ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT

Provera

For

Mercury

MERCURY NZ LIMITED
NZBN: 9429037705305

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EXECUTIVE SUMMARY

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of **Mercury NZ Limited (Mercury),** 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 7.2.

Mercury operates three reconciliation participant codes:

- **MRPL** which is a grid connected generator,
- **MEEN** for NHH and HHR settled ICPs, and
- **TRUS** for NHH and HHR settled ICPs.

Findings in this report relate to the MEEN and TRUS codes unless specifically stated otherwise.

During the audit period mass market ICPs migrated from MEEN SAP to TRUS GTV. This resulted in heavy workloads for staff involved in the migration process, registry update and validation, and submission. Some discrepancy resolution, read attainment and field services processes were temporarily put on hold during this period due to heavy workloads as well as to improve customer experience and minimise confusion and complications for field services providers.

Now that the migration is complete these processes have been reinstated, staff have more time to manage and resolve discrepancies, and some additional checks have been added. I saw evidence that backdated corrections are occurring as older discrepancies are identified and resolved when checking late status and trader registry updates. I found the Mercury team was very motivated to resolve issues, but in some cases, they were constrained by the time and resources available to them.

MEEN

Summary	Key areas for improvement
Registry and static data accuracy	
Registry and SAP validation processes have improved. With less ICPs in SAP, identifying and resolving discrepancies has become more manageable. Unmetered load details are checked more regularly, and some key fields are validated more often than they were in previous audits.	Exceptions are generally identified promptly through reporting, but there can be delays in investigating and correcting the exceptions which leads to inaccurate registry, switching and submission information. I found some missed and incorrect status updates were slipping through checks completed at the time the update is processed without detection. Distributed generation processes could be improved by identifying ICPs with generation which do not have I flow metering, which has led to a small number of exceptions. The increase in unknown ANZSIC codes identified in previous audits has been caused by ANZSIC codes sometimes not being populated in SAP for switch ins. ANZSICs should be checked and populated consistently. Monitoring of rejected MEP nominations would help to ensure that they are reissued promptly where required.
Switching	
The switching process is well managed. Given the volume of switches completed there were a small number of breaches for late information. Most data checked was accurate.	There were some errors in files which were produced manually and by SAP.

Summary	Key areas for improvement
Read import and validation	
Read import and validation processes are operating as expected, and the treatment of customer reads is compliant. Not all meter events and clock synchronisation events are consistently reviewed, and some events requiring action or correction may be missed. Reads recorded against meter read orders are truncated on import, which is a technical non-compliance.	Consistently review and action meter and clock synchronisation events. Carefully review meter events to ensure that any issues MEEN and TRUS lost track of during the migration are appropriately investigated and resolved.
Read attainment	
NHH manual read attainment processes are sufficient to usually meet the code requirements. In most cases, compliance with the best endeavours requirements was met for ICPs supplied for one year or more, but the requirements were not consistently met for ICPs supplied less than four months.	Consider whether processes could be improved for ICPs with shorter periods of supply.
Volume and reading corrections	
Compliant processes are in place for corrections, but some ICPs requiring correction are not investigated and corrected promptly. Correction and estimation processes are operating as expected.	Status and profile corrections relating to periods more than 14 months ago are not consistently identified and wash up data for periods more than 14 months ago is not always provided. I recommend improving this process to capture consumption within the last 14 months.
Submission	
The reconciliation processes are compliant, but sometimes incorrect data is produced where underlying data is incorrect. Generation processes are operating effectively.	Ensure that underlying data is correct so that submission data is correctly provided.

TRUS

Summary	Key areas for improvement
Registry and static data accuracy	
Automated processes ensure that registry and GTV information is synchronised, and daily validation processes identify and resolve discrepancies between GTV and the registry. There is also reporting in place to identify instances where information matches in both systems but is incorrect.	There are sometimes delays in identifying, investigating and correcting exceptions due to workloads. Monitoring of new connections which have MEEN assigned as the proposed trader in error. Monitoring of ICP claims which cannot be processed because status and/or trader information is incomplete in GTV.

Summary	Key areas for improvement
I saw evidence that where issues were identified, new validation reports and processes are promptly created to improve compliance.	Continuing to work to clear unmetered load and distributed generation discrepancies. There has been an increase in discrepancies with the migration of ICPs from MEEN to TRUS.
Switching	
In general switching is well managed and closely monitored. Improvements are made where errors are identified.	Ensure that the date failed withdrawal code is applied correctly. Ensure that agreed switch readings are correctly entered where read renegotiations occur.
Read import and validation	
Read import and validation processes are operating as expected, and the treatment of customer reads is compliant. Not all meter events and clock synchronisation events are consistently reviewed, and some events requiring action or correction may be missed. Reads recorded against meter read orders are truncated on import, which is a technical non-compliance.	Consistently review and action meter and clock synchronisation events. Ensure that Powerco checks meter condition when they manually read meters and provides confirmation of this.
Read attainment	
NHH manual read attainment processes are sufficient to usually meet the code requirements.	This process is under review, and I recommend this review continues.
Volume and reading corrections	
Compliant processes are in place for corrections, but some ICPs requiring correction are not investigated and corrected promptly. Correction and estimation processes are operating as expected.	Potential stopped and faulty meters are reviewed and investigated only when staff have time due to workloads, which could lead to missed or late corrections. A small number of corrections were not processed accurately or were missed, and TRUS intends to correct these. Corrections for bridged consumption do not normally occur if an ICP switches out before it is unbridged, or a correction is processed. Corrections for bridged consumption should be consistently processed.
Submission	
The reconciliation processes are compliant, but sometimes incorrect data is produced where underlying data is incorrect.	Ensure that underlying data is correct so that submission data is correctly provided, including correctly applying NHH boundary readings for upgrades and downgrades.

