve the timeliness in investigating and resolving these exceptions.
Losing trader must provide final information - standard switch	4.3	Correct labelling of unvalidated actual AMI interval data	Recommend that Flick amends their logic in labelling received AMI data to reflect it is unvalidated actual data rather than estimated data.
Retailers must use same reading - standard switch	4.4	Requirement to provide complete and accurate information	Flick amends its process for continuing to use read estimates from CS files for estimation purposes where RR files have been rejected or not issued and actual AMI HHR data is present in Telemetry.
Collection of information by certified reconciliation participant	6.5	Clock synchronisation events	Where a clock synchronisation over 1800 seconds occurs, and data for multiple trading periods is pushed into the period of adjustment, develop a process to spread the total consumption for the adjustment period across the periods it actually occurred within.
Electronic meter readings and estimated readings	9.6	Comparison with previous or expected consumption patterns	Recommend that consumption is validated to confirm whether it is consistent with historic or expected usage patterns at ICP level.

Subject	Section	Description	Recommendation
Electronic meter readings and estimated readings	9.6	Identification and escalation of missing AMI interval data to MEPs	Develop and implement reporting of missing/ estimated interval data used in submission, and a process to escalate these instances to the relevant AMI MEP for resolution.

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

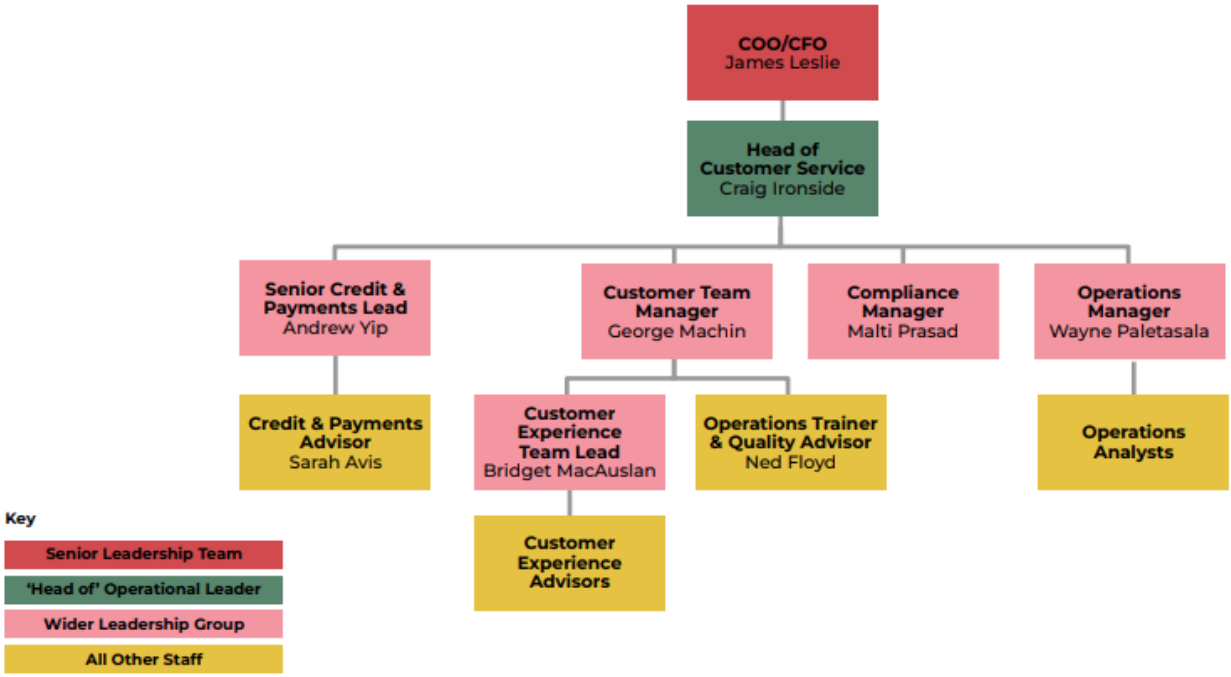
Current code exemptions were reviewed on the Electricity Authority website.

Audit commentary

There are no exemptions in place that are relevant to the scope of this audit.

1.2. Structure of Organisation

Flick provided a copy of their organisation structure for the relevant parts of their business.



1.3. Persons involved in this audit

Auditor:

Bernie Cross

Veritek Limited

Electricity Authority Approved Auditor

Flick personnel assisting in this audit were:

Name	Title
Malti Prasad	Compliance Manager – Customer and Market Operations
Maneesh Prasad	Senior Operations Analyst
Craig Ironside	Head of Customer Services
Lucy Grant	Operations Analyst

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 Flick.

Audit commentary

HHR data is provided by AMS (for AMS and Smartco), IntelliHUB (for Metrix, IntelliHUB and Counties Power), Arc, WASN and FCLM as MEPs. All ICPs have category 1 or 2 meters.

IntelliHUB estimates have not been applied since April 2021.

Audit outcome

Compliant

1.5. Hardware and Software

The table below lists the systems used to meet Flick's reconciliation participant obligations. Access to systems is restricted using logins and passwords, and back up services are via Amazon Web Services and Google Cloud.

System/Provider	Function
Flick Billing	Billing system.
Telemetry (and Provisioning)	Customer, registry, volume, and reconciliation information management from 1 April 2018. Registry updates are processed manually. Automation of CS processes is being tested, with automation of RR and AC processes to follow.
Salesforce	Customer relationship management system which interfaces with the Admin App, Telemetry and Flick Billing.

1.6. Breaches or Breach Allegations

There have been no alleged breaches relevant to the scope of this audit during the audit period.

1.7. ICP Data

Active ICPs are summarised by meter category in the table below.

Metering Category	2022	2021	2020	2019	2018	2017	2016	2015
1	23,188	26,002	23,005	20,012	24,665	21,973	15,071	5,445
2	30	34	34	29	33	36	16	1
3	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-
9	-	-	-	-	-	15	-	-
Blank	-	-	-	-	-	-	-	-

Status	Number of ICPs (2022)	Number of ICPs (2021)	Number of ICPs (2020)	Number of ICPs (2019)	Number of ICPs (2018)	Number of ICPs (2017)	Number of ICPs (2016)	Number of ICPs (2015)
Active (2,0)	23,218	26,036	23,039	20,041	24,698	21,946	15,015	5,446
Inactive – new connection in progress (1,12)	7	5	5	-	-	-	-	-
Inactive – electrically disconnected vacant property (1,4)	51	25	17	27	34	13	4	12
Inactive – electrically disconnected remotely by AMI meter (1,7)	157	153	66	145	156	26	67	0
Inactive – electrically disconnected at pole fuse (1,8)	1	1	1	5	2	-	-	-
Inactive – electrically disconnected due to meter disconnected (1,9)	8	5	1	1	2	-	-	-
Inactive – electrically disconnected at meter box fuse (1,10)	-	-	-	-	1	-	-	-
Inactive – electrically disconnected at meter box switch (1,11)	-	-	-	-	-	-	-	-
Inactive – electrically disconnected ready for decommissioning (1,6)	7	4	5	1	2	3	-	-
Inactive – reconciled elsewhere (1,5)	-	-	-	-	-	-	-	-
Decommissioned (3)	258	216	140	102	70	37	5	1

1.8. Authorisation Received

A letter of authorisation was provided.

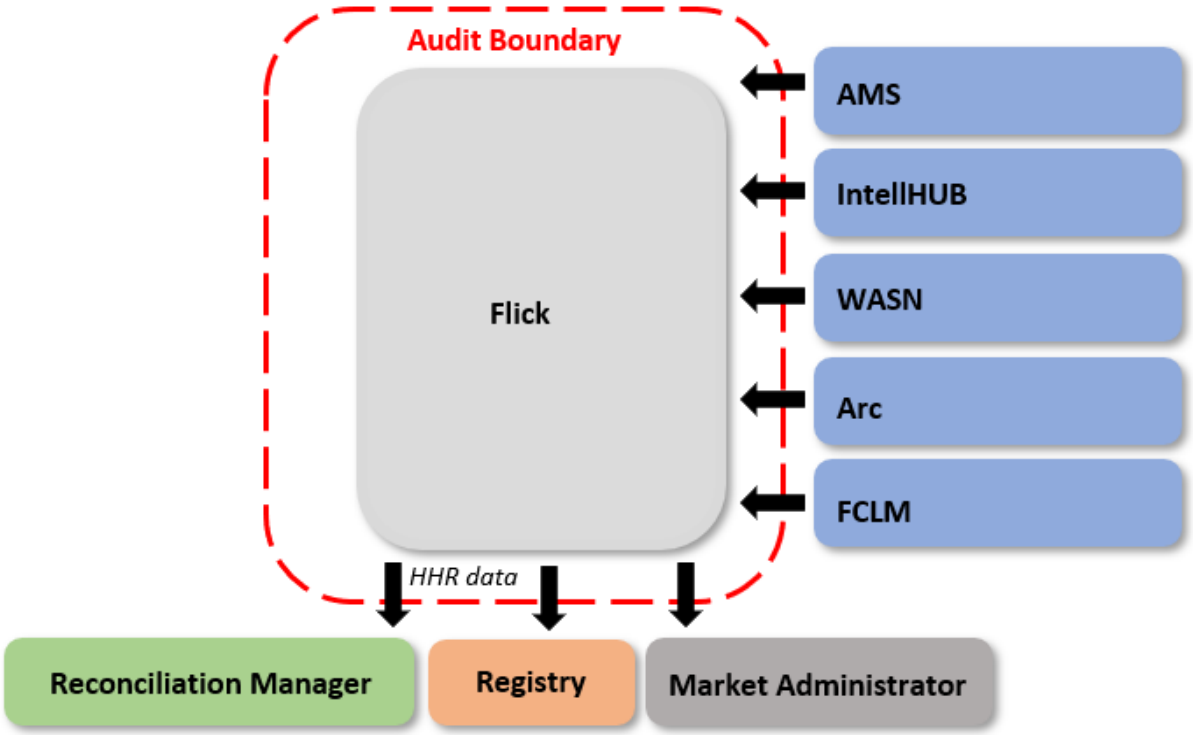
1.9. Scope of Audit

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of Flick, to support their application for renewal of certification in accordance with clauses 5 and 7 of schedule 15.1. The audit was conducted in accordance with the Guideline for Reconciliation Participant Audits V7.1.

The audit was carried out at Flick's premises in Wellington on 27-28 October 2022.

As part of the audit, I examined registry list, event detail and audit compliance reports for 1 November 2021 to 21 September 2022, and the meter installation details report for 20 September 2022.

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



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

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		AMS – HHR (AMI) Arc – HHR (AMI) FCLM – HHR (AMI) IntelliHUB – HHR (AMI) WASN – HHR (AMI)

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs Providing AMI data
(c)(i) - Creation and management of volume information		AMS – HHR (AMI) Arc – HHR (AMI) FCLM – HHR (AMI) IntelliHUB – HHR (AMI) WASN – HHR (AMI)
(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		

HHR data is provided by AMS (for AMS and Smartco), IntelliHUB (for Metrix, IntelliHUB and Counties Power), Arc, WASN and FCLM as MEPs. All ICPs have category 1 or 2 meters.

1.10. Summary of previous audit

Flick provided a copy of their previous audit conducted in November 2021 by Tara Gannon of Veritek Limited. The summary tables below show the status of the non-compliances and recommendations raised in the previous audit. Further comment is made in the relevant sections of this report.

Subject	Section	Clause	Non-compliance	Status
Relevant information	2.1	10.6, 11.2, 15.2	Some registry data is incorrect. HHR estimates are not generated where there is insufficient history for Telemetry to generate an estimate. At least eight ICPs did not have estimates generated because there was insufficient history for Telemetry to create an estimate. Seven ICPs had consumption recorded on a date with inactive status. Two ICPs had HHY profile applied for longer than the maximum period allowed under the approved profile application. IntelliHUB does not provide updated actual data to replace estimates if the actual data is obtained more than 15 days after the event date.	Still existing.

Subject	Section	Clause	Non-compliance	Status
			Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate	
Electrical Connection of Point of Connection	2.11	10.33A	Three ICPs did not have their meters certified on reconnection.	Still existing.
Changes to registry information	3.3	10 Schedule 11.1	85 late status updates to active status. Ten late status updates to inactive status. 177 late trader updates. 53 late ANZSIC code updates for new connections or switch ins.	Still existing.
Trader responsibility for an ICP	3.4	11.18	The MEP was notified of the decommissioning of ICP 0001381020PC55D six days after the decommissioning date.	Cleared.
Provision of information to the registry manager	3.5	Clause 9 Schedule 11.1	Five late status updates for new connections. ICP 0007198487RN3F4 had its active status date recorded as 02/11/20 instead of 05/11/20 and was corrected during the audit.	Still existing.
ANZSIC codes	3.6	9 (1)(k) of Schedule 11.1	The ANZSIC code for 0001202483TU4A7 is recorded as D281100 water supply but should be I530900 - Other Warehousing and Storage Services	Still existing.
Management of "active" status	3.8	17 Schedule 11.1	ICPs 0000010228MLB36 and ICP 0007198487RN3F4 had incorrect active status dates which were corrected during the audit.	Still existing.
Management of "inactive" status	3.9	19 Schedule 11.1	ICPs 0387281169LC942 and 0420349359LCF6E had incorrect disconnection records on the registry which were corrected during the audit. Seven ICPs had consumption recorded on a date with inactive status.	Still existing.
Losing trader must provide final information - standard switch	4.3	5 Schedule 11	Two CS breaches for transfer switches. At least four transfer CS files contained average daily kWh inconsistent with the requirements of the registry functional specification. Seven CS files had an incorrect last actual read date. Three CS files had an incorrect read type. Three CS files had an incorrect CS event read. 0005263689RN1D2 had an incorrect switch event date applied and was corrected through the withdrawal process.	Still existing.

Subject	Section	Clause	Non-compliance	Status
Retailers must use same reading - standard switch	4.4	6(1) and 6A Schedule 11.3	Three RR breaches. Switch event readings for 0006880711RN2DA (12/03/2021) and 0007000499RN46A (27/04/2021) were recorded as estimates in Telemetry but should have been actual.	Still existing.
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	13 ET breaches for switch moves. Two E2 breaches for switch moves. Five ANs did not have the correct AN response code applied.	Still existing.
Losing trader must provide final information - switch move	4.10	11 Schedule 11.3	At least six CS files contained average daily kWh inconsistent with the requirements of the registry functional specification. 12 CS files had an incorrect last actual read date. Four CS files had an incorrect read type. Three CS files had an incorrect CS event read.	Still existing.
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	Two RR breaches for switch moves. Three RRs had the incorrect read recorded in Telemetry and were corrected by re-issuing an RR which was accepted during the audit.	Still existing.
Withdrawal of switch requests	4.15	17 and 18 Schedule 11.3	Nine NA breaches. Four NWs were issued for the wrong ICPs and rejected by the other trader. The NW for 0000064496TR28F (09/03/21) should have been issued with advisory code WS (wrong switch type) instead of WP (wrong premises).	Still existing.
Metering information	4.16	21 Schedule 11.3	For six CS files issued by Flick, the switch event readings did not reflect the actual reading or estimated reading on the last day of supply.	Still existing.
Electricity conveyed & notification by embedded generators	6.1	10.13 and clause 15.2	Eight bridged meters were identified during the audit period. Energy was not quantified in accordance with the code during the bridged periods.	Still existing.
NHH meter reading application	6.7	6 Schedule 15.2	For six CS files issued by Flick, the switch event readings did not reflect the actual reading or estimated reading on the event date.	Still existing.
NHH meters 90% read rate	6.10	Clause 9(1) and (2) Schedule 15.2	Meter reading frequency reports have not been provided to the market administrator for NHH ICPs continuously supplied for four months or more.	Cleared

Subject	Section	Clause	Non-compliance	Status
Identification of readings	9.1	Clause 3(3) Schedule 15.2	Seven CS files had an incorrect read type. The incorrect read types were recorded in Telemetry for two ICPs which had RRs.	Still existing.
Half hour estimates	9.4	15 Schedule 15.2	HHR estimates are not generated where there is insufficient history for Telemetry to generate an estimate. Flick did not provide their best estimate for at least eight ICPs which did not have estimates generated because there was insufficient history for Telemetry to create an estimate, and three ICPs where trading period consumption was estimated using a flat profile.	Still existing.
Calculation of ICP days	11.2	15.6	ICP days are not provided for trading periods which do not have estimated or actual data.	Still existing.
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information. HHR estimates are not generated where there is insufficient history for Telemetry to generate an estimate. At least eight ICPs did not have estimates generated because there was insufficient history for Telemetry to create an estimate	Still existing.
Creation of submission information	12.2	15.4	HHR estimates are not generated where there is insufficient history for Telemetry to generate an estimate. At least eight ICPs did not have estimates generated because there was insufficient history for Telemetry to create an estimate. Seven ICPs had consumption recorded on a date with inactive status.	Still existing.
Accuracy of submission information	12.7	15.12	HHR estimates are not generated where there is insufficient history for Telemetry to generate an estimate. At least eight ICPs did not have estimates generated because there was insufficient history for Telemetry to create an estimate. Seven ICPs had consumption recorded on a date with inactive status. Two ICPs had HHY profile applied for longer than the maximum period allowed under the approved profile application. IntelliHUB does not provide updated actual data to replace estimates if the actual data is	Still existing.

Subject	Section	Clause	Non-compliance	Status
			obtained more than 15 days after the event date. Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate.	

Subject	Section	Clause	Recommendation	Status
Management of "inactive" status	3.9	Processing of disconnections and reconnections	To ensure that all consumption is captured, record active status for any part or full days where the ICP is active and/or has consumption recorded, or process corrections to capture inactive consumption.	Cleared
Collection of information by certified reconciliation participant	6.5	Clock synchronisation events	Where a clock synchronisation over 1800 seconds occurs, and data for multiple trading periods is pushed into the period of adjustment, develop a process to spread the total consumption for the adjustment period across the periods it actually occurred within.	Still existing
NHH meters 90% read rate	6.10	Meter reading frequency reporting	Provide meter reading frequency reports to the Authority for any month where ICPs are supplied with NHH metering (HHY profile) for four months or more according to the Authority's non half hour meter read frequency guidelines.	Cleared
Electronic meter readings and estimated readings	9.6	Comparison with previous or expected consumption patterns	I recommend that consumption is validated to confirm whether it is consistent with historic or expected usage patterns at ICP level.	Still existing

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

Status and trader updates are completed manually using the registry web interface, and data is updated in Telemetry at the same time. As part of this process, the user checks that the registry update is successful, and that the data recorded in Telemetry and on the registry matches. Flick is considering future automation of the status and trader update process. Clause 8(1) of Schedule 15.1 requires that if a reconciliation participant intends to make a "material" change to any certified facilities, processes, or procedures then the changes must be subject to an audit prior to the change taking place.

Registry notification files are imported into Telemetry. Acknowledgement files are not routinely reviewed, but changes to registry information will be detected through Flick's safety net process, which identifies and corrects inaccurate data. Each Tuesday and Thursday, safety net reporting is used to identify and resolve data discrepancies, including:

- status discrepancies, including a check that any inactive ICPs are still disconnected, and the status is valid,
- ICPs with generation fields populated are checked to ensure that generation metering is installed, and the generation fuel type is as expected,
- ICPs with distributor unmetered load details, daily unmetered kWh or the unmetered flag set to Y are not usually supplied, and arrangements are made for the switch to be withdrawn or the ICP to switch out,
- ANZSIC codes beginning with "T" are checked and updated (there is also monthly validation of ANZSIC codes against the network price category, blank ANZSIC codes and ICPs with meter category two and residential ANZSIC codes, as discussed in **section 3.6**),
- ICPs with meter flags or submission types that indicate a NHH meter is present (if an AMI meter upgrade is not in progress, arrangements are made for the switch to be withdrawn, or the ICP to switch out),

- ICPs with the AMI flag = N, which are checked to determine whether a job to resolve the issue or upgrade the meter is in progress,
- ICPs with PP = Y are not usually supplied, and arrangements are made for the switch to be withdrawn, or the ICP to switch out,
- profiles which are inconsistent with the metering details, which are corrected, and
- expired meter certification, which is followed up with the MEP.