Conclusion

The audit identified 46 non-compliances and 23 recommendations are made, and the audit risk rating has decreased from 99 in the previous audit to 85 this audit. This an excellent result given the migration was

completed this audit period. The decrease is due to some previous non-compliances being cleared, a reduction in the number and impact of discrepancies, and that some controls have improved post migration resulting in better current control ratings when assessing non-compliance.

For MEEN I found that following the migration to TRUS, exceptions are able to be more closely managed due to a decrease in ICP numbers.

For TRUS, I found that the increase in ICP numbers due to the migration has resulted in an increase in exceptions (some of which were inherited from MEEN). TRUS is striving to resolve these, but in the meantime some processes to identify new exceptions such as stopped meters are being completed less frequently. I have recommended this be improved.

In general, both codes have made good progress with resolving exceptions post migration and are working to improve and streamline their processes to increase compliance.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The table below recommends that the next audit be completed in three months. I have considered this in conjunction with Mercury's responses which indicate that they plan to take action to prevent future non-compliance, and I recommend that the next audit is undertaken in a minimum of 13 months on 28 June 2025. The matters raised are detailed in the table below.

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	**MEEN** and **TRUS** Some inaccurate registry and submission data is recorded and was not updated as soon as practicable.	Moderate	Medium	4	Identified
Electrical Connection of Point of Connection	2.11	10.33A	**MEEN** Up to 22 metered new connections had late meter certification. Up to 91 reconnections of metered ICPs had late meter certification. **TRUS** Up to 262 metered new connections had late meter certification. 109 reconnections of metered ICPs had late meter certification.	Strong	Low	1	Identified
Meter bridging	2.17	10.33C and 2A of Schedule 15.2	**TRUS** Five ICPs which switched out before being unbridged or before a correction was processed did not have consumption estimated during the bridged period. One ICP later had its switch withdrawn. ICP 0007132718RN866 did not have a bridged meter correction processed because the new meter details were not received before the ICP switched out.	Moderate	Low	2	Identified
Changes to registry information	3.3	10 of schedule 11.1	**MEEN** 519 late reconnection updates. 343 late disconnection updates. 40,980 late trader updates. 1,237 ICPs did not have ANZSIC codes populated within 20 business days of switching in, or initial electrical connection. **TRUS** 631 late reconnection updates. 532 late disconnection updates. 3,670 late trader updates. 490 ICPs did not have ANZSIC codes populated within 20 business days of switching in, or initial electrical connection.	Moderate	Low	2	Identified
Trader responsibility for an ICP	3.4	11.18	**MEEN** Two of the 5,238 MEP nominations were rejected because they were initially sent to the wrong MEP. **TRUS** Five of the 20,080 MEP nominations were rejected because they were initially sent to the wrong MEP.	Strong	Low	1	Identified
Provision of information to the registry manager	3.5	9 of Schedule 11.1	**MEEN** 740 late updates to "active" status for new connections. One late MEP nomination for a new connection. 12 new connections had incorrect "active" status dates, and one was corrected during the audit. Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			Three ICPs connected by MEEN were not updated to "active" status before they switched out. **TRUS** 937 late updates to "active" status for new connections. 59 late MEP nominations for new connections. Nine new connections had incorrect "active" status dates, and one was corrected during the audit. Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit.				
ANZSIC codes	3.6	9 (1(k) of Schedule 11.1	**MEEN** Eight ICPs with T994 "don't know" ANZSIC codes, and ten meter category two or three ICPs with residential ANZSIC codes had incorrect ANZSIC codes applied, and were identified and corrected during the audit. Seven of a sample of 40 ICPs sampled (17.5%) had incorrect ANZSIC codes assigned and were corrected during the audit. **TRUS** One ICP with a T994 "don't know" ANZSIC code, and 14 meter category two ICPs with residential ANZSIC codes were corrected during the audit. Three ICPs of the 130 ICPs sampled (2.3%) had incorrect ANZSIC codes applied and were identified and corrected during the audit.	Moderate	Low	2	Cleared
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	**MEEN** Three "active" ICPs with unmetered load have no daily unmetered kWh recorded on the registry (0007301973NVCDF, 0004450225ML4AC and 0004450157ML277). Four ICPs were confirmed to have incorrect average daily kWh and were corrected during the audit. **TRUS** 23 ICPs did not have unmetered load connected but had trader unmetered load details recorded on the registry. 17 were corrected during the audit and six ICPs still have unmetered load recorded. GTV is correct, so submission information is correct. One ICP had its unmetered load details removed as part of a trader update to change a profile. They were correctly reinstated during the audit.	Moderate	Low	2	Investigating
Management of "active" status	3.8	17 Schedule 11.1	**MEEN** 12 new connections had incorrect "active" status dates, and one was corrected during the audit. Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit. Three ICPs connected by MEEN were not updated to "active" status before they switched out. Seven ICPs had invalid reconnections processed by SAP. **TRUS**	Moderate	Low	2	Cleared

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			Nine new connections had incorrect "active" status dates and were corrected during the audit. Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit. One ICP had a reconnection incorrectly processed and was corrected during the audit.				
Management of "inactive" status	3.9	19 Schedule 11.1	**MEEN** ICP 0309892023LCFC2 has been "inactive" since 4 November 2022 but was confirmed to have non-zero HHR consumption reported in May, July and September 2023 indicating that the registry ICP status is incorrect. **TRUS** Four out of a sample of 38 "inactive" status updates had an incorrect event date and/or status reason applied. Three have been corrected and ICP 0000206556UNF7C requires the network to reverse a decommissioning event before the incorrect date of 3 February 2022 can be replaced with an "active" status event. ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active". ICP 0000769092WAE1B had the 1,7 "electrically disconnected remotely by AMI meter" status reason code applied when there was no AMI meter. The disconnection event was processed in error, and the registry has been corrected.	Moderate	Low	2	Identified
Inform registry of switch request for ICPs - standard switch	4.1	2 Schedule 11.3	**TRUS** Two switch moves were requested as transfer switches. Eight NTs were issued more than two business days after pre-conditions were cleared. Switch move was applied for 301,556 ICPs which switched from MEEN to TRUS during the audit period, to ensure that the correct switch event date was applied.	Moderate	Low	2	Identified
Losing trader response to switch request and event dates - standard switch	4.2	3 & 4 of schedule 11.3	**MEEN** Eight of the sample of 620 AN files contained incorrect response codes. **TRUS** Six ANs had proposed event dates more than ten business days of NT receipt. Five of the sample of 1,543 AN files contained incorrect response codes.	Strong	Low	1	Identified
Losing trader must provide final information - standard switch	4.3	5 of schedule 11.3	**MEEN** 16 CS breaches. Six CS files had average daily kWh of zero incorrectly recorded where there were less than two actual readings available. Nine ICPs had incorrect last actual read dates, due to manual data entry errors when creating the files using the registry user interface. **TRUS** 29 CS breaches. Four E2 breaches.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			Six CS files had average daily kWh of zero incorrectly recorded where there were less than two actual readings available.				
Retailers must use same reading - standard switch	4.4	(1) and 6A Schedule 11.3	**MEEN** For seven ICPs the switch event read type recorded in SAP did not match the expected read type. 11 RR breaches.	Moderate	Low	2	Identified
Gaining trader informs registry of switch request - switch move	4.7	9 Schedule 11.3	**TRUS** Nine NTs were issued more than two business days after pre-conditions were cleared. Switch move was applied for 301,556 ICPs which switched from MEEN to TRUS during the audit period (including eight ICPs in the sample of 25 checked), to ensure that the correct switch event date was applied.	Moderate	Low	2	Identified
Losing trader provides information - switch move	4.8	10 of schedule 11.3	**MEEN** 13 AN breaches. Nine WR breaches. 43 T2 breaches. Eight of a sample of 162 AN files contained incorrect response codes. **TRUS** 24 AN breaches. Three WR breaches. 36 T2 breaches. 11 of a sample of 915 AN files contained incorrect response codes.	Strong	Low	1	Identified
Losing trader must provide final information - switch move	4.10	11 of schedule 11.3	**MEEN** Five E2 breaches. Seven ICPs had incorrect last actual read dates. One ICP had an incorrect read type recorded. Four ICPs had an incorrect event read recorded. Four CS files had average daily kWh of zero incorrectly recorded where there were less than two actual readings available. **TRUS** One E2 breach. Four CS files had average daily kWh of zero incorrectly recorded where there were less than two actual readings available.	Moderate	Low	2	Identified
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	**MEEN** For seven ICPs the switch event read type recorded in SAP did not match the expected read type. For one ICP the RR was not supported by two validated actual readings. 36 RR breaches. One AC breach. **TRUS** One switch event did not have its reading recorded against the correct day in GTV, resulting in under submission of 14 kWh. 20 RR breaches. For one ICP the switch event read type recorded in GTV did not match the expected read type.	Moderate	Low	2	Identified
Gaining trader informs registry of switch request - gaining trader switch	4.12	14 Schedule 11.3	**MEEN** Three PT breaches.	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Gaining trader to advise the registry manager - gaining trader switch	4.14	16Schedule 11.3	**MEEN** One CS breach.	Strong	Low	1	Identified
Withdrawal of switch requests	4.15	17 & 18 of schedule 11.3	**MEEN** Three incorrect NW codes found in the sample of 22 checked. 203 NA breaches. 44 SR breaches. 33 NW breaches. 32 AW breaches. **TRUS** Five incorrect NW codes found in the sample of 21 checked. 125 NA breaches. 23 SR breaches. One NW breach.	Moderate	Low	2	Identified
Metering information	4.16	21 of schedule 11.3	**MEEN** Four ICPs had an incorrect event read recorded in their CS file.	Moderate	Low	2	Identified
Distributed unmetered load	5.4	11 Schedule 15.3, Clause 15.37B	**MEEN** Inaccurate submission information for several databases. The DUML load is submitted using HHR profile, without an exemption in place.	Moderate	Medium	4	Identified
Electricity conveyed & notification by embedded generators	6.1	10.13	**MEEN** Four ICPs with distributed generation do not have their I flows measured and submitted. 12 HHR ICPs with generation recorded by the distributor and I flow metering did not have their I flow meter set up in SAP and no I flow submission is occurring. While meters were bridged, energy was not metered and quantified according to the code for five ICPs. **TRUS** Nine ICPs with distributed generation do not have their I flows measured and submitted. 13 ICPs had incorrect generation profiles applied which were corrected during the audit. ICP 0000640400TE25B has no solar present but PV1 profile remains on the registry. There is no impact because no volumes are submitted. While meters were bridged, energy was not metered and quantified according to the code for 65 ICPs.	Moderate	Low	2	Identified
Responsibility for metering at GIP	6.2	10.26 (6), (7) and (8)	**MEEN** Three meters have expired certification on the NSP table. 13 meter certification expiry dates were updated more than ten business days after the meters were certified.	Strong	Low	1	Identified
Certification of control devices	6.3	33 Schedule 10.7 and clause 2(2) Schedule 15.3	**TRUS** Four ICPs without HHR or AMI metering or a certified control device had T07 and/or T23 profiles assigned.	Strong	Low	1	Cleared
Reporting of defective	6.4	10.43(2) and (3)	**MEEN** The MEP was not notified of five bridged meters which required un-bridging.	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
metering installations							
Collection of information	6.5	2 Schedule 15.2	**MEEN** ICP 1000004624BP8E6 was not read within its maximum interrogation cycle.	Strong	Low	1	Investigating
Derivation of meter readings	6.6	3(2) Schedule 15.2	**MEEN** One out of a sample of 18 meter condition events provided by MRS had not been resolved, reviewed or actioned. **TRUS** Nine out of a sample of 36 meter condition events provided by MRS had not been resolved, reviewed or actioned.	Moderate	Low	2	Investigating
NHH meter reading application	6.7	6 Schedule 15.2	**MEEN** Four ICPs had an incorrect event read recorded in their CS file.	Moderate	Low	2	Identified
NHH meters interrogated annually	6.9	8(1) and (2) Schedule 15.2	**TRUS** Two "vacant" ICPs did not have validated readings in GTV during the 12 months ending October 2023 and the best endeavours requirement was not met because TRUS had not validated the AMI readings received in time for them to be used for submission. One AMI ICP where the customer provides readings did not have validated readings in GTV during the 12 months ending October 2023 and the best endeavours requirement was not met because TRUS had not validated and loaded the AMI readings.	Strong	Low	1	Identified
NHH meters 90% read rate	6.10	9(1) and (2) Schedule 15.2	**MEEN** Eight of a sample of ten ICPs connected to NSPs where less than 90% read attainment was achieved for October 2023 did not have exceptional circumstances preventing reads or meet the best endeavours requirements.	Strong	Low	1	Identified
Trading period duration	7.1	13 Schedule 15.2	**MEEN** The Whakamaru generation meter had a clock synchronisation event where the meter time differed from the system time by ten seconds on 20 April 2024. The meter was synchronised against the system time to correct the error, resulting in trading period durations difference of ten seconds.	Strong	Low	1	Identified
Identification of readings	9.1	3(3) Schedule 15.2	**MEEN** For 14 ICPs the switch event read type recorded in SAP did not match the expected read type. **TRUS** For one ICP the switch event read type recorded in GTV did not match the expected read type.	Strong	Low	1	Identified
Meter data used to derive volume information	9.3	3(5) of schedule 15.2	**MEEN** Raw AMI meter data is rounded upon receipt and not when volume information is created. **TRUS** Raw meter data is rounded upon receipt and not when volume information is created.	None	Low	5	Investigating
NHH metering information data validation	9.5	16 Schedule 15.2	**TRUS** Not all identified "inactive" consumption and potential stopped or faulty meters are being investigated and resolved in a timely manner.	Moderate	Low	2	Identified
Electronic meter readings and	9.6	17 Schedule 15.2	**MEEN** Some investigations into meter events which could affect accuracy were not actioned or had	Weak	Low	3	Investigating