During the audit, I saw evidence that the safety net process was working successfully, and exceptions identified were followed up.

Flick's internal audit programme has continued during the audit period, and samples of switching and registry events are checked in a similar manner to this reconciliation participant audit. Corrections, training, and process improvements may be carried out as a result of the audit findings. Processes covered by this audit are internally audited at least quarterly.

The analysis of the list file and AC020 returned the following findings:

Issue	2022 Qty	2021 Qty	2020 Qty	2019 Qty	2018 Qty	2017 Qty	Comments
Active with blank ANZSIC codes	**-**	-	-	-	-	-	Compliant.
Active with ANZSIC "T999" not stated	**-**	-	-	-	-	-	Compliant.
Active with ANZSIC "T994" don't know	**-**	-	-	-	-	-	Compliant.
Incorrect ANZSIC code	**13**	1	5	-	7		Only Blank or T series ANZSIC codes reviewed on sign up of business customers resulting in Flick not keeping ANZSIC codes up to date. See **section 3.6**.
Meter cat 3 or known commercial site with residential ANZSIC code	**-**	-	-	-	-	-	Compliant, no ICPs have metering category 3 or above.
ICPs with unmetered load flag Y but load is recorded as zero	**-**	-	-	-	-	-	Compliant, no ICPs with unmetered load are supplied.
ICPs with incorrect unmetered load	**-**	-	-	-	-	-	Compliant, no ICPs with unmetered load are supplied.
ICPs with Distributor unmetered load populated but retail unmetered load is blank and UML flag = N	**-**	-	-	-	-	-	Compliant, no ICPs with unmetered load are supplied.
Active ICPs with blank MEP and no MEP nominated and UML = N	**-**	-	-	-	-	-	Compliant, all ICPs are metered and have an MEP recorded.

Issue	2022 Qty	2021 Qty	2020 Qty	2019 Qty	2018 Qty	2017 Qty	Comments
Incorrect status	**7**	4	4	-	3	-	Six ICPs had incorrect active status records. The affected records were corrected as part of the respective distributor IECD / active date mismatch escalations. See **sections 3.8** and **3.9**.
Incorrect profile	**20**	7	2	-	46	1	The HHY profile changes were due to Arc removing their AMI meter on the registry prior to Flick completing a nomination for the new MEP (NGCM). This meant that Flick could not submit a MEP nomination without a meter being installed and with the HHR submission type flag set to 'Y'. This resulted in Flick utilising their HHY profile code for one day to enable a MEP nomination. The ICPs were settled using the HHR profile for this one day. One profile change (ICP 0005768110RND55) was to correct the event date.
Incorrect submission type	**1**	-	1	-	44	-	The correction of the submission type flag (ICP 1000607977PC456) was due to human error when the initial trader event population for a new connection was applied.
Active date variance with initial electrical connection date		8	-	-	-	-	

Read and volume data accuracy

As described in **section 12.2** and **12.7**, some submission accuracy issues are present.

- Switch estimate reads provided by the losing trader were not used by Flick for two ICPs resulting in incorrect submission of 16 kWh.
- Where an RR issued by Flick is rejected, the file is passed to the data team who will adjust the start reading within telemetry and replace the actual interval data with an estimate to match the CS file. I found two examples where the CS reads were applied, and the actual interval data replaced with an estimate. The process to replace actual interval data with an estimate to ensure alignment with the read estimate within the CS file means the HHR data estimated from these CS reads is not considered to be accurate in accordance with Clause 15.2 as accurate actual HHR data has been replaced with inaccurate estimated HHR data.
- ICP 0005768110RND55 had its profile changed from an incorrect date on the registry.
- Backdated switch for ICP 0002401989EN1D8 (8 June 2019) resulted in 13,316 kWh not being included in the submission process

- ICP (0002401989EN1D8) was also assigned HHY profile for three years which does not met the terms of the profile, particularly the requirement to be upgraded to HHR profile within 16 weeks.
- Flick supplies 632 active ICPs with HHR settled Arc meters. There is an issue with ARC Innovations meters when used for HHR settlement. The on-site setup is that a meter pulses into a data storage device, which counts the pulses and "stores" them every 200 pulses which equals 0.1 kWh. There is only one decimal place, so the smallest increment of consumption is 0.1. Unfortunately for Flick, this means the HHR data derived from ARC meters is not considered to be accurate in accordance with Clause 15.2. The total kWh per month will be accurate but if volumes are not recorded and reported against the correct trading period, Flick may not be charged at the wholesale rate that applied during the trading period when the electricity was consumed.

Previous audit issues that did not occur during this audit were re-checked.

- No unmetered load was supplied during the audit period, but the use of the new HHU profile will allow unmetered load to be submitted if required in the future.
- IntelliHUB estimates have not been applied since April 2021.

Half hour estimates

The half hour estimation processes are described in **section 9.4**.

A review of the process confirmed that HHR estimates will be created after five business days for all X flow meters, including for ICPs which do not have sufficient history to create estimates under Telemetry's existing estimation process. I flow registers are excluded from the estimation process and as no I flow estimates are created, the registers will be excluded from submission data until actual readings are received. Once actual AMI data is received, or a removal reading or switch out reading is entered, the missing data will be populated. If an ICP with an I flow register switches out before actual readings are received, zero consumption will be estimated.

Estimates will be included in the HHR aggregates and volumes submissions, and days with estimated data will be included the ICP days submissions.

I order to achieve reasonable endeavours requirements for half hour estimation I repeat the recommendation from the material change audit for Flick to extend the estimation process to include I flow meter registers.

Description	Recommendation	Audited party comment	Auditor comments
Estimates for I flow registers	To meet the reasonable endeavours requirements for I flow meter registers, Flick should extend the estimation process to include I flow meter registers until actual data is received.	We will investigate options for estimating I flow meter registers and attempt to adopt this recommendation.	Investigating

Corrections

Read and volume accuracy issues are identified in the validation processes described in detail in **section 9.6**. I reviewed HHR correction processes, including checking correction examples where available.

Defective meters	Where a meter is confirmed not to be recording consumption accurately, Flick arranges meter replacement and manually estimates consumption for the faulty period once one month of reliable data is available on the replacement meter. I reviewed five examples of defective meters and found corrections were processed and a reasonable estimate of consumption during the faulty period was reported.
Incorrect multipliers	Telemetry stores the meter multiplier, which is applied to the raw meter data it imports to create the reconciliation submission data and billed data. The multipliers are extracted from the registry along with other meter attributes, and multiplier changes will be identified through the registry notification process. Validation including the checksum is completed on the raw data. No incorrect multipliers were identified, and review of a sample of ten ICPs with multipliers confirmed that the stored multipliers and their application were correct.
Bridged meters	Where a meter is bridged, it will not record consumption during the bridged period. Flick arranges for the meter to be unbridged and/or replaced and manually estimates consumption for the bridged period once one month of reliable data is available. Four meters were bridged, and corrections were processed and a reasonable estimate of consumption during the bridged period was reported. Non-compliance is recorded in **section 6.1** as energy was not quantified in accordance with the code during the bridged periods
Consumption while inactive	Consumption during inactive periods is recorded in Telemetry but excluded from submission. If an ICP is connected for part of any day, it should have active status recorded in order to be included in submission information. When processing disconnections, Flick now enters the date after the disconnection was completed as the disconnection date and this ensures all consumption recorded on the disconnection date is included in the HHR submission process. Inactive consumption is identified as part of the safety net check and ICPs are usually returned to active for any inactive periods with consumption.
Consumption while vacant	I checked a sample of 20 vacant ICPs with consumption where the AMI meter was communicating, and which confirmed that consumption for vacant ICPs is captured and reported. I checked another sample of 10 ICPs where the AMI meter is not communicating, and consumption is being estimated as zero kWh per day which is recorded as non-compliance in **sections 9.4** and **12.7**.
Unmetered load corrections	Flick's engineered profile (HHU), which allows submission of unmetered load to the reconciliation manager was approved by the Authority on 1 December 2020. Flick will use a manual process to apply a flat load profile, consistent with the Authority's NHH UML profile, to spread the daily unmetered kWh between the trading periods so that the unmetered load can be included in the HHR aggregates and volumes files.
Check sum validation and correction of interval data	MEPs compare meter readings against half hour interval data, known as the sum-check process. Flick also completes a sum-check process for all meters, including three phase meters which now have midnight readings supplied. Where data is available for all trading periods and the sum-check is not within ± 1 kWh, a validation exception is generated and trading period data between the midnight reads will be estimated via an automated process. The accuracy of the received midnight reads is not investigated prior to the data correction. Flick is aware of instances where the accuracy of the received midnight reads has been confirmed as not being accurate, however the actual accurate interval data is still replaced with an estimate to ensure the interval data values align with the received midnight reads. This means the HHR data estimated from inaccurate midnight reads replacing actual interval data is not considered to be accurate in accordance with Clause 15.2. This means that Flick may

	not be charged at the wholesale rate that applied during the trading period when the electricity was consumed.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 10.6, 11.2, 15.2 From: 01-Nov-21 To: 21-Sep-22	Some registry data is incorrect. Switch estimate reads provided by losing trader not used by Flick for two ICPs resulting in incorrect submission of 16 kWh. HHR actual data replaced by inaccurate estimate where RR file rejected, and interval data is estimated and scaled to align with CS read estimate. Backdated switch for ICP 0002401989EN1D8 (8 June 2019) resulted in 13,316 kWh not being included in the submission process. Actual HHR interval data automatically replaced with estimates where check sum validation identifies a difference of more than ± 1 kWh where the accuracy of the received midnight reads is not investigated prior to the data correction. One ICP (0002401989EN1D8) which was assigned HHY profile has not met the terms of the profile, particularly the requirement to be upgraded to HHR profile within 16 weeks. Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate. Potential impact: Medium Actual impact: Medium Audit history: Multiple times Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	Controls are rated as moderate because they are sufficient to ensure that most information is recorded correctly. The impact is assessed to be medium due to the volume missing from the submission process for which will not be updated as the revision process has already occurred for the affected periods.

Actions taken to resolve the issue	Completion date	Remedial action status
Safety Net process will be enhanced to ensure that it picks up all the registry discrepancies including IECD (Initial Electrically connected) dates. Retraining has been provided to the switch team on the RR process. An attempt will be made to correct the RR read. An escalation process has been implemented in the switching team for requests for all withdrawals exceeding the 14-month mark to be escalated to the Operations Manager. Withdrawals over the 14 months will not be initiated or accepted. The unvalidated HHR data is not replaced but marked as an estimated in the system. An attempt will be made to implement changes to the system, so it enables the unvalidated date to be marked as "unvalidated" rather than an estimate. We could not meet the HHY profile term for ICP 0002401989EN1D8 due to the switch being backdated. The backdated term had already passed the 16 weeks' timeframe.	24/12/2022	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monthly Operations QA has been implemented to assess and monitor all the processes above. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits	Ongoing	

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 several 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

HHR data is provided by AMS (for AMS and Smartco), IntelliHUB (for Metrix, IntelliHUB and Counties Power), Arc, WASN and FCLM as MEPs via SFTP. To confirm the transmission process, I traced a sample of reads and volumes for a diverse sample of eight HHR ICPs from the source files to Telemetry and HHR aggregates submissions. The sample included all data providers.

Flick also supplies a small number of ICPs with legacy meters, which are intended to be promptly upgraded to AMI meters. Readings are not received for these meters until (1) they are upgraded, and a removal reading is provided or (2) they switch out prior to upgrade and customer photo reading is used to create an estimated switch reading. The process is discussed further in **section 6.6**.

Audit commentary

All read and volume data is transferred to Flick via SFTP. I traced a sample of data for 13 HHR ICPs from the raw data files to Telemetry and the HHR aggregates files and confirmed that the readings and volumes recorded were consistent with the raw data for 12 ICPs. The volume for ICP 1920003000CHB8E for August 2021 did not align between Telemetry and the HHRAGGS report (67.7 kWh – telemetry vs 77.55 kWh – HHRAGGS). Flick are investigating the possible cause of this difference.

The IntelliHUB daylight savings issue recorded in the previous audit has not recurred.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.3 With: Clause 20 Schedule 15.2 From: 01-Nov-21 To: 21-Sep-22	Consumption volume for ICP 1920003000CHB8E differs between HHRAGGS and the received values from the AMI MEP. 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, because Flick systems have audit trails in place to track changes to consumption information. The audit risk rating is low as the volume impact on reconciliation is small.

Actions taken to resolve the issue	Completion date	Remedial action status
This issue has been raised with our Tech team who are investigating the reason for this discrepancy between HHRAGGS and the received values from the AMI MEP for ICP 1920003000CHB8E.	20/12/2022	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monthly Operations QA has been implemented which will include the above process to be assessed.	Ongoing	

2.4. Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

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

The audit trail must include details of information:

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

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

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

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

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

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

Audit observation

A complete audit trail was checked for all data gathering, validation and processing functions. I viewed audit trails in Telemetry and the provisioning system for a small sample of events.

Audit commentary

Audit trails 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 Flick's current customer terms and conditions.

Audit commentary

Flick's terms and conditions include 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 Flick's current customer terms and conditions and discussed compliance with these clauses.

Audit commentary

Flick's terms and conditions include consent to access for authorised parties for the duration of the contract. Flick confirmed that they have been able to arrange access for other parties when requested.

Audit outcome

Compliant

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

Code reference

Clause 10.35(1) & (2)

Code related audit information

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

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

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

Audit observation

The physical meter location point is not specifically mentioned in the terms and conditions, but the existing practices in the electrical industry achieve compliance.

The registry list was reviewed to determine the metering categories supplied.

Audit commentary

Flick only supplies ICPs with metering categories 1 and 2 and does not deal with any installations with loss compensation.

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 sub-clause (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 Flick's current customer terms and conditions.

Audit commentary

Flick'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 one or more metering installations for the point of connection.*

Audit observation

The new connection processes were examined in detail to evaluate the strength of controls, and the registry list, audit compliance, and switch breach history reports were examined to confirm process compliance. Late updates to active status for new connections are discussed in **section 3.5**.

Audit commentary

The design of the new connections process does not allow ICPs to be connected without authorisation by Flick, or an arrangement with an MEP.

Flick's new connection process requires all ICPs to be taken to the 1,12 "inactive - new connection in progress" status in the registry and the MEP is nominated at the same time. All new connections identified on the event detail report had a 1,12 status record.

Trader acceptance for new connections is normally provided on a case-by-case basis via email, to ensure that ICPs meet Flick's supply requirements before they are accepted. There are no blanket acceptance agreements in place.

Progress with new connections is monitored. A monthly registry list of ICPs with Flick as the proposed trader is reviewed to identify any new connections which do not have applications, which are followed

up with the network. ICPs at the "inactive - new connection in progress" status are monitored as part of the twice weekly safety net checks.

The audit compliance report did not record any "active" ICPs where the metering category was 9 or blank, indicating that no meters were present. All active ICPs are metered, and no ICPs with unmetered load are supplied.

I checked a sample of 13 new connections. In all cases, Flick had accepted responsibility prior to initial electrical connection.

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 a MEP to temporarily electrically connect a point of connection, only if:

- *for a point of connection to the grid – the grid owner has approved the connection*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection.*
- *for a point of connection that is an ICP, but is not as NSP:*
- *the reconciliation participant is recorded in the registry as the trader responsible for the ICP*
- *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 temporary electrical connection.*

Audit observation

The new connection process was examined in detail.

Audit commentary

Flick claims ICPs at 1,12 "inactive - new connection in progress" status which helps to ensure that the trader is recorded on the registry if an ICP is temporarily electrically connected. No temporary electrical connections were identified.

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

The new connection process was examined in detail to evaluate the strength of controls.

The AC020 report was examined to confirm process compliance and that controls are functioning as expected.

Audit commentary

Active ICPs without metering

Review of the registry list and AC020 reports confirmed that all active ICPs have an MEP recorded and metering category 1 or 2.

Certification on connection

Flick checks that all ICPs have full metering certification and follows up any discrepancies with the MEP as part of their safety net checks described in **section 2.1**. Flick also checks that ICPs are fully certified before reconnection.

The AC020 report showed that all new connections were certified on time, but 15 reconnections were not recertified post connection:

- 14 ICPs had an Arc meter, and AMS obtained an exemption from the Authority which will allow certification through statistical sampling; these ICPs have now either been certified or replaced with a NGCM meter, and
- ICP 0007197681RN11C is still not certified by the AMI MEP.

Certification on un-bridging

Flick provided a list of four meters which had been bridged during the audit period, and all were certified on un-bridging.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.11 With: Clause 10.33A From: 01-Nov-21 To: 21-Sep-22	15 ICPs did not have their meters certified on reconnection. 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, because Flick identifies uncertified meters as part of their safety net checks and follows up uncertified meters with the MEP. The audit risk rating is low as this has no direct impact on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
The above mentioned ICPs had meters which were owned by ARC. Flick received an email confirmation from AMS which stated that EA had provided ARC with an exemption on the certification of ARC meters. Our safety net check spits out all the ICP's requiring re-certification within a month, and these are escalated to the MEP's.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We can only identify and escalate all uncertified ICPs to the MEP's. We are dependent on the MEP's on re-certifying the sites.	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, along with the application process.

The registry list was reviewed to identify all networks Flick has traded on during the audit period.

Audit commentary

Flick has arrangements in place for line function services where they intend to trade and did not begin trading on any new networks during the audit period.

When a customer applies using Flick's application process, registry data for the ICP is retrieved and validated. The application will only be accepted if the following criteria are met:

- valid network for Flick,
- MEP is AMS, Arc, FCLM, WASN, SMCO or IntelliHUB,
- valid price category for Flick,
- AMI flag is yes,
- unmetered flag is no, and
- installation type is L.

Applications that do not meet these criteria are declined automatically.

If an application is declined, the customer has the option of leaving their email address if they would like to be contacted. Flick contacts these customers to determine whether they could be eligible for supply if their meter is upgraded, and if the upgrade is likely to be possible, they may then manually approve acceptance for a NHH non-AMI meter.

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 was reviewed to identify the MEPs for Flick ICPs during the audit period.

Audit commentary

The process to ensure that MEP arrangements are in place before switching in ICPs is described in **section 2.12.**

Flick supplied four ICPs with LMGL meters. Flick demonstrated that arrangements are in place with the MEPs for their ICPs.

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.

Traders are only able to update ICP status for event dates where they are responsible for the ICP on the registry.

Audit commentary

Flick ensures that a switch is completed before arranging reconnection.

If an ICP was reconnected as part of the switching process and the switch was later withdrawn, Flick would restore the disconnection and reimburse the losing trader for any direct costs incurred if requested.

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.

Audit commentary

Flick checks they are listed as the current trader in the registry before initiating a disconnection.

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 events which required seals to be broken were checked for compliance.

Audit commentary

Field services jobs are normally completed by the MEP, and they replace the seals and re-certify where required.

In the rare event that Flick becomes aware that another party has broken or removed a seal, Flick raises a field services job for the MEP to attend, check the meter, and replace the seals.

Flick has agreements in place with the MEPs, which include service levels. The MEPs are required to ensure that only qualified personnel perform work and manage and trace seals. The MEPs do not usually provide details of seals in their job completion paperwork.

Service orders are monitored using an excel spreadsheet which includes the service order number, date raised, party raised to, description, and target date and time. The spreadsheet is monitored and followed up daily to ensure that work is completed, and paperwork is received.

Flick uses job completion paperwork to confirm the correct ICP attributes including status and profile, and update Telemetry and the registry.

I checked a sample of five ICPs where work had been performed around a customer's switchboard and a site visit was performed by the MEP to reseal where necessary where an electrician, MEP, or distributor may have broken a meter or main switch seal. The outcome of these five site visits was:

- one resulted in the meter being resealed,
- one had an incorrect ICP listed so was turned down by the MEP,
- two resulted in meter changes (switchboard upgrade, solar installation), and
- one site visit confirmed no seals had been broken.

I also checked a sample of ten reconnections and ten disconnections and found they were all completed remotely or at site by the MEP.

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, and the reading validation process.

Flick only allows meters to be bridged where an urgent reconnection is required to prevent customer hardship, and it is not possible to reconnect without bridging the meter.

I reviewed a sample of four bridged meters and found the meters had been unbridged, and estimated consumption was reported for the bridged period.