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
estimated readings			field services jobs cancelled prior to the ICPs migrating to TRUS. Some of these jobs were not restarted by TRUS on switch in. The EDMI agent audit recorded that a meter event for ICP 0004862980CNE78's battery alarms on 3 April 2023 was not sent to MEEN. I found that the event was not sent later, and because MEEN was unaware of it, no action was taken. **TRUS** Full event information is not analysed and acted upon for all MEPs.				
Calculation of ICP days	11.2	15.6	**TRUS** A small number of ICP days errors were caused by incorrect NSPs or switch read dates. The errors have been corrected.	Strong	Low	1	Cleared
HHR aggregates information provision to the reconciliation manager	11.4	15.8	**TRUS** Three ICPs did not have the correct NSP recorded in GTV for the whole of October 2023 resulting in submission against an incorrect NSP. The error was corrected and revised submission data was provided.	Strong	Low	1	Cleared
Creation of submission information	12.2	15.4	**MEEN** and **TRUS** Some submission information was not complete and accurate.	Moderate	Medium	4	Investigating
Accuracy of submission information	12.7	15.12	**MEEN** Some submission data was inaccurate and was not corrected at the next available opportunity.	Moderate	Medium	4	Investigating
Permanence of meter readings for reconciliation	12.8	4 Schedule 15.2	**MEEN** Some estimates were not replaced by revision 14. **TRUS** TRUS did not ensure that it used reasonable endeavours to attempt to obtain actual readings before changing estimates to permanent estimates.	Strong	Low	1	Identified
Reconciliation participants to prepare information	12.9	2 Schedule 15.3	**TRUS** Four ICPs without HHR or AMI metering or a certified control device had T07 and/or T23 profiles assigned. They were corrected during the audit.	Strong	Low	1	Cleared
Forward estimate process	12.12	6 Schedule 15.3	**MEEN** The accuracy threshold was not met for all months and revisions. **TRUS** The accuracy threshold was not met for all months and revisions.	Strong	Low	1	Identified
Compulsory meter reading after profile change	12.13	7 Schedule 15.3	**TRUS** The five upgrades checked did not have a NHH reading recorded on the last day with NHH submission. The five downgrades checked did not have NHH reading recorded on the first day with NHH submission.	Moderate	Low	2	Investigating
Historical estimate reporting to RM	13.3	10 of Schedule 15.3	**MEEN** Historic estimate thresholds were not met for some revisions. **TRUS** Historic estimate thresholds were not met for some revisions.	Moderate	Low	2	Identified
					Future Risk Rating	**85**	

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

RECOMMENDATIONS

Subject	Section	Recommendation	Response
Improve data validation processes	2.1	**MEEN** I recommend the following checks are completed at least monthly: • status validation between SAP and the registry, • trader information validation between SAP and the registry, and • monitoring of any MN MEP nomination response files with an R (rejected) response, so that the nomination can be reissued if necessary.	Adopted in principle but will prioritise as resource allows. In the last 12 months Mercury has migrated the majority of its ICPs from the MEEN code (SAP) to the TRUS code (GTV), as such going forward our main focus and priority is on the TRUS code.
Improve validation process for status changes	2.1	**MEEN** Provide further training and support to staff checking that status changes have been processed accurately in SAP, including ensuring that the correct status and event date are applied before closing the service order.	Adopted. Further training will be provided to ensure we are reviewing each job once completed to ensure the status is updated correctly, with most of this being done automatically we can't assume it was done correctly so this manual check is important.
Corrections affecting periods longer than 14 months.	2.1	**MEEN** If a correction affects a period longer than 14 months, the whole correction should be processed within the most recent 14-month window. If MEEN does not wish to pass the full correction on to their customer, a billing credit could be applied.	The 14-month window affects our submission and the data for our billing and submission is aligned, however where required we will manually apply a billing credit for the customer.
Corrections affecting periods longer than 14 months.	2.1	**TRUS** If a correction affects a period longer than 14 months, the whole correction should be processed within the most recent 14-month window. If TRUS does not wish to pass the full correction on to their customer, a billing credit could be applied.	There is some confusion from our teams on this as they believe it is contrary to what we were advised in 2022 and what was covered in the last audit i.e. we were advised we were no longer able to submit consumption that is for a period prior to the most recent 14 month window and have been using that methodology since that time. TRUS has the reconciliation capability to account for volume outside of the 14 month timeframe; post-audit we will review the Code and liaise with the auditors to confirm 100% and remove any doubt with regards to the correct methodology and apply it going forward.
Bridged meter corrections for ICPs which switch out	2.17	**TRUS** Ensure that corrections are processed to capture all consumption during bridged periods, including where ICPs have switched out prior to being unbridged and where ICPs switch out before a correction was processed.	Adopted in principle however there are challenges in how to handle corrections where an ICP has switched out where the new retailer may not be willing to switch the ICP back for the purpose of correction, and any correction being done without this occurring may lead to energy being submitted twice.
Identification of missed ICP claims	3.3	**TRUS** Develop a process to identify instances where an ICP has not been claimed on the registry because the status or trader information has not been updated in GTV.	Reporting has been implemented and is delivering daily to the New Connections team for monitoring when results occur. This has delivered since being implemented and has been confirmed to correctly identify these scenarios as they occur.
Changes to registry information	3.3	**TRUS** Modify reporting to exclude decommissioned ICPs from any changes to the registry post the decommissioning date.	Reporting has been updated so that sites at DEC, DED or DEA do not show on reporting and will not be incorrectly updated going forward.
Validation of distributor unmetered load details	3.7	**TRUS** Confirm the correct unmetered load details for ICPs 0000018605WEC0F and 000010328EA262 with the	0000018605WEC0F has been corrected as of 22/05/2024. 0000010328EA262 is showing on the registry as being with

Subject	Section	Recommendation	Response
		distributor and make corrections to unmetered load details if necessary.	TRUS but isn't visible in either GTV or SAP, we are investigating.
Calculation of daily unmetered kWh for shared unmetered load	3.7	**TRUS** When calculating the daily unmetered kWh for shared unmetered load ICPs, check the distributor unmetered load details for the parent ICP to confirm whether the shared wattage recorded reflects the total before it is shared across the ICPs, or after.	Adopted, we will be following this process moving forward.
Identification of ICPs which switched in with "inactive" status with consumption	3.9	**MEE**N Consider whether switched in ICPs with "inactive" status could be added to the "inactive consumption report" based on the difference between the switch event read and subsequent actual readings.	Adopted, this is part of the report and will be monitored.
Monitoring of ICPs at "new" and "ready" status	3.10	**MEEN** New connections for mass market ICPs are normally completed by TRUS and there is no monitoring of ICPs where MEEN is assigned as the proposed trader in error. I recommend that a registry list of ICPs at "new" or "ready" status is reviewed at least quarterly to identify any ICPs assigned to MEEN.	Adopted.
Populate ANZSIC codes in SAP when loading customer applications	4.1	**MEEN** Collect the ANZSIC code during application and ensure that a valid code is applied in SAP. If it is difficult to determine the correct code, I suggest using the previous trader's ANZSIC code if it is valid.	Investigating, will confirm whether can be done as a process change or whether it requires a system change, if requiring a system change it may be undesirable taking into account lack of ICPs on the MEEN code.
CS average daily kWh	4.3	**TRUS** Where there are less than two actual readings for an ICP at the time of switch out, the CS average daily kWh is expected to be the same as the incoming CS file for ICPs that have switched in, or a reasonable estimate of consumption for new connections. Currently zero is reported where there are less than two actual readings.	Adopted. Following original receipt of this guidance during audit, Comms provided to all team to correct this issue.
Correct use of the date fail (DF) NW advisory code	4.15	**MEEN** Ensure that the DF code is only used where the proposed event date is more than ten business days in the future.	Adopted. DF codes and usage has been discussed with the team and both MEEN & TRUS codes are across it.
Set up all settled EG registers completely in SAP	6.1	**MEEN** Settled EG registers are not always set up in SAP if consumption is not expected. These should be consistently created to ensure that all volumes are reported.	Adopted.
Identification of ICPs with settled I flow register and no generation compatible profile	6.1	**TRUS** Add a check to identify ICPs with settled I flow registers on the registry which do not have settled I flow registers in GTV. This could be achieved using the registry AC020 trader compliance report's AC020Trader20 which shows ICPs with I flow registers and generation recorded by the distributor where no generation compatible profiles are present.	This recommendation is accepted and work is currently in progress to create a report that will identify where the registry has a billable I flow register but this is not reflected in GTV.
Recording of meter condition issues for Powerco readings	6.6	**TRUS** Add fields to the meter reading template used by Powerco's engineers to enable meter condition information to be recorded including: • whether seals are present and intact, • phase failure (if supported by the meter), • signs of tampering and damage, and • electrically unsafe situations.	We will liaise with Powerco on this to see if they can assist.
Review of MRS meter condition events	6.6	**TRUS**	Following the Mercury/Trustpower integration we are reviewing our process for monitoring and taking appropriate