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

The process to ensure that the ICP identifier is printed on every invoice or document relating to the sale of electricity was discussed, and an invoices and letters were reviewed.

Audit commentary

Invoices and communications regarding the sale of electricity (including price change letters) contain the ICP number.

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. A sample of invoices, letters, emails, and recorded greetings for inbound calls were reviewed to determine whether clear and prominent information on Utilities Disputes is provided.

Audit commentary

Clear and prominent information on Utilities Disputes is provided:

- in Flick's terms and conditions,
- on Flick's website under my account/complaints/concerns,
- on Flick's invoices,
- as part of Flick's email footers for outbound email communications, and
- in a recorded voice message, which is played for inbound customer calls.

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. A sample of invoices, letters, and emails were reviewed to determine whether clear and prominent information on Powerswitch is provided.

Audit commentary

Clear and prominent information on Powerswitch is provided:

- on Flick's website under contact us,
- on Flick's invoices,
- on letters advising customers of price and service changes, and
- as part of Flick's email footers for outbound email communications.

All customers receive an invoice and will receive notification monthly. An annual notification is also scheduled to be sent to customers before each April.

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

The new connections process was examined in detail to confirm compliance with the requirement to obtain ICP identifiers for points of connection to local or embedded networks.

Audit commentary

This requirement is well understood and managed by Flick. The new connection process is detailed in **section 2.9**.

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

The new connection processes were examined in detail to evaluate the strength of controls, and the registry list and audit compliance reports were examined to confirm process compliance. Late updates to "active" for new connections are discussed in **section 3.5**.

Audit commentary

The new connection processes are detailed in **section 2.9** above. The processes in place ensure that the trader required information is populated as required by this clause.

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 and a sample of late status updates, trader updates, and MEP nominations were checked as described in the audit commentary.

Audit commentary

Status updates

Status updates are completed manually using the registry web interface, and Telemetry is updated at the same time. As part of this process, the user checks that the registry update is successful, and that the data recorded in Telemetry and on the registry matches. The status is only updated once paperwork confirming the correct status and date has been received.

Active status

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

Year	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2017	146	80%	6
2018	15	87%	1
2019	65	90.3%	2.38
2020	38	94.63%	1.56
2021	85	90.75	3.56

Year	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2022	**29**	**93.67**	**2.31**

19 of the late updates were within 10 business days of the event date, 26 were within 30 business days, and the latest update was 142 business days after the event date. I checked the ten latest updates:

- Five were processes on time,
- Two were due to internal processing delays, and
- four of the late updates were related to ICPs switching in where the status was showing "inactive", at the time of the switch completion.

Where the late updates were related to ICP switch gains and the status was incorrectly showing "inactive" at the time of the switch completion. In three of these cases the MEP confirmed that the reconnection paperwork was received by the losing trader before the switch was completed and the losing trader failed to ensure the status was correct at the time of the switch completion.

Flick does not initiate a reconnection as part of a switch gain until the switch is completed on the registry. Flick will then request confirmation from the customer that the ICP does still require reconnection. This extra step in seeking customer confirmation can cause delays in performing registry updates where the ICP has been reconnected by others and the customer is slow to respond to Flicks confirmation request.

Some ICPs in this scenario are identified via the consumption on inactive ICPs reporting in place as part of the weekly safety net reporting process, however the content of this report does not enable the user to be able to determine that the inactive consumption has occurred from the customers move in date. I recommend that Flick looks at enhancing its reporting to provide additional attributes to enable users to identify potential incorrect registry status information as opposed to reconnections performed by others relating to Flick ICPs.

Description	Recommendation	Audited party comment	Remedial action
Inactive consumption reporting	Recommend that the inactive consumption safety net reporting is enhanced to provide additional attributes to support users root cause analysis to identify potential incorrect registry status values as opposed to ICPs that have started to consume post physical disconnection.	Flick has created an "Inactive ICP has Active Energy Throughput" report which reports on all inactive ICPs that show consumption. This report identifies incorrect inactive registry status. This report is investigated and dealt by our operations team, and is run and checked on a daily basis The safety Net will be enhanced to provide additional attributes to support users as recommended	Investigating

<u>Inactive status</u>

The timeliness of status updates to inactive is set out on the table below.

Year	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2018	-	100%	5
2019	11	99.00%	2.13

Year	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2018	-	100%	5
2020	4	99.30%	2.54
2021	10	98.64%	1.43
2022	**13**	**97.84%**	**2.79**

Nine of the late updates were within 10 business days of the event date, seven were within 30 business days, and the latest update was 271 business days after the event date. These late updates were checked and found to be caused by delays in processing updates where new staff were being trained and a key staff member was away sick. Disconnection service orders are monitored using a spreadsheet, and as part of the safety net checks described in **section 2.1**.

The other four late updates to inactive status relate to the 1,12 inactive – 'new connection in progress" status as part MEP nomination process.

Trader updates

Trader updates are completed manually using the registry web interface, and data is updated in Telemetry at the same time. As part of this process, the user checks that the registry update is successful, and that the data recorded in Telemetry and on the registry matches. Trader information is only updated once the correct values have been confirmed.

MEP nominations are made at the time the service request for a meter change is made. For new connections MEP nominations are made at the time the ICP is claimed at 1,12 "new connection in progress" status.

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

Year	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2018	95	51%	117
2019	3,306	7.39%	27.1
2020	36	91.47%	2.43
2021	177	84.22%	4.00
2022	**36**	**96.94%**	**1.53**

20 of the late updates were within 10 business days of the event date, 27 were within 30 business days, and the latest update was 253 business days after the event date.

13 of the late updates were MEP nominations from ARCS to NGCM and 20 were changes between HHY and HHR profile. The ICPs were settled using the HHR profile for the period the profile code on the registry was HHY. This is recorded as non-compliance in **section 2.1**

The remaining late updates were a mix of MEP nominations for other MEPs and updates to NHH submission type flag (ICP 1000607977PC456).

I checked the five latest profile changes and ten latest MEP nominations and also the one submission type flag update.

- Four of the late profile changes were due to Arc removing their AMI meter on the registry prior to Flick completing a nomination for the new MEP (NGCM). This meant that Flick could not submit a MEP nomination without a meter being installed and with the HHR submission type flag set to 'Y'. This resulted in Flick utilising their HHY profile code for one day to enable a MEP nomination. However, four of these fixes were not reverted post the MEP nomination to HHR profile and resulted in late trader updates.
- One profile change (ICP 0005768110RND55) was to correct the event date. This is recorded as a non-compliance in **section 2.1**.
- 10 late MEP nominations were changes from ARCS to NGCM. Six were where the meter change had occurred prior to the MEP informing Flick these meters were part of a displacement batch. One was late as there was a conflicting registry event that required reversing by another participant. One related to late paperwork being provided by the MEP. One (0006882129RN270) was due to an update of the event date and one was due to human error where the MEP nomination was not completed by Flick once notified by Arc.
- The correction of the submission type flag (ICP 1000607977PC456) was due to human error when the initial trader event population for a new connection was applied. This is recorded as a non-compliance in **section 2.1**.

The AC020 also identified four switched in and newly connected ICPs where the ANZSIC code was not populated within 20 business days. I checked these updates and found that three related to backdated switches where the ANZSIC code was updated as part of Flicks initial trader event upon switch completion. The other late ANZSIC code update related to a wrong property switch where Flick switched unoccupied property and there was a delay in confirming the correct business operation until a customer was identified and moved in.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.3 With: Clause 10 Schedule 11.1 From: 01-Nov-21 To: 21-Sep-22	29 late status updates to active status. 13 late status updates to inactive status. 36 late trader updates. One late ANZSIC code update for a switched in ICP. 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 because they are adequate to ensure that the registry is updated on time most of the time, but there is room for improvement. The risk is low as most updates were completed on time or soon after they were due, unless they were backdated corrections.

Actions taken to resolve the issue	Completion date	Remedial action status
Some of the late trader updates and status updates were due to the inability to update registry while an ICP is in switch. This issue needs to be resolved through the Switch process review process by the authority. An "Inactive ICP has Active Energy Throughput" report has been created which runs daily and reports on all inactive ICPs that show consumption. This report is investigated and dealt by our operations team on a daily basis. This will eliminate most of the status update non-compliance which occurs due to manual error. Late ANZSIC codes update cannot be fully resolved as this is dependent on customers advising us of correct ANZSIC when signing up. The non-compliance is due to the backdated date used to correct registry records. If current date was used to update the ANZSIC code, then incorrect records will be reflected in the registry. The correction of ANZSIC codes is dependent on customers advising us their end use during sign up. We do run a report each month to identify ANZSIC discrepancy through the price category codes but this has its limitations as we are only able to identify business or residential end use and not the type of business on site.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We cannot fully eliminate this non-compliance, but this process will be monitored through our monthly Operations QA.	Ongoing	

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 new 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 audit compliance report did not record any "active" ICPs where the metering category was 9 or blank, indicating that no meters were present. All active ICPs are metered and have an MEP recorded.

MEP nominations are made at the time the service request for a meter change is made. For new connections, MEP nominations are made at the time the ICP is claimed at 1,12 "inactive - new connection in progress" status. Late MEP nominations are recorded as non-compliance in **section 3.3**.

A service request is raised for each MEP nomination and added to the service order tracking spreadsheet. ICPs are monitored to ensure the MEP nominations are issued and accepted. The event detail report recorded 1,101 MEP nominations which had a corresponding MN record, all nominations were accepted by the MEP.

ICP Decommissioning

Flick continues with their obligations under this clause. ICPs that are vacant and active, or inactive are maintained in Telemetry. 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. Flick also advises the MEP responsible that their metering can be removed, and the site is to be decommissioned, or has been decommissioned, dependent on the distributor's process.

37 ICPs were decommissioned during the period, of which ten were checked. Flick had met their obligation to arrange a meter interrogation prior to or upon meter removal. For nine ICPs the MEP was notified prior to decommissioning by raising a service order to remove the metering. For ICP 0001175481MLCD3 the distributor completed the permanent disconnection and meter removal prior to informing Flick.

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

The new connection processes were examined in detail to evaluate the strength of controls, and the registry list and audit compliance reports were examined to confirm process compliance.

Audit commentary

New connection information timeliness

The new connection process is described in detail in **section 2.9**. MEP nomination occurs when the ICP is at 1,12 "inactive - new connection in progress" status as part of the service request process.

The timeliness of status updates to active (for new connections) is set out on the table below.

Year	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2018	4	42%	10
2019	1	83.3%	3.67
2020	2	90.91%	2.95
2021	5	83.87%	6.65
2022	**13**	**51.85%**	**36.41**

Six of the late updates were within 10 business days of the event date, three were within 30 business days, and the latest update was 283 business days after the event date. The late updates were found to be caused by:

- seven relating to delays in processing updates where new staff were being trained and a key staff member was away sick, and delays in receiving and processing work completion paperwork; all seven ICPs were claimed at 1,12 "inactive - new connection in progress", the MEP was nominated prior to initial electrical connection, and the correct status and event dates were applied, and

- six relating to correction to the active status event date due to users initially applying an incorrect event date and the discrepancy being escalated by the respective distributor as part of their registry discrepancy reporting - non-compliance is recorded here and in **section 2.1.**

I recommend that Flick investigates including an additional check within safety net to compare distributors IECD value with the Flicks active status date populated on the registry to improve the timeliness in investigating and resolving these exceptions.

Description	Recommendation	Audited party comment	Remedial action
Monitor IECD and active status dates for new connections	Recommend that Flick investigates including an additional check within safety net to compare distributors IECD value with the Flicks active status date populated on the registry to improve the timeliness in investigating and resolving these exceptions.	Flick will adopt this recommendation by including an additional check to be in the safety net which will compare distributors IECD value with the Flicks active status date populated on the registry to improve the timeliness in investigating and resolving these exceptions.	Identified

New connection information accuracy

The AC020 did not record any ICPs which had an initial electrical connection date populated which had not been made active.

One ICP (0007207864RNB92) had inconsistencies between the active status date, meter certification date, and/or initial electrical connection date on the AC020 report. Flick has queried this with the MEP / Livening agent to clarify the correct active status event date and they have confirmed that Flicks active status date is correct. Flick intends to liaise with the distributor to ensure the active status date matches the IECD date for this ICP on the registry.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.5 With: Clause 9 Schedule 11.1 From: 01-Nov-21 To: 21-Sep-22	13 late status updates for new connections. Six ICPs had incorrect active status events dates that required correction. Potential impact: Low Actual impact: Low Audit history: Three times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong, because the late updates decreased as the audit period progressed and one data discrepancy was identified. The impact is assessed to be low, based on the ICPs affected and number of days late.

Actions taken to resolve the issue	Completion date	Remedial action status
An additional check will be included in the safety net to monitor the new connection status update process. Training has been provided to the team on the timeliness and accuracy of the new connection and active status updates.	24/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monthly Operations QA has been implemented to assess and monitor all the processes above. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits.	Ongoing	

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. ANZSIC codes were checked against google street view and registry property name information for a sample of 60 ICPs to determine compliance. Where codes could not be confirmed from registry and google street view information, I checked Flick's customer details to determine the correct code.

Audit commentary

ANZSIC codes are set based on information provided on the customer application. The twice weekly safety net check identifies ICPs with ANZSIC codes beginning with "T" (unknown) which are checked and updated. ANZSIC codes are validated against the network price category monthly, to identify ICPs with residential price categories and business ANZSIC codes, or business ANZSIC codes with residential price categories. Blank ANZSIC codes and meter category two ICPs with residential ANZSIC codes are also checked. Any exceptions are validated by checking the address on Google maps and/or contacting the customer.

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

- no ICPs had blank or unknown (T99 series) ANZSIC codes,
- no ICPs have meter category three, and
- no ICPs with meter category two have residential ANZSIC codes.

I checked a sample of 60 ICPs with the six most frequently applied ANZSIC codes. 47 ANZSIC codes were confirmed to be correct. The ANZSIC code for 13 ICPs were reviewed by Flick during the audit and the ANZSIC code updated to reflect the actual business operation of the ICP.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.6 With: Clause 9 (1(k) of Schedule 11.1 From: 01-Nov-21 To: 21-Sep-22	The ANZSIC code for 13 ICPs were confirmed as being incorrect. The code was corrected during the audit. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are moderate as ANZSIC code are not being confirmed with the customer during the sign-up process for all business customers. There is no impact on other participants or settlement, but there is a minor impact on the Authority because this information is used for reporting.

Actions taken to resolve the issue	Completion date	Remedial action status
The accuracy of ANZSIC codes is dependent on customers advising us of their correct end use. We do run a report each month to identify ANZSIC discrepancy through the price category codes but this has its limitations as we are only able to identify business or residential end use and not the type of business on site.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We cannot fully eliminate this non-compliance, but this process will be monitored through our monthly Operations QA	Ongoing	

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 audit compliance report were examined to identify any ICPs with unmetered load.

Audit commentary

Applications to become a customer are not accepted if the ICP has unmetered load connected. Flick's weekly safety net checks, discussed in **section 2.1,** will identify any ICPs where unmetered load is added. The details will be checked for any affected ICPs, and Flick will arrange for the ICP to switch out effective from the date the unmetered load was connected, or for the distributor to remove shared unmetered load for the ICP.

Flick has not supplied any ICPs with unmetered load during the audit period, and the AC020 report did not identify any unmetered load discrepancies. All active ICPs are metered.

The 2017, 2018, 2019, and 2020 audits found Flick had historically supplied some ICPs with unmetered load for short periods, but unmetered volumes were not submitted to the reconciliation manager because Flick is a HHR trader and does not have a process for unmetered submissions. 14-month revisions have passed for the affected periods, and non-compliance was recorded for under submission of 8.65 kWh of unmetered load in the 2020 audit.

Flick's engineered profile (HHU) was approved by the Authority on 1 December 2020 and allows submission of unmetered load to the reconciliation manager. If unmetered load is supplied in the future, Flick will use a manual process to apply a flat load profile (consistent with the Authority's NHH UML profile), to spread the daily unmetered kWh between the trading periods for inclusion in the HHR aggregates and volumes files.

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

The new connection process was examined in detail in **sections 2.9**, and the timeliness and accuracy of registry updates is discussed in **section 3.5.**

The timeliness of registry updates for reconnections is assessed in **section 3.3**, and a sample of ten updates were checked for accuracy.

Audit commentary

Telemetry will not allow more than one party per ICP, nor will it allow an ICP to be set up without both a meter and MEP. Automated processes prevent an ICP being recorded against a customer account for any day that it is active against another account. ICPs that do not have open meters are identified through the weekly safety net check described in **section 2.1**.

ICPs are updated to active status manually on the registry once the connection or reconnection has been confirmed by the MEP.

New connection information accuracy

The AC020 audit compliance report was examined to confirm process compliance and did not record any ICPs which had an initial electrical connection date populated which had not been made "active".

One ICP (0007207864RNB92) had inconsistencies between the active status date, meter certification date, and/or initial electrical connection date on the AC020 report. Flick has queried this with the MEP / Livening agent to clarify the correct active status event date and they have confirmed that Flicks active status date is correct. Flick intends to liaise with the distributor to ensure the active status date matches the IECD date for this ICP on the registry.

Six of the late updates were within 10 business days of the event date, three were within 30 business days, and the latest update was 283 business days after the event date. The late updates were found to be caused by:

- Seven relating to delays in processing updates where new staff were being trained and a key staff member was away sick, and delays in receiving and processing work completion paperwork. All five ICPs were claimed at 1,12 "inactive - new connection in progress" and the MEP was nominated prior to initial electrical connection. The correct status and event dates were applied.
- Six relating to correction to the active status event date due to users initially applying an incorrect event date and the discrepancy being escalated by the respective distributor as part of their registry discrepancy reporting. Non-compliance is recorded here and in **section 2.1.** The six ICPs are listed below:
    - 0000035084EN4EB
    - 0002301074EN296
    - 0000445061WPC9F
    - 0007204486RNF41
    - 1000601448PCCB8
    - 0000444117WP0E9

Reconnection information accuracy

Reconnections are processed manually on the registry once paperwork is received. A typical sample of ten reconnections were checked, all had the correct status and date applied apart from 0007197681RN11C which was reconnected by the losing trader prior to the switch to Flick; the losing trader did not complete the status update during their period of supply and Flick updated the registry for the start of their period of supply.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.8 With: Clause 11.18 From: 01-Nov-21 To: 21-Sep-22	Six ICPs initially had incorrect active status event dates which were subsequently corrected. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	Rationale for audit risk rating
Low	Controls are rated as moderate, because the process to update the registry is manual, increasing the likelihood of data processing errors. There are some monitoring controls in place to check that details are recorded correctly at the time the update is processed. The impact is low because there was a small difference between the correct and applied dates, and the errors were corrected during the audit.

Actions taken to resolve the issue	Completion date	Remedial action status
Re-training has been provided to the team on the timeliness and accuracy of the active status updates. The incorrect active status event dates has now been corrected.	24/11/2022	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monthly Operations QA has been implemented to assess and monitor the above process. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits.	Ongoing	

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.

The registry list file was examined to identify any ICPs that had been at the "inactive - new connection in progress" for more than 24 months.

Audit commentary

Use of inactive statuses

Flick conducts disconnections remotely and updates the registry once confirmation of the disconnection is provided by the MEP.

I reviewed a sample of 10 updates to "inactive" status. I confirmed the status reason codes and event dates were correctly applied based on the paperwork provided at the time of the update.

30 ICPs with the AMI metering flag set to no had the 1,7 "electrically disconnected remotely by AMI meter" status applied. All had HHR metering and were able to be disconnected remotely.

Ten ICPs were at 1,12 "inactive - new connection in progress" status. None have been at the status for more than four months.

Late registry updates are recorded as a non-compliance in **section 3.3**.

Inactive ICPs with consumption

Consumption for all trading periods is recorded in Telemetry. If the ICP has inactive status on a particular day, any volumes for that day will be excluded from submission.

In reality, disconnections and reconnections occur part way through the day, so the ICP is both active and inactive on the disconnection and reconnection date. The registry only allows one status to be recorded per day, which applies effective from 12.00am.

Flick has amended its process around updating the registry status events for disconnections to be effective from the first full day that the ICP is disconnected to ensure all consumption is captured and included in the submission process. Additionally, inactive consumption is identified as part of the safety net check described in **section 2.1**, and ICPs are usually returned to "active" for any inactive periods with consumption.