Subject	Section	Recommendation	Response
		Clarify responsibilities for reviewing MRS meter condition events and ensure that all event types are reviewed and actioned appropriately and promptly.	action on meter condition events to ensure that we have a tight process and internal responsibilities are well established.
Review of stopped meter/zero consumption reporting	9.5	**MEEN** Reinstate zero consumption reporting to identify potentially stopped or faulty meters.	May be some confusion as we thought we were still doing this, will investigate and if we aren't then we will reinstate.
Review of stopped meter/zero consumption reporting	9.5	**TRUS** Allocate resources to ensure that stopped meter/zero consumption reporting is reviewed regularly so that stopped, bridged and faulty meters can be replaced or unbridged, and corrections processed promptly.	Mercury has 8 FTE in our Revenue Assurance team. We have a range of reports and mechanisms identifying potential instances of inactive consumption and stopped/ faulty meters. The fact that these instances are not being investigated and resolved in a "timely" manner is due a number of factors i.e. the high level of fieldwork contractor turndowns, increasing levels of meter faults (particularly LCD's), the bridging of meters for reconnection, a significant level of unaddressed meter faults migrated from MEEN to TRUS. We are working to address delays and reduce volumes, and do expect to see a steady improvement across the next 12 to 18 months.
Ensure that field services jobs cancelled by MEEN before the ICPs migrated to TRUS have been appropriately actioned by TRUS	9.6	**MEEN** and **TRUS** Ensure that any MEEN ICPs where field services jobs such as site investigations were cancelled or not raised before the ICP was migrated to TRUS are identified and checked to make sure TRUS has taken appropriate action to resolve the issue. Affected ICPs include 0304657026LCA8F (memory failure metering events) and 1001138133UNE6C (phase failure events).	MEEN: We will review the original list of jobs cancelled under MEEN to identify any that haven't had a new job raised in GTV under TRUS. TRUS: We will follow up with our SAP based staff and former MEEN personnel on this recommendation as we are not aware of any records having been kept of the field services jobs and site investigations that were cancelled. NB: the consumption being recorded and billed in GTV for these 2 ICP's does not indicate a revenue assurance concern for either.
AMI events	9.6	**TRUS** Obtain event information description information from MEPs and ensure that all event types are reviewed.	We will investigate what event information we currently receive and what revenue assurance activities result from this, and also look into any relevant event data we are not currently receiving or acting upon.
Apply boundary readings for NHH submission start and end dates	12.13	**TRUS** Historic estimate for NHH submissions requires boundary readings to be estimated at the start and end of NHH submission periods. If actual readings are not available, permanent estimate boundary readings should be applied.	We have raised a ticket with our IT teams to review the profiling processes to ensure boundary reads are always applied for profile changes.

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

Mercury has been granted the following exemptions:

- **Exemption 309 (MEEN)**
  Mercury is exempted from complying with the obligation in clause 10.14(2)(b) of the Electricity Industry Participation Code 2010 ("Code") to not treat load expected to exceed 9,000 kWh in any 12-month rolling period as unmetered load. This exemption applies only to installation control points ("ICPs") 0000161894CK3EF, 0000161895CKFAA, 0001393839UN86B, 0000161897CKF2F, 0000190118TR62B, 0000161899CKCB4 and 0000161900CK406.

  The exemption expires on the earlier of 17 June 2028, when Mercury is no longer recorded as the trader, when the ICPs are metered, when the ICPs are decommissioned, or when the load for any of the ICPs exceeds 9,000 kWh per annum.

- **Exemption 307 (MEEN)**
  Mercury is exempted from complying with the obligation in clause 10.24(c) of the Electricity Industry Participation Code 2010 ("Code") to not to use subtraction to determine submission information. This exemption applies only to ICP 0003133903AA777.

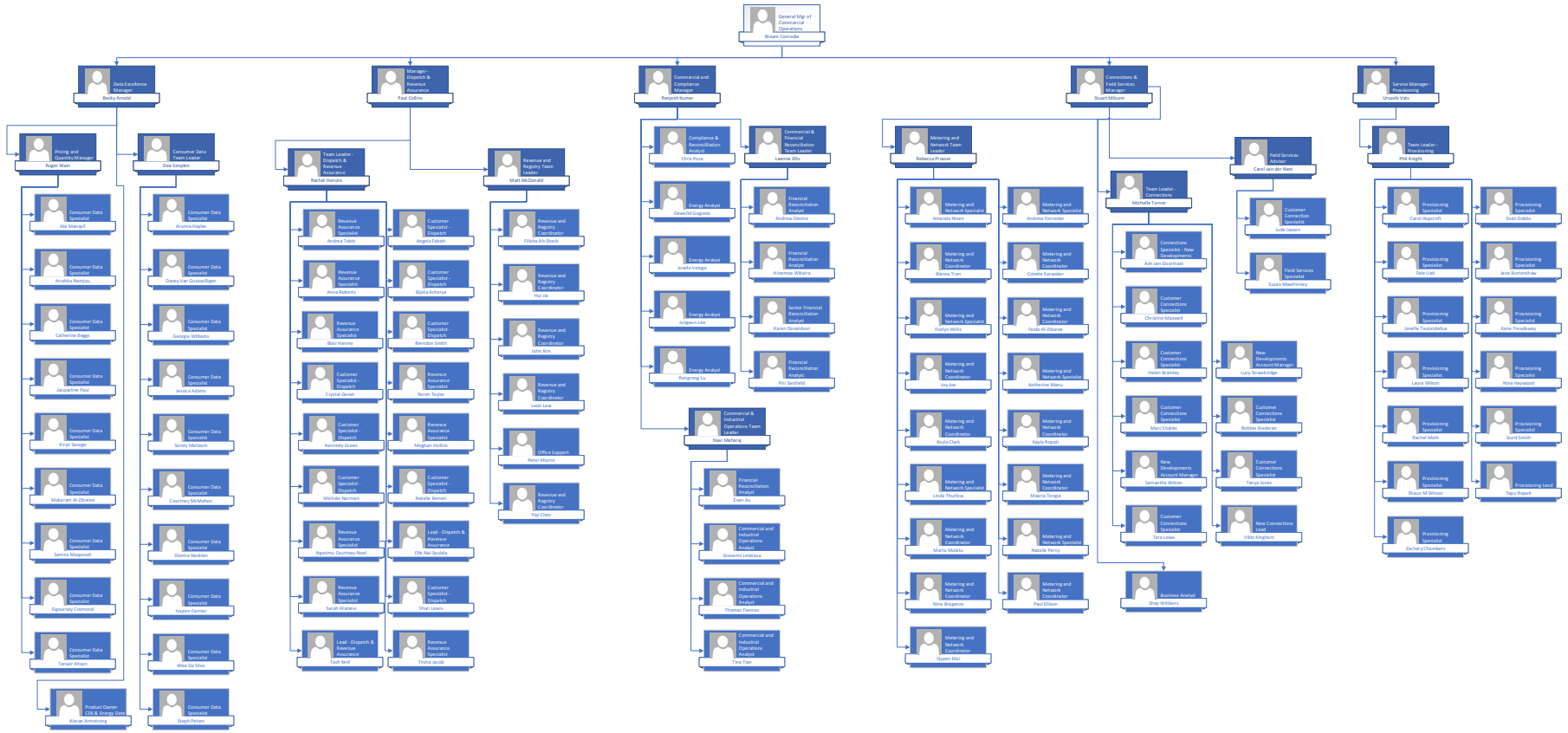
  The exemption expires on the earlier of 1 December 2030, the date when Mercury is no longer recorded in the registry as being the trader for ICP 0003133903AA777, the date when Accucal is no longer recorded on the registry as the MEP, the date on which the meter programming, metering or distribution configuration is changed, the date on which any other consumer is connected to the same 11kV distribution substation as ICP 0003133903AA777, and the date on which any other consumer is connected to the same 11kV distribution substation as ICP 0003133903AA777.