Audit outcome

Compliant

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

Code reference

Clause 15 Schedule 11.1

Code related audit information

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

Audit observation

Whilst this is a distributor's code obligation, I investigated whether any queries had been received from distributors in relation to ICPs at the "new" or "ready" status for more than 24 months and the process in place to manage and respond to such requests.

I analysed a registry list of ICPs with "new" or "ready" status and Flick as the proposed trader, and reviewed processes to monitor new connections.

Audit commentary

No ICPs currently have “new” or “ready” status and Flick recorded as the proposed trader, and no requests for information on “new” or “ready” ICPs have been received from distributors. If received these would be actioned on a case-by-case basis.

A monthly registry list of ICPs with Flick as the proposed trader is reviewed to identify any new connections which do not have applications, which are then followed up with the network.

Audit outcome

Compliant

4. PERFORMING CUSTOMER AND EMBEDDED GENERATOR SWITCHING

Internal audits are conducted for all switching processes every second month. As part of this process a sample of switch events are checked to determine whether they are compliant. Corrections, training, and process improvements may be carried out as a result of the audit findings.

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 Flick deem all conditions to be met.

A typical sample of five transfer switches were checked to confirm that they were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

Flick'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. NTs have been automatically sent from the provisioning system since June 2019.

Switch type is selected based on information provided by the customer on application. The customer is asked their move in date and whether they have been billed at the property by another retailer as part of the application process.

The five NT files checked were sent within two business days of pre-conditions being cleared, and the correct switch type was selected.

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 may disregard every event date established by the losing trader for an ICP for which when the losing trader received notice from the registry manager under clause 22(a) the losing trader had been responsible for less than 2 months.

Audit observation

The event detail report was reviewed to:

- identify AN files issued by Flick 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 files are generated by the provisioning system. The AN process assigns response codes based on a hierarchy, and the AN event date is set as the receipt date + five business days for transfer switches. Where the system cannot determine the correct code or date, an exception is sent to the errors app, and a user will assign the correct values and manually process the AN on the registry.

I checked the 3,216 AN files on the event detail report where metering details were available on the registry list with history. All had AMI metering at the time the AN was issued and the AD (advanced metering) response code was correctly applied except for four ICPs where the OC (Occupied) response code was incorrectly applied. The affected ICPs are listed below.

ICP	Event date	Applied code	Correct code
0005369282RN92B	3 March 2022	OC (Occupied premises)	AD (Advanced metering)
0434803197LC36D	15 March 2022	OC (Occupied premises)	PD (Premise disconnected)
1002074379LC1F9	22 June 2022	OC (Occupied premises)	AD (Advanced metering)
0005522843CN7DD	5 August 2022	OC (Occupied premises)	AD (Advanced metering)

Non-compliance is recorded for the incorrect use of the OC response code for transfer switches.

Event dates set by losing trader must be no more than 10 business days after receipt of an NT file. Over a 12-month period 50% of event dates must be within five business days. The event detail report was reviewed for all 3,216 transfer ANs to assess compliance with the setting of event dates requirements.

- 3,182 ANs (98.94%) had proposed event dates within five business days of the NT receipt date.
- All had proposed event dates within ten business days of the NT receipt date.

AN timeliness

The switch breach history report is monitored daily to identify ICPs which require AN files.

The switch breach history report for the audit period confirmed all AN files were sent within the allowable timeframes.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.2 With: Clauses 3 and 4 Schedule 11.3 From: 01-Nov-21 To: 21-Sep-22	Four ICPs where the OC (Occupied) response code was incorrectly applied for transfer switches. 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 as the switching process is only partially automated and where users are required to manually intervene and complete the process, they are required to assign the appropriate response code. The manual nature of this process can lead to errors being made. The audit risk rating is low overall as all switches were successfully completed.

Actions taken to resolve the issue	Completion date	Remedial action status
Re-training has been provided to the operations team on the use of the AN code. This was a manual input error.	24/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monthly Operations QA has been implemented to assess and monitor the above process. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits.	Ongoing	

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 Flick 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 switch breach history report is used to monitor the timeliness of CS files. Flick manually adds extra fields to the report for cross checking, including comments.

The switch breach history report recorded no CS breaches for transfer switches, where the CS arrival date was more than five business days after the actual transfer date.

CS content

CS files are automatically generated from the provisioning system, unless they fail to be generated because they have an Arc meter, do not have an actual reading on the last day of supply, or a switch move is requested for an occupied ICP. In these cases (up to 25% of switches) a work item that needs action is created in the provisioning system, and the user manually creates the CS file on the registry using information from the provisioning system and Telemetry.

The Registry Functional Specification v22.21 states that average daily consumption within the CS file should be the average kWh per day for the last read period. If less than two actual readings are available, the average daily kWh in the incoming CS file is expected to be applied. Because Flick receives daily readings, average daily consumption is calculated as the average daily consumption over the past 30 days. If no readings are received over the past 30 days, zero is reported.

Flick has been waiting for amendments to the switching process proposed by the Switch Technical Group to be finalised before making changes to their processes. In the meantime, they believe their method provides an accurate estimate of average daily kWh except where no readings are received.

Analysis average daily kWh provided in CS files on the event detail report identified:

Average daily kWh	Count of transfer CS files	Findings
Negative	0	No examples were identified on the event detail report.
Zero	239	Eight ICPs with zero consumption were checked and found to have actual zero consumption in the last read to read period.
More than 200 kWh	12	The consumption was based on the previous 30 days rather than the last actual read but was within 1 kWh of the correct value.

I checked a sample of a further three transfer switch CS files and found the average daily consumption did not reflect the average daily consumption between the last two actual reads, because Telemetry calculates consumption over the last 30 days, but all other content was correct. Non-compliance is recorded where the average daily consumption did not reflect the average daily consumption between the last two actual reads.

I checked for discrepancies between the last actual read date and switch event reading type for transfer switch CS files and found:

- seven transfer switches had a last actual read date more than one day before the event date and an actual switch event read type,
- 40 transfer switches had a last actual read date the day before the event date and an estimated switch event read type, and
- one transfer switch (ICP 0045147391PC9C6) had a last actual read date after the switch event date.

I checked a sample of ten or all CS files for each exception type. The following read, read type, and last actual read date errors were identified:

Exception type	Qty	Detail
Incorrect last actual read date	7	0005539790RN415 25 January 2022 to 4 May 2021 should be 3 November 2021 0000022447EAF22 0006987257RN4F9 0007019882RN85E 0000187876UN510 0000010396WE72D 0000016395TR8B4 The incorrect last actual read dates were either typos entering dates, or the user manually selected last day of supply instead of last actual read date.
Incorrect read	4	0007019882RN85E 0000187876UN510 0000010396WE72D 0000016395TR8B4

No transfer switch ICPs switched out with HHY profile.

One potential future issue was identified. If an MEP provides "unvalidated" data (where the sum-check was not performed), the data is labelled as an estimate and if one of these reads is used in a CS file it will be labelled "E" when it should be labelled as an actual. The sum-check is performed by the MEP to support metering certification and data should not be considered estimated just because the sum-check was not performed. No examples were found but this could become an issue in future. I recommend that Flick amends their logic in labelling received AMI data to reflect it is unvalidated actual data rather than estimated data.

Description	Recommendation	Audited party comment	Remedial action
Correct labelling of unvalidated actual AMI interval data	Recommend that Flick amends their logic in labelling received AMI data	Flick will investigate options through our Tech resource in labelling data. We will attempt to adopt this	Investigating

Description	Recommendation	Audited party comment	Remedial action
	to reflect it is unvalidated actual data rather than estimated data.	recommendation if a suitable Tech solution is identified.	

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.3 With: Clause 5 Schedule 11.3 From: 01-Nov-21 To: 21-Sep-22	At least three transfer CS files contained average daily kWh inconsistent with the requirements of the registry functional specification. Seven CS files had an incorrect last actual read date. One CS file (ICP 0138831025LC74E) had an incorrect read type. Four CS files had an incorrect CS event read. One transfer switch (ICP 0045147391PC9C6) had a last actual read date after the switch event date. 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 overall. Where files were manually created there were some errors in: • last actual read dates, where they contained typos or the last day of supply was selected instead of the last actual reading, • some read types were incorrected keyed, and • some readings were incorrect because the wrong read was entered for the meter, the reading for the wrong date was selected or a typo was made when entering the reading. The audit risk rating is low overall: • most Flick ICPs have communicating AMI meters and the gaining retailer is likely to receive actual readings soon after the ICP switches in, reducing the likelihood of forward estimate being calculated from the average daily kWh value (in most cases the average daily kWh provided was a reasonable estimate of the ICP's consumption), • the last actual read date field is used to help assess the accuracy of any estimates provided and has no impact on submission, • all switch event readings should be treated as actual or permanent estimate, so the incorrect read types are expected to have a low impact, and • the incorrect switch event date was corrected through the withdrawal process and the impact is low.

Actions taken to resolve the issue	Completion date	Remedial action status
We calculate average consumption over the last month rather than the last read to read period. We believe this provides a more accurate figure. We are waiting for the amendments to the switching process proposed by the Switch Technical Group to be finalised before making changes to their processes. Re-training has been provided to the operations team on the accuracy and timeliness of the CS file contents. All the issues above were due to manual error. We are looking at automating the remaining 25% of the switch process which will eliminate this non-compliance	24/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monthly Operations QA has been implemented to assess and monitor the processes above. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits.	Ongoing	

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 4 calendar months of the registry manager giving the gaining trader written notice of having received information about the switch completion, provide to the losing trader a changed switch event meter reading supported by 2 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. A sample of RR and AC files issued for transfer switches were checked to confirm that the content was correct, and that Telemetry reflected the outcome of the RR process.

I also checked for CS files with estimated readings provided by other traders where no RR was issued, to determine whether the correct readings were recorded in Telemetry.

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

Audit commentary

Application of CS readings

New ICPs are recorded in Telemetry as switch in cases until actual readings are received. A user will review the switch in cases daily and accept the CS reads for ICPs which switched in more than five days ago, which then records the opening switch reads against the ICPs in Telemetry and triggers the estimation process.

Telemetry's switch in cases are also used to identify incoming switches with switch event reads inconsistent with actual AMI data. Once the switch event reads are accepted, the ICPs will disappear from the current switch in cases list. Because estimates will be triggered by accepting CS readings, the process to identify ICPs requiring RRs will change for any ICP with readings accepted before AMI data is received. To ensure that ICPs requiring RRs are identified:

- switching agents will keep a record of ICPs where estimated switch event reads were accepted before AMI data was received, and monitor these, and
- when Flick becomes aware that a communications issue has been resolved through a registry update, receipt of AMI data, or returned field services paperwork, agents will check the actual readings against the CS readings to determine whether the start readings are correct and initiate an RR if necessary.

Awaiting telemetry cases are monitored and followed up with the MEP as necessary to obtain actual data.

Where a RR is rejected by the losing trader or is not requested in the timeframes set within the code, the process does not ensure the CS read within Telemetry is replaced by the actual AMI read/HHR data to ensure Flick complies with Clause 15.2 (Requirement to provide complete and accurate information) as the actual AMI HHR data is a complete and accurate record of the consumption for the first day of supply for the ICP in question. I recommend that Flick amend its process around using CS read estimates and telemetry estimation process for the first day of supply where actual AMI HHR data is available.

Description	Recommendation	Audited party comment	Remedial action
Requirement to provide complete and accurate information	Flick amends its process for continuing to use read estimates from CS files for estimation purposes where RR files have been rejected or not issued and actual AMI HHR data is present in Telemetry.	Flick will investigate options for a solution in attempt to adopt this recommendation.	Investigating

To confirm the process for CS readings where no RR was issued, I checked a sample of four transfer CS files with estimated readings and four move switch files with estimated readings, where no RR had been issued to confirm that the correct readings were recorded in Telemetry and for all eight ICPs, the CS estimate was correctly applied in Telemetry,

RR

Flick issued 177 RRs for transfer switches. 23 were rejected and 154 were accepted.

RRs are created manually using information from the provisioning system. Where an RR issued by Flick is accepted, Flick does not need to make any changes in Telemetry. The expected start read recorded in the RR and AMI data are automatically applied. To confirm this, I checked a sample of nine transfer RRs which were accepted and found that the reads recorded and used for submission by Flick reflected the outcome of the RR process. In all cases there was a genuine reason for the RR, the file content was accurate, and the reads recorded in Flick's system reflected the outcome of the RR process.

Where an RR issued by Flick is rejected, the file is passed to the data team who will adjust the start reading within Telemetry and replace the actual interval data with an estimate to match the CS file. I checked five examples and found the CS reads were applied and the actual interval data replaced with an estimate and found:

- for four ICPs the actual received read and interval data from the AMI MEP was used for submission purposes and the CS file estimate read was not used; non-compliance is also recorded in **sections 2.1**, **12.2** and **12.7**, and
- for one ICP the actual received read and interval data from the AMI MEP was replaced with an estimate of volume for submission purposes where the CS file estimate read was used as the basis of this estimation.

The process to replace actual interval data with an estimate to ensure alignment with the read estimate within the CS file means the HHR data estimated from these CS reads is not considered to be accurate in accordance with Clause 15.2 as accurate actual HHR data has been replaced with inaccurate estimated HHR data. Non-compliance is recorded in **sections 2.1 and 12.7**

AC

ACs due to be issued are identified by working through RR files received from the registry and the switch breach history report. Where another trader issues an RR to Flick, the values are checked against Telemetry to determine whether it should be accepted, and an AC file is issued.

In Telemetry actual AMI readings from the MEP cannot be invalidated and replaced with other readings. This means that if an ICP switches out on an actual AMI reading, Flick cannot modify that reading in Telemetry. For this reason, Flick normally only accepts RRs if they contain data matching Telemetry because either an error was made when entering the reads into the original CS file, or the CS reading was estimated, and AMI data has later become available and is consistent with the RR. If Flick accepts an RR from another trader where an actual value is already recorded in Telemetry, Flick is unable to apply the switch reading.

Flick issued 58 ACs for transfer switches. 43 were rejected and 15 were accepted. I checked five rejected and five accepted AC files and found that the CS reading matched the AMI data received by Flick, and the correct readings were recorded in Telemetry.

Timeliness of RR and AC files

The switch breach history report recorded no late RR or AC files.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.4 With: Clause 6(1) and 6A Schedule 11.3 From: 01-Nov-21 To: 21-Sep-22	For four ICPs the actual received read and interval data from the AMI MEP was used for submission purposes and the CS file estimate read was not used. 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, because the process to update Telemetry where an RR is rejected normally ensures that the correct read is applied where an actual AMI read is not already present. The impact is low because the read differences have small impact on submission.

Actions taken to resolve the issue	Completion date	Remedial action status
We believe that the authority should further promote the use of actual data where available. Currently when an RR is rejected with an estimate CS read, Flick uses actual reads for submission and billing purposes. This ensures that customers are billed for their correct consumption. We will continue with the above process and ensure that all CS estimate reads are rejected in a timely manner to eliminate this non-compliance.	Ongoing	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Any RR rejected with an estimate CS read will now be monitored through Operations QA and reported to the Compliance Manager who will escalate this to respective retailers. We will also explore options with our Tech team of a possibility of overriding actual data in rare instances	Ongoing	

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

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

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

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

Audit observation

The process for the management of read requests was examined. The event detail report was analysed to identify read change requests issued and received under Clause 6(2) and (3) Schedule 11.3 and determine compliance.

Audit commentary

Other retailers cannot issue read change requests to Flick under clause 6(2) and (3) of schedule 11.3 because Flick is a HHR only trader.

21 RR files sent within five business days were rejected. I checked five rejected RRs, and found the correct readings were recorded for all ICPs in Telemetry.

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 Flick whether any disputes have needed to be resolved in accordance with this clause.

Audit commentary

Flick confirmed 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 Flick deem all conditions to be met.

A typical sample of five switch moves were checked to confirm that they were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

Flick'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. NTs have been automatically sent from the provisioning system since June 2019.

Switch type is selected based on information provided by the customer on application. The customer is asked their move in date and whether they have been billed at the property by another retailer as part of the application process.

The five NT files checked were sent within two business days of pre-conditions being cleared, and the correct switch type was selected.

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 Flick 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 files are generated by the provisioning system. The AN process assigns response codes based on a hierarchy, and the AN event date is set as the NT requested date for switch moves unless this falls before the last date the ICP was billed. In these cases, the day after the last billing date is proposed.

Where the system cannot determine the correct code or date, or a switch move is requested where Flick has a current customer, an exception is sent to the errors app, and a user will assign the correct values and manually process the AN on the registry.

I checked the 4,573 AN files on the event detail report where metering details were available on the registry list with history. All had the correct AN codes selected apart from:

ICP	Event date	Applied code	Correct code
0006639860RNC72	30/07/2022	OC (Occupied premises)	AD (Advanced metering)

All 4,573 switch move AN files were examined on the event detail report:

- seven ANs (0.15%) had proposed event dates later than 10 business days after receipt of the NT, which were also recorded as ET breaches on the switch breach history report, and
- no ANs had a proposed transfer date earlier than the gaining trader's proposed date.

The ANs with non-compliant dates were all created manually.

AN and CS timeliness

The switch breach history report is used to monitor the timeliness of AN and CS files. Flick manually adds extra fields to the report for cross checking, including comments.

The switch breach history report was reviewed to determine whether switch move AN and CS files were issued on time, and found:

- there were no late AN files, and
- one E2 breach where the NT proposed transfer date and CS actual transfer date do not match, and the CS transfer date is earlier than NT proposed transfer date or more than ten business days after receipt of the NT.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.8 With: Clause 10(1) Schedule 11.3 From: 01-Nov-21 To: 21-Sep-22	Seven ET breaches for switch moves. One E2 breach for switch moves. One AN did not have the correct AN response code applied. 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. A small number of errors occurred, mainly for manually generated files. The impact is assessed to be low because the switches were completed as expected, and the E2 breaches were close to the expected dates.

Actions taken to resolve the issue	Completion date	Remedial action status
Re-training has been provided to the operations team on the accuracy and timeliness of the above switch processes. All the issues raised above were due to manual error. We are looking at automating the remaining 25% of the switch process which will eliminate this non-compliance.	24/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monthly Operations QA has been implemented to assess and monitor the processes listed above. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits.	Ongoing	

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, then within 10 business days of receiving notice 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 Flick during the audit period, and assess compliance with the requirement to meet the setting of event dates requirement.

Audit commentary

Review of the event detail report found 517 AN files had a proposed event date which differed from the gaining trader's requested date.

As described in **section 4.8**, seven proposed event dates for switch moves were non-compliant. Switches were completed as required by this clause:

- four switches were later withdrawn and re-requested from a different date, and
- three switches were completed from the gaining trader's NT proposed event date.

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 Flick during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of records per trader code. 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.

Audit commentary

CS files are automatically generated from the provisioning system, unless they fail to be generated because they have an Arc meter, do not have an actual reading on the last day of supply, or a switch move is requested for an occupied ICP. In these cases (up to 25% of switches) a work item that needs action is created in the provisioning system, and the user manually creates the CS file on the registry using information from the provisioning system and Telemetry.

The Registry Functional Specification v22.21 states that average daily consumption within the CS file should be the average kWh per day for the last read period. If less than two actual readings are available, the average daily kWh in the incoming CS file is expected to be applied. Because Flick receives daily readings, average daily consumption is calculated as the average daily consumption over the past 30 days. If no readings are received over the past 30 days, zero is reported.

Flick has been waiting for amendments to the switching process proposed by the Switch Technical Group to be finalised before making changes to their processes. In the meantime, they believe their method provides an accurate estimate of average daily kWh except where no readings are received.

Analysis average daily kWh provided in CS files on the event detail report identified:

Average daily kWh	Count of switch move CS files	Findings
Negative	-	Compliant.
Zero	225	Five ICPs with zero consumption were checked. One CS file was for an ICP with communications issues. The ICP was with Flick for seven months before returning to the previous trader. The same read received by Flick in the gaining CS file was applied to Flick's CS file confirming zero consumption was settled during this ICPs tenure with Flick.
More than 200 kWh	4	The consumption was based on the previous 30 days rather than the last actual read.