- **Exemption 281 (MEEN)**
  Mercury is exempted from the obligation to arrange a distributor audit under clause 11.10 of the Electricity Industry Participation Code 2010 ("Code"). This exemption applies only in respect of the grid exit point (GXP) at Atiamuri (ATI2201 MRPL GN). This exemption expires on 16 August 2029.

- **Exemption 250 (TRUS)**
  Exemption 250 from clause 10.14(2)(b) allows five unmetered ICPs to consume more than 6,000 kWh per annum. This exemption expires on 31 December 2026, when all the ICPs are all metered, or when Trustpower is no longer responsible for the ICPs. The TRUS code is no longer responsible for any of these ICPs because they switched to the CNIR code owned by Manawa.

1.2. Structure of Organisation

Mercury provided their current organisational structure.



1.3. Persons involved in this audit

Auditors:

Name	Company	Role
Tara Gannon	Provera	Lead Auditor
Brett Piskulic	Provera	Supporting Auditor

Mercury personnel assisting in this audit with the MEEN code were:

Name	Title
Chris Posa	Compliance & Reconciliation Analyst
David Ho	Manager Electrical Engineering
Dewaltd Gagiano	Metering and Network Coordinator
Filisha Ah-Sheck	Risk Control Co-ordinator
Hui Jia	Revenue and Registry Coordinator
Jacqueline Paul	Meter Reading Specialist
Josefa Veiogo	Energy Analyst
Kayla McJarrow	Energy Services
Leon Law	Revenue and Registry Coordinator
Mokram Al-Zibaree	Meter Reading Specialist
Navi Maharaj	Complex Billing Team Leader
Ranjesh Kumar	Commercial Operations and Reconciliation Manager
Rebecca Prosser	Metering & Network Team Leader
Roger Wain	Pricing and Quantity Manager
Rongrong Lu	Energy Analyst
Tom Fiennes	Complex Billing & Contracts Analyst
Urvashi Vats	Customer Transition Manager

Mercury personnel assisting in this audit with the TRUS code were:

Name	Title
Andrea Tobin	Revenue Assurance Administration
Courtney McMahon	Consumer Data Specialist
Deanna Simpkin	Consumer Data Team Leader
Dionne Necklen	Bill Data Specialist
Jane Burtenshaw	Energy Provisioning Specialist
Jo Andrews	Billing Manager
Jungeun Lee	Reconciliation Analyst
Laura Wilson	Energy Provisioning Specialist
Marc Stubbs	Connections Specialist
Mea De Silva	Billing Team Member
Michelle Turner	New Connections Manager
Nawaf Ali	Operations Analytics Manager
Nina Haywood	Energy Provisioning Specialist
Patrick Nettingham	Billing Team Member
Paul Collins	Assurance/Collections and Dispatch Manager
Phil Knight	Energy Provisioning Team Leader
Shay Williams	Connection Analyst
Suzie Kelsey	Technology Delivery Team
Tash Keill	Team Leader Dispatch and Revenue Assurance

Other personnel assisting in this audit were:

Name	Title	Company
Lana Burns	C&I Data Services Specialist	Bluecurrent
Hannah Kelly	Senior Solution Specialist	EDMI
Nayan Kumath	Reconciliation Manager	NZX

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 Mercury.

Audit commentary

Mercury uses some agents for functions covered by the scope of this audit. They are identified in **section 1.9**.

- Bluecurrent and EDMI provide HHR data.
- Councils provide HHR and NHH DUML data.
- MRS (AD Reilly) provides NHH data.
- Intellihub provides estimated AMI data.

Where the agent audit report was more than seven months old on the audit due date, I confirmed with the agent that that there had been no changes to systems or processes which could affect Mercury's compliance.