I checked for discrepancies between the last actual read date and switch event reading type for switch move CS files. All the files with exceptions were created manually because Telemetry was unable to automatically process the CS file.

- 33 switch moves had a last actual read date more than one day before the event date and an actual switch event read type. A sample of 10 were checked.
- 104 switch moves had a last actual read date the day before the event date and an estimated switch event read type. A sample of nine were checked.

The following read, read type, and last actual read date exceptions were identified:

Exception type	Qty	Detail
Incorrect last actual read date	16	0010942527LC42B – 29 April 2022 should be 29 April 2021 0000010442DEA29 0001434067UN476

Exception type	Qty	Detail
		0215806670LC3EE 0315318392LC120 0408427043LCB02 0445996552LCA4C 0465272649LC418 0544740704LC6E2 – 29 October 2021 should be 27 April 2019 1001108836LC112 1001135718UN1CB 0120398478LC6CC – 11 November 2021 – should be 3 August 2021 0006619100RN346 – 9 August 2022 should be 10 May 2018 0000180573CT589 – 8 July 2022 should be 5 April 2021 0000145492UN55C – 9 September 2022 should be 8 January 2022 0010942527LC42B – 25 August 2022 should be 15 March 2021 The incorrect last actual read dates were either typos entering dates, or the user manually selected last day of supply instead of last actual read date.

One potential future issue was identified. If an MEP provides "unvalidated" data (where the sum-check was not performed), the data is labelled as an estimate and if one of these reads is used in a CS file it will be labelled "E" when it should be labelled as an actual. The sum-check is performed by the MEP to support metering certification and data should not be considered estimated just because the sum-check was not performed. No examples were found but this could become an issue in future. I have recorded a recommendation regarding the incorrect labelling of unvalidated actual data as estimates in **section 4.3**.

I checked a sample of a further six switch move CS files and found that average daily kWh did not reflect the average daily consumption between the last two actual reads for two of the ICPs.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.10 With: Clause 11 Schedule 11.3 From: 01-Nov-21 To: 21-Sep-22	At least two CS files contained average daily kWh inconsistent with the requirements of the registry functional specification. 16 CS files had incorrect last actual read dates. 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 overall. At least 75% of switches are created automatically by the provisioning system. No discrepancies between read types and last actual read dates were identified for automatically generated files, and the sample of files checked were accurate apart from average daily kWh, which was calculated based on the previous month, rather than previous actual read to read period. Where files were manually created there were some errors in: • last actual read dates, where they contained typos or the last day of supply was selected instead of the last actual reading, • some read types were incorrected keyed, and • some readings were incorrect because the reading for the wrong date was selected, or a typo was made when entering the reading. The audit risk rating is low overall: • most Flick ICPs have communicating AMI meters and the gaining retailer is likely to receive actual readings soon after the ICP switches in, reducing the likelihood of forward estimate being calculated from the average daily kWh value (in most cases the average daily kWh provided was a reasonable estimate of the ICP's consumption), • the last actual read date field is used to help assess the accuracy of any estimates provided and has no impact on submission, • all switch event readings should be treated as actual or permanent estimate, so the incorrect read types are expected to have a low impact, and • the impact of the discrepancies between the correct and applied event readings is minor.

Actions taken to resolve the issue	Completion date	Remedial action status
We calculate average consumption over the last month rather than the last read to read period. We believe this provides a more accurate figure. We are waiting for the amendments to the switching process proposed by the Switch Technical Group to be finalised before making changes to their processes. The CS file read date was a manual error and the Operations team has been re-trained on this process.	24/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monthly Operations QA has been implemented to assess and monitor the above process. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits.	Ongoing	

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 date the registry manager gives the gaining trader written notice of having received information about the switch completion, must provide to the losing trader a changed validated meter reading or a permanent estimate supported by 2 validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):*
- *advise the gaining trader if it does not accept the switch event meter reading and the losing trader and the gaining trader must resolve the dispute in accordance with the 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. A sample of RR and AC files issued for transfer switches were checked to confirm that the content was correct, and that Telemetry reflected the outcome of the RR process.

I also checked for CS files with estimated readings provided by other traders where no RR was issued, to determine whether the correct readings were recorded in Telemetry.

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

Audit commentary

The read recording and read renegotiation processes are the same for transfer switches and switch moves. These processes are discussed in **section 4.4**.

Application of CS readings

To confirm the process for CS readings where no RR was issued, I checked a sample of five switch move CS files with estimated readings where no RR had been issued:

- for two ICPs, the CS estimate reading was correctly applied in Telemetry,
- for one ICP a RR for the correct reading was later issued and accepted,
- for ICP 1001257730LC932 (17 May 2021) the starting register reads do not align with the reads received within the CS file by 3 kWh, and

- for ICP 0007002688RNBC5 the starting register reads do not align with the reads received within the CS file by 10 kWh for register 1 and 3 kWh for register 2.

This is recorded as non-compliance in **sections 2.1**, **12.2** and **12.7**

RR

Flick issued 846 RRs for switch moves. 77 were rejected and 769 were accepted.

RRs are created manually using information from the provisioning system. Where an RR issued by Flick is accepted, Flick does not need to make any changes in Telemetry. The expected start read recorded in the RR and AMI data are automatically applied. To confirm this, I checked a sample of five switch move RRs which were accepted and found that the reads recorded and used for submission by Flick reflected the outcome of the RR process.

In all cases there was a genuine reason for the RR, the file content was accurate, and the reads recorded in Flick's system reflected the outcome of the RR process.

Where an RR issued by Flick is rejected, the file is passed to the data team who will adjust the start reading within telemetry and replace the actual interval data with an estimate to match the CS file. I checked five examples and found the CS reads were applied and the actual interval data replaced with an estimate and found:

- for four ICPs the actual received read and interval data from the AMI MEP was used for submission purposes and the CS file estimate read was not used; non-compliance is recorded here and in **sections 2.1**, **12.2** and **12.7**, and
- for one ICP the actual received read and interval data from the AMI MEP was replaced with an estimate of volume for submission purposes where the CS file estimate read was used as the basis of this estimation.

The process to replace actual interval data with an estimate to ensure alignment with the read estimate within the CS file means the HHR data estimated from these CS reads is not considered to be accurate in accordance with Clause 15.2 as accurate actual HHR data has been replaced with inaccurate estimated HHR data. Non-compliance is recorded in **sections 2.1 and 12.7.**

AC

ACs due to be issued are identified by working through RR files received from the registry and the switch breach history report. Where another trader issues an RR to Flick, the values are checked against Telemetry to determine whether it should be accepted, and an AC file is issued.

In Telemetry actual AMI readings from the MEP cannot be invalidated and replaced with other readings. This means that if an ICP switches out on an actual AMI reading, Flick cannot modify that reading in Telemetry. For this reason, Flick normally only accepts RRs if they contain data matching Telemetry because either an error was made when entering the reads into the original CS file, or the CS reading was estimated, and AMI data has later become available and is consistent with the RR. If Flick accepts an RR from another trader where an actual value is already recorded in Telemetry, Flick is unable to apply the switch reading.

Flick issued 105 ACs for switch moves. 52 were rejected and 53 were accepted. I checked five rejected and five accepted AC files, and in all cases the agreed switch reading was applied, and rejections occurred for valid reasons.

Timeliness of RR and AC files

The switch breach history report recorded no late RR or AC files.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.11 With: Clause 12 of Schedule 11.3 From: 01-Nov-21 To: 21-Sep-22	Switch estimate reads provided by losing trader not used by Flick for two ICPs resulting in incorrect submission of 16 kWh. For four ICPs the actual received read and interval data from the AMI MEP was used for submission purposes and the CS file estimate read was not used. Potential impact: Low Actual impact: Low Audit history: Three times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate, because the process to update Telemetry where an RR is rejected normally ensures that the correct read is applied where an actual AMI read is not already present. The impact is low because the read differences have small impact on submission

Actions taken to resolve the issue	Completion date	Remedial action status
We believe that the authority should promote the use of actual data where available. Currently when an RR is rejected with an estimate CS read, Flick uses actual reads for submission and billing purposes. This ensures that customers are billed for their correct consumption. We will continue with the above process and ensure that all CS estimate reads are rejected in a timely manner.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Any RR rejected with an estimate CS read will now be monitored through Operations QA and reported to the Compliance Manager who will escalate this to respective retailers. We will also explore options with our Tech team of a possibility of overriding actual data in rare instances	Ongoing	

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

Code reference

Clause 14 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 at an ICP at which the losing trader trades electricity with the customer or embedded generator, and one of the following applies at the ICP:

- *the gaining trader will trade electricity through a half hour metering installation that is a category 3 or higher metering installation; or*
- *the gaining trader will trade electricity through a non-AMI half hour metering installation and the losing trader trades electricity through a non-AMI non half hour metering installation; or*
- *the gaining trader will trade electricity through a non-AMI non half hour metering installation and the losing trader trades electricity through anon-AMI half hour metering installation*

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

The event detail report was reviewed to identify any HH NTs and confirm whether any ICPs with meter categories above 3 were requested as TR or MI switches.

Audit commentary

No HH switches occurred during the audit period, and all Flick ICPs have metering category 1 or 2.

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

The event detail report was reviewed to identify any HH ANs. The switch breach history report was reviewed.

Audit commentary

No HH switches occurred during the audit period, and all Flick ICPs have metering category 1 or 2. The switch breach history report did not record any late HH AN files.

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 five 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

The event detail report was reviewed to identify any HH switches during the audit period. The switch breach history report was reviewed.

Audit commentary

No HH switches occurred during the audit period, and all Flick ICPs have metering category 1 or 2. The switch breach history report did not record any late HH CS files.

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

Audit observation

The event detail reports were reviewed to:

- identify all switch withdrawal requests issued by Flick, and check a sample for accuracy,
- identify all switch withdrawal acknowledgements issued by Flick, and check a sample of rejections, and
- confirm timeliness of switch withdrawal requests.

The switch breach history reports were checked for any late switch withdrawal requests or acknowledgements.

Audit commentary

NW and AW files are manually processed on the registry.

NW

749 NWs were issued by Flick; 75 (10%) were rejected by the other trader. The content of a sample of 21 files were checked and the following error was identified:

- four NWs were issued in error and Flick requested the other trader reject these withdrawal requests.

The switch breach history report recorded seven NA breaches for NWs issued more than two calendar months after the CS actual transfer date. Four were for wrong property withdrawals where it was not identified until an investigation had been completed that the incorrect ICP had been switched and three were customer requests switch was in error.

AW

AWs due to be issued are identified by working through NW files received from the registry and the switch breach history report.

589 NWs were issued to Flick, and 107 (18%) of these were rejected. I reviewed a sample of 15 rejected NWs including two or all rejected for each reason code, and the rejections were based on the information available at the time the response was issued.

The switch breach history report did not record any late AW files.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.15 With: Clauses 17 and 18 Schedule 11.3 From: 01-Nov-21 To: 21-Sep-22	Seven NA breaches. Four NWs were issued in error by Flick and rejected by the other trader. 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	Controls are moderate because the files are processed manually. The incorrect withdrawals were manually created, and the late files were delayed while Flick confirmed that the NWs were required. The audit risk rating is low because a small number of files were affected.

Actions taken to resolve the issue	Completion date	Remedial action status
We believe the 2-month timeframe allowed for the switch withdrawals is not reasonable and does not meet customer requirements in some instances. We action withdrawal requests as soon as we are made aware of an incorrect sign up or a need for a switch withdrawal. We have raised this with the EA and are awaiting changes through the Switch Technical group. Four NWs were issued in error and retailers were advised to reject this NWs.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
NW process is going to be monitored through the monthly Operations QA and Monthly Compliance reports.	Ongoing	

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 standard 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.

Four CS files contained switch event readings which did not reflect the reading at the end of Flick's last day of supply:

ICP and event date	Comment
0005208610RNDDC – 28 March 2022	The read for 7 April 2022 was applied in error.
0006106080RNB82 – 7 April 2022	The read for 8 April 2022was applied in error.
0045147391PC9C6 - 29 July 2022	The read for 31 July 2022was applied in error.
0194156796LC167 - 25 July 2022	The read for 27 July 2022was applied in error.

Flick's policy regarding the management of meter reading expenses is compliant.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.16 With: Clause 21 Schedule 11.3 From: 01-Nov-21 To: 21-Sep-22	For four CS files issued by Flick, the switch event readings did not reflect the actual reading or estimated reading on the last day of supply. 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 moderate, all the incorrect readings were in manually created CS files and most CS files are generated automatically by the provisioning system. The audit risk rating is low, based on the kWh difference and that the largest difference was resolved through the RR process.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**
Re-training has been provided to the operations team on the accuracy and timeliness of the CS file contents. All the issues raised above were due to manual error. We are looking at automating the remaining 25% of the switch process which will eliminate this non-compliance		24/11/2022	Identified
Preventative actions taken to ensure no further issues will occur		**Completion date**	
Monthly Operations QA has been implemented to assess and monitor the processes above. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits.		Ongoing	

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

Code reference

Clause 11.15AA to 11.15AB

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 within 180 days of switch completion post 31 March 2020. A sample were checked to determine compliance.

Audit commentary

No win-back activity is completed. Switch save protection processes have been subject to a monthly internal audit of calls for CX withdrawals, and Flick's quality assurance processes. No issues have been identified through Flick's reviews.

I checked a sample of ten CX withdrawals made within 180 days of switch completion where Flick was the losing trader and found that win-backs had not been attempted.

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 process to manage unmetered load was examined. The registry list and audit compliance report were examined to identify any ICPs with shared unmetered load.

Audit commentary

Flick has not supplied any ICPs with unmetered load during the audit period, and the AC020 report did not identify any unmetered load discrepancies. All active ICPs are metered.

Processes to prevent ICPs with unmetered load from switching in, and to monitor existing ICPs for addition of unmetered load are discussed in **sections 2.1** and **3.7**.

The 2017, 2018, 2019 and 2020 audits found Flick had historically supplied some ICPs with unmetered load for short periods, but unmetered volumes were not submitted to the reconciliation manager because Flick is a HHR trader and does not have a process for unmetered submissions. 14-month revisions have

passed for the affected periods, and non-compliance was recorded for under submission of 8.65 kWh of unmetered load in the 2020 audit.

Flick's engineered profile (HHU), which allows submission of unmetered load to the reconciliation manager was approved by the Authority on 1 December 2020. Flick will use a manual process to apply a flat load profile, consistent with the Authority's NHH UML profile, to spread the daily unmetered kWh between the trading periods so that the unmetered load can be included in the HHR aggregates and volumes files.

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 registry list and audit compliance report were examined to determine compliance.

Audit commentary

Flick has not supplied any ICPs with unmetered load during the audit period, and the AC020 report did not identify any unmetered load discrepancies. All active ICPs are metered.

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 retailer proposes to take or is taking to reduce the unmetered load.*

Audit observation

The registry list and audit compliance report were examined to determine compliance.

Audit commentary

Flick has not supplied any ICPs with unmetered load during the audit period, and the AC020 report did not identify any unmetered load discrepancies. All active ICPs are metered.

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 registry list and audit compliance report were examined to determine compliance.

Audit commentary

Flick has not supplied any ICPs with unmetered load during the audit period, and the AC020 report did not identify any unmetered load discrepancies. All active ICPs are metered.

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 for metering, submission, and distributed generation were reviewed. The registry list and AC020 were examined to determine compliance.

Audit commentary

Metering installations installed

The new connection process ensures that metering is installed prior to initial electrical connection. All active ICPs have an MEP, and at least one meter channel. No submission information is determined using subtraction.

The Authority has approved Flick to apply the HHY profile and HHR submission type for NHH non-AMI meters which will be promptly upgraded to HHR or AMI meters. Flick uses the switch event reading and meter removal read from the NHH meter to quantify consumption for the NHH period as described in **section 6.6**.

Distributed Generation

Generation fields are checked weekly as part of Flick's safety net process, discussed in **section 2.1**.

Analysis of the registry list found that Flick supplies 573 ICPs with generation recorded by the distributor, and 572 of those had import/export metering installed and the other had has an outstanding works order for the installation of import/export metering which was completed on 20 July 2022.

I checked submission data for the 572 ICPs with generation metering for February 2022, and found all of the ICPs which were active, generating, and had generation metering installed in February 2022 had generation volumes submitted.

The AC020 report did not identify any ICPs with generation indicated where the profile appeared incorrect.

Bridged meters

Flick provided a list of four ICPs where remote disconnection had occurred then the meter had been bridged to reconnect, and later unbridged. Energy was not quantified in accordance with the code during the bridged periods. Corrections were processed and a reasonable estimate of consumption during the bridged period was reported.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.1 With: Clause 10.13 and clause 15.2 From: 01-Nov-21 To: 21-Sep-22	Four bridged meters were identified during the audit period. Energy was not quantified in accordance with the code during the bridged periods. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as strong as they are sufficient to mitigate risk most of the time. Bridging only occurs where a soft reconnection cannot be performed after hours, and the customer urgently requires their energy supply for health and safety reasons. Corrections are processed to estimate consumption during bridged periods.

Actions taken to resolve the issue	Completion date	Remedial action status
We instruct contractors to bridge meters in exceptional cases to provide customers with power after hour. Bridging only occurs where a soft reconnection cannot be performed after hours, and the customer urgently requires their energy supply for health and safety reasons. Corrections are processed to estimate consumption during bridged periods	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will not be able to eliminate this non-compliance as in some instances it is essential to bridge the meters to provide power to customers due to health and safety reasons.	Ongoing	

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 NSP table was reviewed to confirm whether Flick is responsible for any GIPs.

Audit commentary

Review of the NSP table confirmed that Flick are not responsible for 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 AC020 reports and registry lists were reviewed to confirm the profiles used.

Audit commentary

Examination of the list file found that Flick has only used the HHR and HHY profiles, and control devices are not used for reconciliation purposes. No exceptions were recorded on the AC020 report.

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 leads 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.

A list of ten defective meters and four bridged meters were reviewed to determine whether the MEP was advised and if appropriate action was taken.

Audit commentary

Defective meters are typically identified through the meter reading validation process, or from information provided by the MEP or customer. Upon identifying a possible defective meter, Flick raises a field services job to investigate.

I reviewed nine examples of potential defective meters, including bridged meters. In all cases a field services job was raised to replace or un-bridge the meter, and the MEP was advised.

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

HHR data is provided by MEPs. Interrogation requirements and clock synchronisation were reviewed as part of their MEP audits, and I checked a sample of notifications from each MEP.

Audit commentary

Fulfilment of the interrogation systems requirements was examined as part of the MEP audits and found to be compliant. Only the MEPs can interrogate the meters where Flick is the trader.

The MEPs provide clock synchronisation information via SFTP, and I viewed examples of these.

Clock synchronisation event emails are reviewed on receipt, to determine whether the issue has been resolved or a field services job is required.

Flick does not actively review the time difference reports published by the AMI MEPs as they rely on these AMI MEPS to alert them of any clock synchronisation events requiring attention.

I reviewed ten reports for time difference published by four separate AMI MEPs. Most clock adjustments reviewed were small, however I identified the following:

- for NGCM AMI meters there were:
  - 100 meters where the time difference exceeded 3,600 seconds in the Oct 2021 report, and
  - three ICPs where the time difference exceeded 1,800 seconds in the Sept 2022 report,
- for Arc AMI meters there were:
  - 41 meters in June 2022 where the time correction exceeded 1,500 seconds for a given day and then this correction was reverted back during the proceeding days' time correction (the affected dates where this occurs were 18 &19 June and 26 & 27 June), and
  - 111 in August 2022 where the time correction exceeded 1,500 seconds for a given day and then this correction was reverted back during the proceeding days' time correction (the affected dates were 1 & 2 August, 14 & 15 August and 18 August).

As these reports are not reviewed by Flick no assessment on the impacts these large time corrections to the interval data have been conducted.

I reviewed four Arc ICPs where the time corrections were applied and reverted one day apart and for two of the ICPs I identified that the interval data has been impacted where the interval at the start of the time correction was zero and the interval at the end of this correction was twice the surrounding intervals indicating that the volume recorded in this interval was for two intervals.

Flick does not have a process to estimate data where a clock synchronisation event affects more than one trading period and I repeat the previous audits recommendation that a process is developed.

Description	Recommendation	Audited party comment	Remedial action
Clock synchronisation events	Where a clock synchronisation over 1800 seconds occurs, and data for multiple trading periods is pushed into the period of adjustment, develop a process to spread the total consumption for the adjustment period across	Flick will adopt this recommendation by developing a process to spread the total consumption for the adjustment period across the periods it actually occurred within	Identified

Description	Recommendation	Audited party comment	Remedial action
	the periods it actually occurred within.		

Flick's daylight savings adjustment process has no active monitoring of the available reports therefore no ability to assess the impact to the raw meter data of these large time corrections. Non compliance is recorded below.

I checked whether all data was collected within the maximum interrogation cycle. There were 19 ICPs where data was not collected within the maximum interrogation cycle and the ICP have not been arranged to be read or interrogated between the interrogation cycle limit and one year. Flick has attempted to arrange manual disconnections for the ICPs that are vacant however contractor site visits at the time were unsuccessful. The process to either add these ICPs onto a manual NHH meter reading schedule or resolve the access or comms issue has not been consistently followed.

The ICPs and the number of days since the AMI flag was updated to N on the registry by the MEP are listed below.

ICP	MEP	Registry List report date	AMI = N Date	Days since AMI flag updated (last interrogation)	Max interrogation cycle
0000150411TR9CF	NGCM	19-Sep-22	09-Oct-20	710	90
0000194153TRCDA	NGCM	19-Sep-22	09-Oct-20	710	90
0000233682UN63B	NGCM	19-Sep-22	09-Oct-20	710	90
0001417371UN77A	NGCM	19-Sep-22	09-Oct-20	710	90
0006604943RNFEF	NGCM	19-Sep-22	19-Feb-21	577	90
0194102548LC04D	MTRX	19-Sep-22	24-Mar-21	544	
0000481425CE9D3	NGCM	19-Sep-22	20-Apr-21	517	90
0005399440RNDDB	NGCM	19-Sep-22	20-Apr-21	517	90
0006750303RN6D8	NGCM	19-Sep-22	20-Apr-21	517	90
0086025000WRF12	NGCM	19-Sep-22	20-Apr-21	517	90
0000027385TR295	NGCM	19-Sep-22	06-Oct-21	348	90
0000117787UN189	NGCM	19-Sep-22	16-Oct-21	338	90

ICP	MEP	Registry List report date	AMI = N Date	Days since AMI flag updated (last interrogation)	Max interrogation cycle
0006811426RND8F	NGCM	19-Sep-22	15-Mar-22	188	90
0006622127RND15	NGCM	19-Sep-22	20-Mar-22	183	90
0007124871RNBE9	NGCM	19-Sep-22	09-Apr-22	163	90
0000081790TRA5E	NGCM	19-Sep-22	23-May-22	119	90
0005939380RN077	ARCS	19-Sep-22	28-May-22	114	90
1001276759LC0FE	MTRX	19-Sep-22	22-Jul-22	59	40
0000239021UNAA2	MTRX	19-Sep-22	06-Aug-22	44	40

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.5 With: Clause 2 Schedule 15.2 From: 01-Nov-21 To: 21-Sep-22	100 (NGCM AMI MEP) ICPs where the time correction exceeded the maximum permitted error, and no review of the raw meter data was conducted to determine if any corrections were required. 152 (ARC AMI MEP) ICPs where the time correction exceeded 1,500 seconds and this time correction was then reverted at the next interrogation. 19 ICPs not interrogated within the maximum interrogation cycle. 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 moderate as while the time difference reports published by the AMI MEPs are not reviewed by Flick to enable an assessment of the impacts of any time corrections on the raw meter data, The AMI MEPs are providing emails regarding specific ICP time difference issues for Flick to review. The audit risk rating is low as the number of affected meters is small and the affected ICPs are metering installation capacity 1 so the affected volumes are quite small.

Actions taken to resolve the issue	Completion date	Remedial action status
Re-training has been provided to the operations team. The time difference reports received from all retailers through all channels (emails/SFTP server) are going to be reviewed. There was a training issue which led to this non-compliance	24/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
The above process is going to be assessed through the monthly operations QA.	Ongoing	

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.

Using their approved HHY profile, Flick is allowed to temporarily supply NHH non-AMI meters until they are upgraded to HHR or AMI meters. Flick estimates HHR volumes for the NHH period based on the switch event reading and meter removal reading from the NHH meter.

Flick endeavours to ensure that the customer wants to remain with Flick, and that the meter upgrade will be able to be completed within 112 days. In the event that an ICP switches out before the upgrade is complete, Flick uses the customer's photo read and switch in read to calculate an estimated switch out read. Flick's policy is to treat these readings as estimated reads.

Flick also considers photo readings when preparing estimates for other ICPs where actual AMI data cannot be obtained prior to the ICP switching out. Customer readings without photos are not normally accepted.

Audit commentary

AMI data is provided by MEPs. Validated readings are derived from actual meter readings.

Flick is aware of the requirements to ensure that photo readings are validated against a set of validated actual readings from another source. If photo readings are used to calculate consumption, the interval data is labelled as estimated. One example was checked which confirmed this.

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

Flick has not submitted any NHH volumes. Using the HHY profile, Flick has temporarily supplied NHH non-AMI meters as HHR until they are upgraded to HHR or AMI meters.

All ICPs have metering category 1 or 2, and are switched as NHH.

Audit commentary

The content of CS and RR files was examined in **sections 4.3, 4.4, 4.10** and **4.11**.

Four CS file contained switch event readings which did not relate to the end of Flick's last day of supply:

ICP and event date	Switch event date	Last actual read date provided
0045147391PC9C6	29 July 2022	31 July 2022
0005208610RNDDC	28 March 2022	7 April 2022
0006106080RNB82	7 April 2022	8 April 2022

ICP and event date	Switch event date	Last actual read date provided
0194156796LC167	25 July 2022	27 July 2022

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.7 With: Clause 6 Schedule 15.2 From: 01-Nov-21 To: 21-Sep-22	For four CS files issued by Flick, the switch event readings did not reflect the actual reading or estimated reading on the event date. Potential impact: Low Actual impact: Low Audit history: Three times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate, all the incorrect readings were in manually created CS files and most CS files are generated automatically by the provisioning system. The audit risk rating is low, based on the kWh difference and that the largest difference was resolved through the RR process.

Actions taken to resolve the issue	Completion date	Remedial action status
Re-training has been provided to the operations team on the accuracy of switch event readings in the CS file. All the issues above were due to manual error. We are looking at automating the remaining 25% of the switch process which will eliminate this non-compliance	24/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monthly Operations QA has been implemented to assess and monitor the above process. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits.	Ongoing	

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

Flick has not submitted any NHH volumes. Using the HHY profile, Flick has temporarily supplied NHH non-AMI meters as HHR until they were upgraded to HHR or AMI meters, or switched out.

The registry list was reviewed to identify all ICPs with HHY profile and/or NHH certified metering, and they were checked to determine whether actual readings were obtained during the period of supply.

Audit commentary

Read attainment processes for NHH non-AMI ICPs were reviewed:

- where the upgrade from NHH to AMI metering is successfully completed, Flick obtains an actual meter removal read within their period of supply,
- where a switch is withdrawn before an upgrade is completed, Flick's period of supply is removed, and they are relieved of their obligation to obtain a reading during the period of supply, and
- where an ICP switched out before the upgrade, Flick uses the switch in read and photo reads received from the customer to estimate a CS reading; an actual reading is not obtained during the period of supply unless the switch in read is actual.

No ICPs had their period of supply end with NHH certified metering.

Audit outcome

Compliant

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

Processes for NHH non-AMI read attainment are discussed in **section 6.8**.

The registry list was reviewed to identify all ICPs with HHY profile (and/or NHH certified metering), and determine how long they were supplied.

Audit commentary

The registry list recorded that one ICP was supplied with HHY profile for 12 months or more.

ICP 0002401989EN1D8 was switched to Flick as a backdated switch as their customer had been switched using an incorrect ICP. It was agreed with the losing trader in May 2022 for Flick to claim the correct ICP from the customers supply agreement start date with Flick (8 June 2019). Due to the extended period of this backdated switch, it was not possible for Flick to request and receive HHR data, so the ICP was assigned the HHY profile to enable interval consumption volumes to be derived from the NHH reads (CS read to first received AMI midnight read after switch completion).

As the ICP was recently switched to Flick and AMI readings were received once the switch was completed compliance with this clause is confirmed. This impact of this backdated switch that occurred outside the 14-month revision window is discussed further in **sections 12.2** and **12.7**

Audit outcome

Compliant

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

Code reference

Clause 9(1) and (2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

Processes for NHH read attainment are discussed in **section 6.8**.

The registry list was reviewed to identify all ICPs with HHY profile (and/or NHH certified metering), and determine how long they were supplied.

Audit commentary

The registry list recorded that two ICPs were supplied with HHY profile for four months or more (including ICP 0002401989EN1D8 discussed in **section 6.9**).

The second ICP (0005768110RND55) had the incorrect profile applied because a backdated profile update was applied to enable an MEP nomination to be provided, and this was meant to be corrected back to HHR profile the next day and was not genuinely a NHH metered ICP for more than four months. The incorrect profiles dates are recorded as non-compliance in **section 2.1**.

As ICP 0002401989EN1D8 was recently switched to Flick and AMI readings were received once the switch was completed compliance with this clause is confirmed.

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

Using their approved HHY profile, Flick is allowed to temporarily supply NHH non-AMI meters until they are upgraded to HHR or AMI meters. Flick estimates HHR volumes for the NHH period based on the switch event reading and meter removal reading from the NHH meter.

Audit commentary

Flick does not receive readings from NHH meter interrogation logs.

All validated NHH reads are received from incoming CS files, and meter exchange paperwork. Customer photo reads are considered in certain circumstances, as discussed in **section 6.6**.

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

HHR data is provided by MEPs. Compliance was assessed as part of their MEP audits.

Audit commentary

MEPs are responsible for HHR data collection, and compliance is recorded in their audit reports.

Audit outcome

Compliant

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

Code reference

Clause 11(2) Schedule 15.2

Code related audit information

The following information is collected during each interrogation:

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

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

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

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

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

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

Audit observation

HHR data is provided by MEPs. Compliance was assessed as part of their MEP audits.

Audit commentary

MEPs are responsible for HHR data interrogation, and compliance is recorded in their audit reports.

Audit outcome

Compliant

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

Code reference

Clause 11(3) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

HHR data is provided by MEPs. Compliance was assessed as part of their MEP audits.

Audit commentary

MEPs are responsible for HHR data interrogation logs, and compliance is recorded in their audit reports.

Audit outcome

Compliant

7. STORING RAW METER DATA

7.1. Trading period duration (Clause 13 Schedule 15.2)

Code reference

Clause 13 Schedule 15.2

Code related audit information

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

Audit observation

HHR data is provided by MEPs. Compliance was assessed as part of their MEP audits.

Audit commentary

MEPs are responsible for trading period duration, and compliance is recorded in their audit reports.

Audit outcome

Compliant

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

Code reference

Clause 18 Schedule 15.2

Code related audit information

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

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

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

Audit observation

Raw meter data is retained by MEPs, and compliance is assessed as part of their MEP audits.

Processes to archive and store raw meter date were reviewed.

Audit commentary

Compliance is recorded in the MEP audit reports.

Review of audit trails confirmed that reads cannot be modified in Telemetry without an audit trail being created. This is discussed further in **section 2.4**. Access to modify readings is restricted through log on privileges.

All meter reading data is archived, and is retained by Flick for at least 48 months. Raw read and volume data from 2014 was viewed during the audit.

I traced a sample of data for 13 HHR ICPs from the source files to Telemetry, and found the volumes recorded in Telemetry were consistent with the raw data provided by the MEP for 12 of the ICPs.

The volume for ICP 1920003000CHB8E for August 2021 did not align between Telemetry and the HHRAGGS report (67.7 kWh – telemetry vs 77.55 kWh – HHRAGGS). Flick are investigating the possible cause of this difference. Non-compliance is recorded in **section 2.3**

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

Non metering information is not collected by Flick.

Audit commentary

Non metering information is not collected by Flick.

Audit outcome

Compliant

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

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

Code reference

Clause 19(1) Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

Flick has not submitted any NHH volumes. Using the HHY profile, Flick has temporarily supplied NHH non-AMI meters as HHR until they were upgraded to HHR or AMI meters, or switched out.

Audit commentary

All ICPs have submission type HHR and this clause does not apply.

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

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

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

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

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

Audit observation

Processes for the correction of HHR meter readings were reviewed and are discussed below and in **section 2.1**.

Audit commentary

Errors are identified through the data validation process, missing reads process, or information provided by the customer or MEP. Where errors are detected replacement data is estimated by Telemetry in accordance with the code. The estimation process is discussed in **section 9.4**.

Clause 19(5) of Schedule 15.2 requires that if a reconciliation participant corrects or alters data under this clause, the reconciliation participant must generate and archive a journal that contains the following information:

(a) the date of the correction or alteration,

(b) the time of the correction or alteration,

(c) the operator identifier for the person within the reconciliation participant who made the correction or alteration,

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

(e) the technique used to arrive at the corrected data, and

(f) the reason for the correction or alteration.

When Flick conducts corrections, the journal contains the details listed above. For simple corrections, the notes within Telemetry are used to record this information. For more complex corrections supporting workbooks are created and linked to the audit trail through service order numbers. All data in Telemetry also has a sequence number recorded against it, which links back to the source and audit trail details.

Audit outcome

Compliant

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

Code reference

Clause 19(3) Schedule 15.2

Code related audit information

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

The registry list was reviewed to identify any ICPs which require loss compensation.

Audit commentary

Flick has only supplied ICPs with metering category 1 or 2. No ICPs have required error or loss compensation.

Audit outcome

Compliant

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

Code reference

Clause 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:

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

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

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

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

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

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

Audit observation

Corrections are discussed in **sections 2.1** and **8.2**, 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 and agents was reviewed as part of their own audits.

Audit commentary

Raw meter data is held by MEPs, and compliance is recorded in their MEP audits.

Flick only corrects working data and they keep an appropriate audit trail. Date, time, operator identifier and the data modified are recorded within the Telemetry audit trails. The user details are entered into a free text field in Telemetry when corrections are processed.

Additional information such as the reason for the correction is recorded in supporting excel spreadsheets as discussed in **section 8.2**. Flick uses a standard technique to process corrections.

Retention of raw metering data is discussed in **section 7.2** and audit trails are discussed in **section 2.4**.

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 Flick'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 **sections 2.1, 8.2** and **9.4**.

Audit commentary

Read types and input methods are recorded in Telemetry. The combination of these fields is sufficient to confirm whether the reads are estimated or actual.

Switch event readings

No incorrect read types were identified from the sample of CS files reviewed.

HHY profile readings

Using their approved HHY profile, Flick is allowed to temporarily supply NHH non-AMI meters until they are upgraded to HHR or AMI meters. Flick estimates HHR volumes for the NHH period based on the switch event reading and meter removal reading from the NHH meter. In the event that an ICP switches out before the upgrade is complete Flick uses the customer's photo read and switch in read to calculate an estimated switch out read.

MEP estimates

One potential future issue was identified. If an MEP provides "unvalidated" actual interval data (where the sum-check was not performed), the data is labelled as an estimate and if one of these reads is used in a CS file it will be labelled "E" when it should be labelled as an actual. The sum-check is performed by the MEP to support metering certification and data should not be considered estimated just because the sum-check was not performed. No examples were found but this could become an issue in future. I have recorded a recommendation regarding the incorrect labelling of unvalidated actual data as estimates in **section 4.3**.

IntelliHUB estimates have not been applied since April 2021.

Audit outcome

Compliant

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

Code reference

Clause 3(4) Schedule 15.2

Code related audit information

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

3(4)(a) - validated meter readings

3(4)(b) - estimated readings

3(4)(c) - permanent estimates.

Audit observation

Processes for derivation of volumes were discussed and observed.

Audit commentary

All validated NHH reads are received from incoming CS files, and meter exchange paperwork. Customer photo reads are considered in certain circumstances, as discussed in **section 6.6**. Where an ICP switches out during a NHH period, an estimated switch read is provided.

Where AMI HHR readings are received, volumes are sourced from the AMI metering information. Where an estimated or switch reading is used, the HHR volumes are derived from actual readings or estimates.

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 **sections 11** and **12**, to confirm that volume was based on readings as required.

HHR data is collected by MEPs. Compliance was assessed as part of their MEP audits.

Audit commentary

The MEP retains raw, unrounded data and meter reading data is not rounded or truncated on import into Telemetry. Rounding occurs at the point of submission.

ARC Innovations meters record data to one decimal place. Compliance is recorded in this section because data is not rounded or truncated on receipt by Flick. Non-compliance is recorded in s**ections 2.1** and **12.7** in relation to submission accuracy.

Audit outcome

Compliant

9.4. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

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

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

Audit observation

The HHR estimate process was examined, and a sample of ten estimates were reviewed. Revised data was compared to estimates, where the estimates had been replaced.

Audit commentary

Telemetry's estimation process requires a minimum of one weekday, Saturday, and Sunday of actual data and/or boundary readings for the estimated period to be able to produce an estimate. ICPs without actual or estimated data are excluded from submissions. Once actual AMI data is received, or a removal reading or switch out reading is entered, the missing data will be populated and the ICP will be included in revision submissions.

Where estimates are generated they are based on the best information available. Estimates consider actual midnight readings and trading period data available for the day with missing data if available. Consumption is apportioned between the missing trading periods based on the average for the same trading period and day for the previous four weeks (or as much actual data as is available). If midnight readings are not available, and the minimum actual data requirements are met, they will be estimated.

New ICPs are recorded in Telemetry as switch in cases until actual readings are received. A user will review the switch in cases daily and accept the CS reads for ICPs which switched in more than five days ago, which then records the opening switch reads against the ICPs in Telemetry and triggers the estimation process. Flick has determined to wait five days before creating estimates to prevent customers being billed on estimates where there are small delays in the MEP providing data. I flow registers are excluded from the estimation process and no I flow estimates are created, so the registers will be excluded from submission data until actual readings are received. Once actual AMI data is received, or a removal reading or switch out reading is entered, the missing data will be populated. If an ICP with an I flow register switches out before actual readings are received, zero consumption will be estimated. A recommendation to create estimates for I flow meters is made in **section 2.1**.

Telemetry's switch in cases are also used to identify incoming switches with switch event reads inconsistent with actual AMI data. Once the switch event reads are accepted, the ICPs will disappear from the current switch in cases list. Because estimates are now triggered by accepting CS readings, the process to identify ICPs requiring RRs has changed for any ICP with readings accepted before AMI data is received. To ensure that ICPs requiring RRs are identified:

- switching agents keep a record of ICPs where estimated switch event reads were accepted before AMI data was received, and monitor these, and
- when Flick becomes aware that a communications issue has been resolved through a registry update, receipt of AMI data, or returned field services paperwork, agents check the actual readings against the CS readings to determine whether the start readings are correct and will initiate an RR if necessary.

Estimates will be created daily and continue to be created until data is received from the MEP. Once actual data is received, the estimates will be replaced with actual data.

The estimates are based upon the averages in the table below. If the customer provides a "customer initiated average" on application, this can be used to override the default average for the area and load

group to improve accuracy. "Customer initiated averages" are provided by customers by phone or email and are validated by Flick to ensure that they appear reasonable based on the ICP type and any information they hold on the ICP. If the "customer initiated average" does not appear reasonable, Flick may reject it and apply their default average. Rejection will only occur where Flick can confirm or prove that the customer value is likely to be inaccurate.

Area	Load Group	Location Classification	Estimated kWh/day
North	Low	Residential	16
South	Low	Residential	19
North	Standard	Residential	26
South	Standard	Residential	30
All	Any	Commercial	60

All ICPs have metering category 1 or 2 and the consumption values appear reasonable. The estimated daily kWh will be split between the meter registers which are present on the following basis. Where there is more than one register Flick has checks in place to ensure that total consumption of 100% of the daily estimate is split across the registers. As part of the customer acquisition process, Flick checks the ICP's meter configuration and rejects any applications where the configuration is unusual and does not meet one of the scenarios below.

Tariff Configuration	Tariff	Details
Uncontrolled	UN24	100% consumption on single tariff
All day Economy	IN19	100% consumption on single tariff
Uncontrolled/Controlled	UN24/CN19/CN17/CN16	60% uncontrolled/40% controlled
Uncontrolled/Night	UN24/CN8/CN10	75% uncontrolled/25% night
Day/Night	D16/N8 D14/N10	75% uncontrolled/25% night

This new estimation process now allows estimation to occur without read history.

I reviewed five examples of missing data which was expected to be estimated and found that Flick used reasonable endeavours to ensure that submitted information was within the percentage specified by the Authority for all five ICPs.

I also reviewed one ICP (0110011809EL130) with a long-term communication issue to determine if the zero consumption being reported for the ICP is consistent with the historic consumption pattern for the ICP prior to the communication issue occurring. This ICP was a new connection with a small amount of consumption (less than 1 kWh) recorded each day. Because the daily volumes are less than 1 kWh per day the data is not able to be validated within Telemetry, therefore with no validated data being available a zero-value estimation is applied.

Ten ICPs identified as active but with the AMI flag set to N were reviewed in the February 2022 HHRAGGS file to determine the volumes being submitted for these ICPs which is listed in the table below.

ICP	AMI Comm = N Date	Status	Max interrogation cycle (days)	Feb 2022 HHRAGGS value	Actual HHR data received?	Estimation methodology	Date last manual read attempt
0000194153TRCDA	9/10/2020	2	90	0	No	Estimated 0 usage as we didn't have an active customer	30/06/2017
0000233682UN63B	9/10/2020	2	90	0	No	Estimated 0 usage as we didn't have an active customer	2/07/2018
0001417371UN77A	9/10/2020	2	90	0	No	Estimated 0 usage as we didn't have an active customer	?
0006604943RNFEF	19/02/2021	2	90	0	No	Estimated 0 usage as we didn't have an active customer	?
0194102548LC04D	24/03/2021	2	40	0	No	Estimated 0 usage as we didn't have an active customer	?
0000481425CE9D3	20/04/2021	2	90	0	No	Estimated 0 usage as we didn't have an active customer	?
0005399440RNDDB	20/04/2021	2	90	0	No	Estimated 0 usage as we didn't have an active customer	?
0006750303RN6D8	20/04/2021	2	90	0	No	Estimated 0 usage as we didn't have an active customer	?
0086025000WRF12	20/04/2021	2	90	0	No	Estimated 0 usage as we didn't have an active customer	?
0000027385TR295	6/10/2021	2	90	0	No	Estimated 0 usage as we didn't have an active customer	?

The practice of applying a zero-value estimation for active vacant ICPs which have not been able to be disconnected, and where there is no process to manually read these ICPs, does not meet the reasonable endeavours requirement around half hour estimations.

In **section 11.2**, I found ten ICPs were missing from HHR submissions because actual HHR data was not received because of meter communication issues, or a delayed meter upgrade. The reasonable endeavours requirements were also not met for these ICPs. Recent changes to Telemetry's estimation processes are expected to address this issue moving forward.

I also reviewed five estimates for consumption on defective meters and found corrections were processed, and a reasonable estimate of consumption during the faulty period was reported.

I also reviewed the corrections for five bridged meters and confirmed that the that an estimate has been appropriately applied for the affected periods.

I reviewed the process for estimating any missing intervals that have occurred during meter changes. Telemetry reflects all meter installations as occurring at the beginning of a day (0000 hours) and meter removals as occurring at the end of a day using the last received midnight read as the removal read. Any outstanding consumption from the removed meter from the last received midnight read to the actual removal read is applied to the new meter by way of adjusting the installed read (deducting the removed meter consumption from the provided installed meter reading provided by the MEP) for the new meter. This enables Telemetry to apply an estimation to fill the missing intervals for the first day of the new meter being installed. If there is no midnight read present for the removed meter for the day prior to the meter change then the user can apply the actual removed meter read as the last midnight read within Telemetry - this pushes some volumes for the meter change date into the day prior and also results in Telemetry to adjust the interval data for the new meter to fill all intervals for the first day. I reviewed two meter changes within Telemetry and found:

- for one ICP the meter change was processed correctly, and
- for one ICP (0005003083RNFC5) there was a difference of 9.4 kWh between the interval data consumption and the meter reads for the month of the meter change.

Estimates are replaced with actual data as soon as it becomes available.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.4 With: Clause 15 Schedule 15.2 From: 01-Nov-21 To: 21-Sep-22	Reasonable endeavours not met for ten active long term vacant and non-communicating AMI metered ICPs where zero value estimations are provided for more than 12 months. Flick did not provide their best estimate for at least ten ICPs which did not have estimates generated because there was insufficient history for Telemetry to create an estimate at the time. One ICP (0005003083RNFC5) had a difference of 9.4 kWh between the interval data consumption and the meter reads for the month of the meter change. 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 moderate, estimates are created by telemetry however by applying a default zero value to these vacant ICP estimations for an extended period of time without either addressing the communication issue or arranging for a disconnection means there is risk of consumption relating to these ICPs not being accounted for in the reconciliation process. The impact is assessed to be low due to the small number of affected ICPs.

Actions taken to resolve the issue	Completion date	Remedial action status
We are investigating options to provide solutions for the above non-compliance. The reasons why vacant non-communicating meters were not resolved were due to access issues.	Ongoing	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
It would be difficult to eliminate the above issue but we will investigate options to put controls in place and provide best estimate where possible.	Ongoing	

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 zero values.

Audit observation

Flick has not submitted any NHH volumes. Using the HHY profile, Flick has temporarily supplied NHH non-AMI meters as HHR until they were upgraded to HHR or AMI meters, or switched out.

Audit commentary

All NHH ICPs have HHR consumption estimated during the NHH period. This consumption is subject to the HHR validation process described in **section 9.6**.

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*
>
> *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 the HHR data validation process, including meter event logs, validation checks, and the sum-check process.

Validation of electronic readings was also reviewed as part of the MEP audits.

Audit commentary

Electronic meter reading information is provided by MEPs. Meters are interrogated regularly, and there is little risk that data can be overwritten. Data is held for a longer period at the meter and can be re-interrogated later if required.

Telemetry validates data on import. The validation includes:

- checks for missing data, and
- checks for invalid dates and times.

Any files that fail to import, or are imported with errors, are checked.

MEPs compare meter readings against half hour interval data, known as the sum-check process. Flick also completes a sum-check process for all meters, including three phase meters which now have midnight readings supplied. Where data is available for all trading periods and the sum-check is not within ± 1 kWh, a validation exception is generated and trading period data between the midnight reads will be estimated via an automated process. The accuracy of the received midnight reads is not

investigated prior to the data correction. Flick is aware of instances where the accuracy of the received midnight reads has been confirmed as not being accurate, however the actual accurate interval data is still replaced with an estimate to ensure the interval data values align with the received midnight reads.

This means the HHR data estimated from inaccurate midnight reads replacing actual interval data is not considered to be accurate in accordance with Clause 15.2. This means that Flick may not be charged at the wholesale rate that applied during the trading period when the electricity was actually consumed. Non-compliance is recorded in **sections 12.2** and **12.7**

If the issue is persistent, it will be identified through the consecutive estimate checks described below.

Each Friday, reports are generated and reviewed to identify ICPs with consecutive estimates or zero consumption on active customer accounts for more than ten business days. Flick typically contacts the customer to determine the reason for the zero or missing consumption, and raises a service order with the MEP to resolve the issue if necessary.

Billing data is compared with expected or previous consumption at total billing run level. Highs and lows are not usually checked at ICP level unless the total for the billing run does not appear reasonable. The pre submission checks described in **section 12.3** check submission information against billed information, previous revisions, and other months. These checks are also completed at an aggregated level and discrepancies for individual ICPs are unlikely to be identified unless they caused obvious outliers in the aggregated data. Compliance is recorded in this section because I did not identify any exceptions which should have failed validation during the audit, but I repeat the recommendation from the previous audit that ICP level validation is completed.

Description	Recommendation	Audited party comment	Remedial action
Comparison with previous or expected consumption patterns	Recommend that consumption is validated to confirm whether it is consistent with historic or expected usage patterns at ICP level.	Flick will attempt to adopt this recommendation after investigating options for validating data.	Identified

Meter event reports are provided by MEPs and were being manually reviewed on an ad hoc basis to identify events that require investigation or action, and I walked through this process and found that the review is arbitrary and relies on a user scrolling through the event log to see if anything sticks out. A recent internal secondment has resulted in a change in personnel conducted this review of event logs and I found that the process is not documented and relies on a user's past experience to perform this review.

MEPs provide meter event information where action is required by Flick, and these events are reviewed and acted upon.

An assessment of the count of AMI HHR intervals estimated for use in the Flick HHR submission for the January 2022 submission was performed. Flick performed estimations for 528,644 intervals out of a total number of intervals submitted of 36 million intervals (1.47% of all intervals estimated).

While the percentage of intervals estimated is relatively low as a proportion of total intervals used for HHR submission, the number of individual ICPs impacted is a higher percentage. While Flicks estimation routine ensures the overall consumption volume has been included in its estimations by using the available midnight reads for reference, HHR volumes are used by the Reconciliation Manager to calculate seasonal shape values to enable retailers to calculate NHH volumes. I recommend that Flick implements regular reporting of missing interval data by each AMI MEP and provide these to the MEPs on a timely basis to ensure all missing data has been investigated and confirmed unrecoverable by each MEP, rather

than just undelivered. This additional step will also assist Flick to ensure the best endeavours have been met in HHR data collection for reconciliation purposes.

Description	Recommendation	Audited party comment	Remedial action
Identification and escalation of missing AMI interval data to MEPs	Develop and implement reporting of missing/ estimated interval data used in submission, and a process to escalate these instances to the relevant AMI MEP for resolution.	We will investigate and explore options with our Tech team to develop and implement reporting of missing estimated interval data and a process for escalation	Investigating

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.6 With: Clause 17 Schedule 15.2 From: 01-Nov-21 To: 21-Sep-22	Meter event logs not consistently reviewed, and no formal process is in place to ensure complete reviews are conducted. 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	Controls are rated as moderate as MEPs provide emails to Flick where action is required. The impact is assessed to be low, as most critical events are alerted by the MEPs via agreed SLAs between parties.

Actions taken to resolve the issue	Completion date	Remedial action status
The above non-compliance occurred due to training issue. The operation agent has now been retrained and advised to ensure complete meter event log reviews are conducted.	24/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
The above process is going to be assessed through monthly operations QA.	Ongoing	

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

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

Code reference

Clause 13.136

Code related audit information

The generator (and/or embedded generator) must provide to 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

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

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

Audit observation

The NSP table on the registry was reviewed.

Audit commentary

Flick 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

Flick 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 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

Flick 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

The registry list was reviewed. I checked whether any breach allegations had been made in relation to buying and selling notifications.

Audit commentary

Flick uses the HHR profile, which does not require a trading notification.

Flick also uses the HHY profile, which allows HHR data from NHH and NHH AMI metering installations to be submitted as HHR. Trading notifications are not required because the submission is not as HHY.

Audit outcome

Compliant

11.2. Calculation of ICP days (Clause 15.6)

Code reference

Clause 15.6

Code related audit information

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

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

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

Audit observation

The process for the calculation of ICP days was examined by checking 50 NSPs with a small number of ICPs to confirm the AV110 ICP days calculation was correct.

I reviewed GR100 reports from February 2021 to June 2022 and investigated all NHH and a diverse sample of ten HHR NSP level ICP days differences, to determine why the differences had occurred.

Audit commentary

Flick's AV110 reports are produced from Telemetry's MDM usage reporting, which combines Telemetry's volume information and registry information to ensure that aggregation is correct. Registry information is updated in MDM daily.

The process for the calculation of ICP days was examined by checking 50 NSPs a small number of ICPs on the July 2021 ICP days submission against the active days for ICPs connected to the NSP on the registry list with history. The ICP days calculation was confirmed to be correct for the sample checked.

GR100 ICP comparison reports are reviewed by Flick, and discrepancies are investigated. The following table shows the ICP days difference between Flick's database and the RM return file (GR100) for 17 months, and found the differences were small.

Month	R1	R3	R7	R14
Feb 2021	0.13%	0.07%	0.04%	0.01%
Mar 2021	0.07%	0.06%	0.03%	0.03%
Apr 2021	0.10%	0.06%	0.03%	0.02%
May 2021	0.09%	0.06%	0.02%	0.00%
Jun 2021	0.08%	0.05%	0.01%	0.00%
Jul 2021	0.05%	0.03%	0.00%	0.00%
Aug 2021	0.03%	0.02%	0.01%	0.00%
Sep 2021	0.03%	0.03%	0.00%	0.00%
Oct 2021	0.03%	0.03%	0.00%	0.00%
Nov 2021	0.01%	0.01%	0.00%	0.00%
Dec 2021	0.02%	0.01%	0.01%	0.00%
Jan 2022	0.02%	0.02%	0.01%	0.00%
Feb 2022	0.01%	0.01%	0.00%	-
Mar 2022	0.01%	0.00%	0.00%	-
Apr 2022	0.03%	0.02%	0.00%	-
May 2022	0.01%	0.01%	0.01%	-

Month	R1	R3	R7	R14
Jun 2022	0.00%	0.01%	-	-

I reviewed a sample of ten HHR ICP days discrepancies remaining at revision 7 or later, and found they were caused either, by missing HHR estimates where there was insufficient history for Telemetry to produce estimates according to the methodology described in **section 9.4**, or NSP mapping to ICP issues preventing the ICP from being included in the submission files. The recent upgrade of Flicks estimation process within Telemetry now ensures there are no missing HHR estimates due to insufficient consumption history.

Once actual AMI data is received, or a removal reading or switch out reading is entered, the missing data will be populated and the ICP will be included in revision submissions. ICP days differences decreased with later revisions.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.2 With: Clause 15.6 From: 01-Nov-21 To: 21-Sep-22	ICP days are not provided for trading periods which do not have estimated or actual data, or where there was a ICP to NSP mapping issue. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as strong as they are sufficient to ensure that most data is correctly reported unless actual or estimated data is unavailable. Estimates are created except where there is insufficient history for Telemetry to produce estimates. The impact is assessed to be low, as updated data will be provided through the revision process.

Actions taken to resolve the issue	Completion date	Remedial action status
This non-compliance applies to the period between the last audit and when the new estimation process was implemented. Telemetry has now been enhanced to estimate data without a read history which enables ICP days to be included in reconciliation reports.	24/11/2022	Cleared

Preventative actions taken to ensure no further issues will occur	Completion date	
This non-compliance is now going to be eliminated with the enhancement of Telemetry which can now estimate data without a read history.	24/11/2022	

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 July 2019 to June 2021 were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

Audit commentary

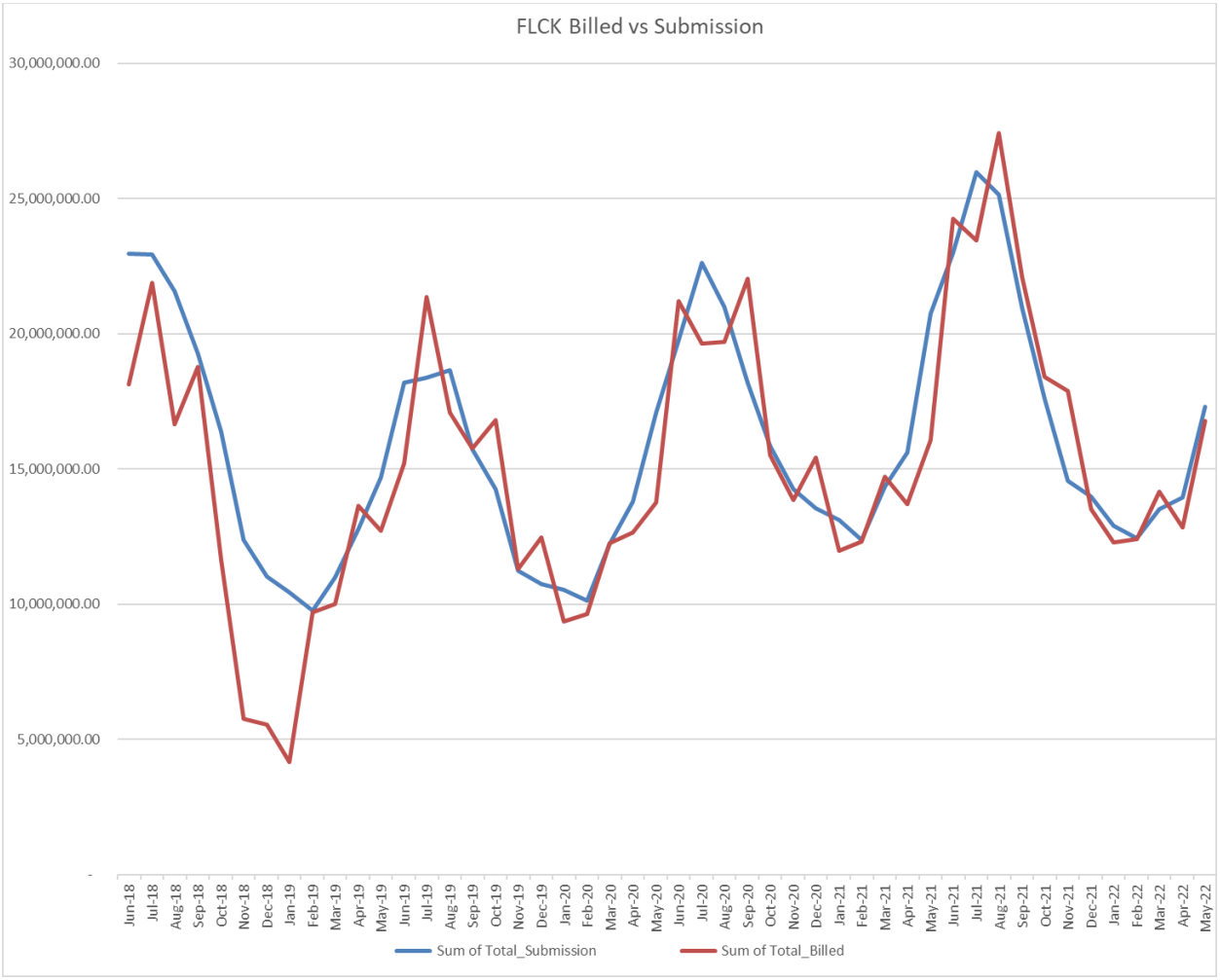
Prior to submission, the AV090 HHR volumes and AV120 billed submissions are compared for reasonableness, and any large discrepancies are investigated. Flick also completes a monthly comparison between the total billed in Flick Billing and the total reported in the AV120, and any anomalies are checked to confirm that they are based on consistent data.

The process for the calculation of as billed volumes was examined by checking five NSPs with a small number of ICPs against Flick's invoice information for August 2022 and was confirmed to be accurate.

Comparison between Submitted Volumes and Electricity Supplied

The chart below shows a comparison between submissions and electricity supplied information. There is a 0.3% difference (submitted higher than billed) for the year ended May 2022 and a -0.2% difference (submitted higher than billed) for the two years ended May 2022. Compliance is recorded.

A comparison of the monthly billed vs submitted amounts did identify a significant divergence for May 2021 where the volumes were different by 29% or 4.7 GWh. The size of such a difference between these monthly datasets cannot be explain by timing of invoicing or vacant consumption or backdated switches. Flick is investigating to determine if the issue is reporting related.



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

I confirmed that the process for the calculation and aggregation of HHR data is correct, by matching HHR aggregates information with the HHR volumes data for 20 submissions.

The GR090 ICP missing files received during the audit period for February 2021 to June 2022 were examined. A sample of 14 missing ICPs were reviewed to determine the reasons they were missing.

Audit commentary

I confirmed the process for aggregation of HHR data is correct by:

- matching HHR aggregates information to the volumes for 20 submissions, which confirmed that the differences between the volumes and aggregates were small; a detailed reconciliation at NSP level was completed for one submission which confirmed that the differences less than ±3 kWh at each NSP and related to rounding, and
- matching HHR aggregates volumes to the source files received from the MEP for 14 ICPs, including data provided by each MEP. The volume for ICP 1920003000CHB8E did not match between Telemetry and the August 2021 HHRAGGS file and non-compliance is recorded in **section 2.3.**

Flick reviews all GR090 (ICP missing) reports and investigates and corrects any data discrepancies. The GR090 ICP missing files received during the audit period were examined, and a sample of 14 differences were reviewed.

- Five ICPs were missing because actual HHR data was not received because of meter communication issues, or a delayed meter upgrade. Estimated data is only created if there is sufficient history for Telemetry to generate an estimate, and ICPs without actual or estimated data are excluded from submissions. The recent upgrade of Flicks estimation process within Telemetry now ensures there are no missing HHR estimates due to insufficient consumption history.
- Three ICPs were missing because of a backdated NSP change. I reviewed Flick's submission information and confirmed that the correct NSP was reported, and the exception appeared on the GR090 report in error.
- Three ICPs were due to Flick submitting the incorrect month for its R7 revision for two months and this resulted in ICPs being identified as missing when they were not.
- The other three ICPs were missing because of backdated switches and backdated withdrawals. Late switching files are discussed in **section 4**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.4 With: Clause 15.8 From: 01-Nov-21 To: 21-Sep-22	HHR estimates are not generated where there is insufficient history for Telemetry to generate an estimate. At least five ICPs did not have estimates generated because there was insufficient history for Telemetry to create an estimate. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1

Audit risk rating	Rationale for audit risk rating
Low	The controls are Strong, estimates are now created after five days even if AMI data has not been received using either customer-initiated averages or a default daily average consumption, except where there is insufficient history for Telemetry to produce estimates. The impact is assessed to be low, as updated data will be provided through the revision process.

Actions taken to resolve the issue	Completion date	Remedial action status
This non-compliance applies to the period between the last audit and when the new estimation process was implemented. Telemetry has now been enhanced to estimate data without a read history.	24/11/2022	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
This non-compliance is now going to be eliminated with the enhancement of Telemetry which can now estimate data without a read history.	24/11/2022	

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

HHR data is provided by MEPs. Compliance was assessed as part of their MEP audits.

The daylight savings adjustment process was reviewed for each MEP, including viewing examples of ICPs moving into and out of daylight savings.

Audit commentary

Daylight savings processes for the MEPs were reviewed as part of their audits, and found to be compliant. Data is provided in NZDT format by all MEPs apart from WASN and ARCS, who provide data in NZST format.

I checked a sample of data provided in NZDT format and confirmed the trading period data was correctly aligned in Telemetry.

I viewed the adjustment process in Telemetry for data provided in NZST format and confirmed the trading period data was correctly aligned in Telemetry for daylight savings changes using the trading period run on technique.

Audit outcome

Compliant

12.2. Creation of submission information (Clause 15.4)

Code reference

Clause 15.4

Code related audit information

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

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

Audit observation

A sample of HHR ICPs were checked to ensure that volumes were correctly recorded in **section 11.4.** Corrections are discussed in **sections 2.1** and **8.2**.

Flick has not submitted any NHH volumes. Using the HHY profile, Flick has temporarily supplied NHH non-AMI meters as HHR until they were upgraded to HHR or AMI meters or switched out.

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. I checked the accuracy of the HHR aggregates and HHR volumes files in **section 11.4**. Some missing submission information was identified and is described below.

Application of CS readings

I checked a sample of five switch move CS files with estimated readings where no RR had been issued and **section 4.11** and found:

- for ICP 1001257730LC932 (17 May 2021) the starting register reads do not align with the reads received within the CS file by 3 kWh, and
- for ICP 0007002688RNBC5 the starting register reads do not align with the reads received within the CS file by 10 kWh for register 1 and 3 kWh for register 2.

Backdated switches older than 14 months

ICP 0002401989EN1D8 was switched to Flick as a backdated switch as their customer had been switched using an incorrect ICP. It was agreed with the losing trader in May 2022 for Flick to claim the correct ICP from the customers supply agreement start date with Flick (8 June 2019). This ICP had NHH metering present which also required upgrading to HHR to enable Flick to continue to settle this ICP. The affected period from switch date to the installation of an AMI meter was assigned the HHY profile.

The consumption calculated between the CS read and the NHH meter removal read was 21,374 kWh covering 1129 days between these read dates. Flick apportioned this volume across the entire read to read period using Telemetry's estimation routine. An assessment of the consumption volume that would not have been included in the 14-month revision process for this ICP was calculated to be 13,316 kWh.

Check sum validation and correction of interval data

MEPs compare meter readings against half hour interval data, known as the sum-check process. Flick also completes a sum-check process for all meters, including three phase meters which now have midnight readings supplied. Where data is available for all trading periods and the sum-check is not within ± 1 kWh, a validation exception is generated and trading period data between the midnight reads will be estimated via an automated process. The accuracy of the received midnight reads is not investigated prior to the data correction. Flick is aware of instances where the accuracy of the received midnight reads has been confirmed as not being accurate, however the actual accurate interval data is still replaced with an estimate to ensure the interval data values align with the received midnight reads.

This means the HHR data estimated from inaccurate midnight reads replacing actual interval data is not considered to be accurate in accordance with Clause 15.2. This means that Flick may not be charged at the wholesale rate that applied during the trading period when the electricity was consumed.

Inactive ICPs with consumption

Consumption for all trading periods is recorded in Telemetry. If the ICP has inactive status on a particular day, any volumes for that day will be excluded from submission.

In reality, disconnections and reconnections occur part way through the day so the ICP is both active and inactive on the disconnection and reconnection date. The registry only allows one status to be recorded per day, which applies effective from 12.00am.

When processing disconnections, Flick now enters the date after the disconnection was completed as the disconnection date and this ensures all consumption recorded on the disconnection date is included in the HHR submission process. Inactive consumption is identified as part of the safety net check described in **section 2.1**, and ICPs are usually returned to active for any inactive periods with consumption.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.2 With: Clause 15.4 From: 01-Nov-21 To: 21-Sep-22	Switch estimate reads provided by losing trader not used by Flick for two ICPs resulting in incorrect submission of 16 kWh. Backdated switch for ICP 0002401989EN1D8 (8 June 2019) resulted in 13,316 kWh not being included in the submission process. Actual HHR interval data automatically replaced with estimates where check sum validation identifies a difference of more than ± 1 kWh where the accuracy of the received midnight reads is not investigated prior to the data correction. Same reading not used by Flick for two ICPs resulting in 10 kWh under submission. Potential impact: Medium Actual impact: Medium Audit history: Three times Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	Controls are rated as moderate because they are sufficient to ensure that most information is recorded correctly. The impact is assessed to be medium, as actual interval data is being replaced with an estimate where inaccurate midnight reads are being used to estimate and replace actual interval values.

Actions taken to resolve the issue	Completion date	Remedial action status
Retraining has been provided to the switch team on the RR process. An attempt will be made to correct the RR read. An escalation process has been implemented in the switching team for requests for all withdrawals exceeding the 14-month mark to be escalated to the Operations Manager. Withdrawals over the 14 months will not be initiated or accepted.	24/11/2022	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Monthly Operations QA has been implemented to assess and monitor all the processes above. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits.	Ongoing	

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**.

I walked through the HHR volumes and aggregates validation process, including reviewing historic validations.

Audit commentary

Flick has validation processes to ensure that submissions are correct, including:

- comparison between the HHR volumes and aggregates files at total and NSP level,
- comparison between the HHR volumes and AV120 billed submission, including comparison with previous revisions and months, and
- checks of any ICPs where no data has been received since switch in, with action taken to retrieve data before the next revision where possible.

Audit outcome

Compliant

12.4. Grid owner volumes information (Clause 15.9)

Code reference

Clause 15.9

Code related audit information

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

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

Audit observation

The registry list and NSP table were reviewed.

Audit commentary

Flick 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

Flick 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

Flick 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 2.1** and **8.2**.

Audit commentary

Review of alleged breaches confirmed that no reconciliation submissions were made late.

Some submission accuracy issues are present.

- **Application of CS**
  I checked a sample of five switch move CS files with estimated readings where no RR had been issued in **section 4.11** and found for ICP 1001257730LC932 (17 May 2021) the starting register reads do not align with the reads received within the CS file by 3 kWh, and for ICP 0007002688RNBC5 the starting register reads do not align with the reads received within the CS file by 10 kWh for register 1 and 3 kWh for register 2

- **Replacing actual HHR data with estimates to ensure alignment with CS**
  Where an RR issued by Flick is rejected, the file is passed to the data team who will adjust the start reading within telemetry and replace the actual interval data with an estimate to match the CS file. I found two examples where the CS reads were applied, and the actual interval data replaced with an estimate. The process to replace actual interval data with an estimate to ensure alignment with the read estimate within the CS file means the HHR data estimated from these CS reads is not considered to be accurate in accordance with Clause 15.2 as accurate actual HHR data has been replaced with inaccurate estimated HHR data

- **Backdated switches older than 14 months**

  ICP 0002401989EN1D8 was switched to Flick as a backdated switch as their customer had been switched using an incorrect ICP. It was agreed with the losing trader in May 2022 for Flick to claim the correct ICP from the customers supply agreement start date with Flick (8 June 2019). This ICP had NHH metering present which also required upgrading to HHR to enable Flick to continue to settle this ICP. The affected period from switch date to the installation of an AMI meter was assigned the HHY profile. The consumption calculated between the CS read and the NHH meter

removal read was 21,374 kWh covering 1129 days between these read dates. Flick apportioned this volume across the entire read to read period using Telemetry's estimation routine. An assessment of the consumption volume that would not have been included in the 14-month revision process for this ICP was calculated to be 13,316 kWh.

- **Reasonable endeavours requirements for HHR estimations**
  I found ten ICPs were missing from HHR submissions because actual HHR data was not received because of meter communication issues, or a delayed meter upgrade. The reasonable endeavours requirements were also not met for these ICPs. This is discussed further in **section 11.2.**

- **Check sum validation and correction of interval data**

  MEPs compare meter readings against half hour interval data, known as the sum-check process. Flick also completes a sum-check process for all meters, including three phase meters which now have midnight readings supplied. Where data is available for all trading periods and the sum-check is not within ± 1 kWh, a validation exception is generated and trading period data between the midnight reads will be estimated via an automated process. The accuracy of the received midnight reads is not investigated prior to the data correction. Flick is aware of instances where the accuracy of the received midnight reads has been confirmed as not being accurate, however the actual accurate interval data is still replaced with an estimate to ensure the interval data values align with the received midnight reads.

  This means the HHR data estimated from inaccurate midnight reads replacing actual interval data is not considered to be accurate in accordance with Clause 15.2. This means that Flick may not be charged at the wholesale rate that applied during the trading period when the electricity was consumed.

- **Inactive ICPs with consumption**
  Consumption for all trading periods is recorded in Telemetry. If the ICP has inactive status on a particular day, any volumes for that day will be excluded from submission

  In reality, disconnections and reconnections occur part way through the day, so the ICP is both active and inactive on the disconnection and reconnection date. The registry only allows one status to be recorded per day, which applies effective from 12.00am.

  When processing disconnections, Flick now enters the date after the disconnection was completed as the disconnection date and this ensures all consumption recorded on the disconnection date is included in the HHR submission process. Inactive consumption is identified as part of the safety net check described in **section 2.1**, and ICPs are usually returned to active for any inactive periods with consumption.

- **Rounding of Arc data**
  Flick supplies 632 active ICPs with HHR settled Arc meters. There is an issue with ARC Innovations meters when used for HHR settlement. The on-site setup is that a meter pulses into a data storage device, which counts the pulses and "stores" them every 200 pulses which equals 0.1 kWh. There is only one decimal place, so the smallest increment of consumption is 0.1. Unfortunately for Flick, this means the HHR data derived from ARC meters is not considered to be accurate in accordance with Clause 15.2. The total kWh per month will be accurate but if volumes are not recorded and reported against the correct trading period, Flick may not be charged at the wholesale rate that applied during the trading period when the electricity was consumed.

Previous audit issues that did not occur during this audit were re-checked:

- No unmetered load was supplied during the audit period but use of the new HHU profile will allow unmetered load to be submitted if required in the future.
- IntelliHUB estimates have not been applied since April 2021.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.7 With: Clause 15.12 From: 01-Nov-21 To: 21-Sep-22	Switch estimate reads provided by losing trader not used by Flick for two ICPs resulting in incorrect submission of 16 kWh. HHR actual data replaced by inaccurate estimate where RR file rejected, and interval data is estimated and scaled to align with CS read estimate. Reasonable endeavours not met for ten active long term vacant and non-communicating AMI metered ICPs where zero value estimations are provided for more than 12 months. Backdated switch for ICP 0002401989EN1D8 (8 June 2019) resulted in 13,316 kWh not being included in the submission process. Actual HHR interval data automatically replaced with estimates where check sum validation identifies a difference of more than ± 1 kWh where the accuracy of the received midnight reads is not investigated prior to the data correction. Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate. Potential impact: Medium Actual impact: Medium Audit history: Multiple times Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	Controls are rated as moderate because they are sufficient to ensure that most information is recorded correctly. The impact is assessed to be medium due to the volume missing from the submission process and as some actual interval data is being replaced with an estimate where inaccurate midnight reads are being used to estimate and replace actual interval values.

Actions taken to resolve the issue	Completion date	Remedial action status
Retraining has been provided to the switch team on the RR process. An attempt will be made to correct the RR read. The unvalidated HHR data is not replaced but marked as an estimated in the system. An attempt will be made to implement changes to the system, so it enables the unvalidated date to be marked as "unvalidated" rather than an estimate. We could not meet the HHY profile term for ICP 0002401989EN1D8 due to the switch being backdated. The backdated term had already passed the 16 weeks' timeframe. The ICP day non-compliance applies to the period between the last audit and when the new estimation process was implemented. Telemetry has now been enhanced to estimate data without a read history. ARC meters are currently in the process of being displaced so the issue of interval data being received to one decimal place will ultimately be eliminated. In the meantime, we will engage with AMS and explore any temporary solution to this.	Ongoing	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monthly Operations QA has been implemented to assess and monitor the processes above. The Operations QA will be backed up by monthly compliance reporting and quarterly Operations internal audits.	Ongoing	

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

Code reference

Clause 4 Schedule 15.2

Code related audit information

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

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

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

Audit observation

Flick has not submitted any NHH volumes. Using the HHY profile, Flick has temporarily supplied NHH non-AMI meters as HHR until they were upgraded to HHR or AMI meters, or switched out.

I evaluated the issue of estimated HHR data still being present at 14 months.

Audit commentary

All ICPs were submitted as HHR, no NHH data was submitted.

When estimates are created and used for submission, it is not possible to differentiate between estimate types or between estimates and corrections. If HHR data is calculated between register reads, the total kWh is correct. If estimates or corrections are conducted without register reads this may be less accurate, but Flick cannot report on the quantity and type of estimates still present at 14 months. Also, when NGCM supplies "unvalidated" data, it remains labelled as estimated as described in **section 9.1**. I have recorded a recommendation regarding the incorrect labelling of unvalidated actual data as estimates in **section 4.3**.

Audit outcome

Compliant

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

Code reference

Clause 2 Schedule 15.3

Code related audit information

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

- *half hour volume information for the total metered quantity of electricity for each ICP notified in accordance with clause 11.7(2) for which there is a category 3 or higher metering installation (clause 2(1)(a))for each ICP about which information is provided under clause 11.7(2) for which there is a category 1 or category 2 metering installation (clause 2(1)(b)):*
  - *a) any half hour volume information for the ICP; or*
  - *b) any non-half hour volumes information calculated under clauses 4 to 6 (as applicable).*
  - *c) unmetered load quantities for each ICP that has unmetered load associated with it derived from the quantity recorded in the registry against the relevant ICP and the number of days in the period, the distributed unmetered load database, or other sources of relevant information. (clause 2(1)(c))*
- *to create non half hour submission information a reconciliation participant must only use information that is dependent on a control device if (clause 2(2)):*
  - *a) the certification of the control device is recorded in the registry; or*
  - *b) the metering installation in which the control device is location has interim certification.*
- *to create submission information for a point of connection the reconciliation participant must 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 Flick's ICPs have metering category 1 or 2, and are submitted as HHR,
- no ICPs with unmetered load were supplied during the audit period,
- no profiles requiring a certified control device are used,
- no loss or compensation arrangements are required, and
- aggregation of the AV090 and AV140 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

Flick has not submitted any NHH volumes. Using the HHY profile, Flick has temporarily supplied NHH non-AMI meters as HHR until they were upgraded to HHR or AMI meters, or switched out.

Audit commentary

All ICPs were submitted as HHR, and this clause does not apply.

Audit outcome

Not applicable

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

Code reference

Clause 4 and 5 Schedule 15.3

Code related audit information

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

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

Audit observation

Flick has not submitted any NHH volumes. Using the HHY profile, Flick has temporarily supplied NHH non-AMI meters as HHR until they were upgraded to HHR or AMI meters, or switched out.

Audit commentary

All ICPs were submitted as HHR, and this clause does not apply.

Audit outcome

Not applicable

12.12. Forward estimate process (Clause 6 Schedule 15.3)

Code reference

Clause 6 Schedule 15.3

Code related audit information

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

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

Audit observation

Flick has not submitted any NHH volumes. Using the HHY profile, Flick has temporarily supplied NHH non-AMI meters as HHR until they were upgraded to HHR or AMI meters, or switched out.

Audit commentary

All ICPs were submitted as HHR, and this clause does not apply.

Audit outcome

Not applicable

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

Code reference

Clause 7 Schedule 15.3

Code related audit information

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

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

Audit observation

Review of the registry list confirmed that all ICPs had submission type HHR.

Review of the event detail confirmed that some ICPs have had a profile change from HHY to HHR.

Audit commentary

All ICPs were submitted with HHR profile, but 16 ICPs had changes from HHY to HHR profile on the registry. I checked a sample of 10 profile changes, all had actual readings on the day that the profile

should have been changed. ICP 0005768110RND55 had its profile changed from an incorrect date on the registry, which is recorded as non-compliance in **section 2.1**. Compliance is recorded in this section because there was an actual reading on the correct profile change date.

Audit outcome

Compliant

13. SUBMISSION FORMAT AND TIMING

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

Code reference

Clause 8 Schedule 15.3

Code related audit information

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

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

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

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

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

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

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

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

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

Audit observation

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

Aggregation of HHR volumes is discussed in **section 11.4**.

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
- consumption period.

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 AV090 and AV140 reports as part of the aggregation checks.

Audit commentary

Submission information is appropriately 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

Flick has not submitted any NHH volumes. Using the HHY profile, Flick has temporarily supplied NHH non-AMI meters as HHR until they were upgraded to HHR or AMI meters, or switched out.

Audit commentary

All ICPs were submitted as HHR, and this clause does not apply.

Audit outcome

Not applicable

14. GLOSSARY OF TERMS

CS breach for transfer switch	Where a CS is received after 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.
ET breach	AN Expected Transfer Date is earlier than the NT Proposed Transfer Date; OR AN Expected Transfer Date is more than 10 business days after NT arrival date.
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.

CONCLUSION

Flick have continued with their internal audits, expanding their safety net checks, and improving monitoring of field services jobs. Issues recorded in previous audits relating to inactive consumption have not been resolved, and some inaccuracies continue to occur where data is manually processed.

Flick have a focus on compliance however the audit risk rating is 48 (an increase from 43 in the previous audit), indicating that the next audit be due in six months.

The improvements around HHR estimations where no history is available, and the further automation of the switching process is evidence of Flick's commitment to improving their levels of compliance.

This audit identified 24 non-compliances and makes eight recommendations. Two non compliances have already been cleared prior to the completion of this audit.

Taking this into consideration along with Flick's comments, I recommend that the next audit is completed in a minimum of 12 months

PARTICIPANT RESPONSE

Flick is committed increasing our level of compliance by improving our processes through system enhancements, monitoring, training, and implementing controls to all our operational processes related to regulatory compliance.

We appreciate the recommendations provided and will consider the implementation of these on a priority basis as we work to improve our compliance levels.

We have made continued systemic enhancements to our platform in the past year through the automation of switching processes. This has not been reflected in the audit risk rating as the functionality was not live for the duration of the audit period. We have also incurred a number of additional risk rating points related to a one off non-compliance due to backdating an ICP in exceptional circumstances. On the whole, we believe that our compliance regime is improving and this will be reflected in the next audit