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

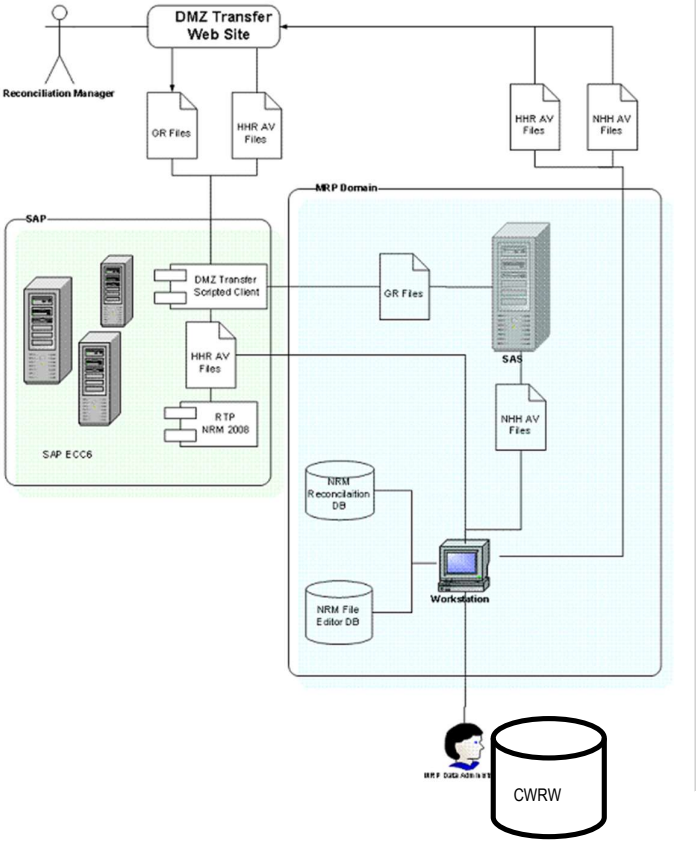
Powerco's engineers record photo readings for Powerco's substations, where the meter readers are not allowed to enter the facility for health and safety reasons. They are considered contractors rather than agents and they operate under the control of TRUS. Their processes were checked as part of this audit.

1.5. Hardware and Software

MEEN

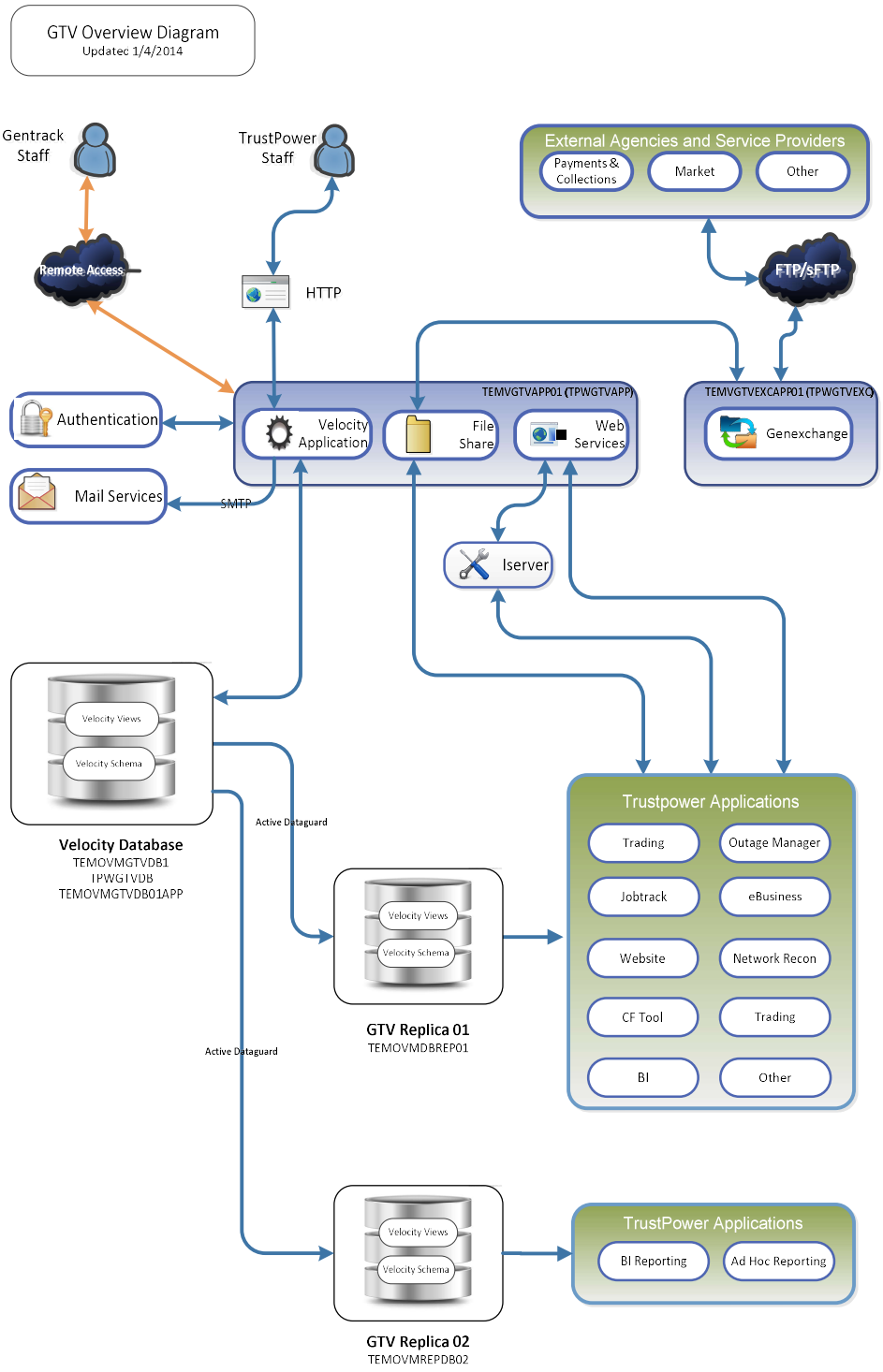
A diagram of MEEN's system configuration is shown below.

Information on backup processes was provided, and these processes are in accordance standard industry procedures. Access to systems is restricted using logins and passwords.



TRUS

A diagram of the TRUS system configuration is shown below.



Access to systems is restricted using logins and passwords. There are comprehensive back up processes in place.

Agents

Agent systems are discussed in their agent audit reports.

1.6. Breaches or Breach Allegations

The Electricity Authority confirmed that there has been one alleged breach relevant to the scope of this audit for Mercury Energy.

Breach ref	Clause breached	Status	Comment
2309MEEN1	Part 15 Appendix 1, Schedule 15.5 clause 2 More	Closed with no warning	Mercury owns Energy Profiles TOC, TON, T07, T08, T23 and T24. The profiles were previously owned by Trustpower, and ownership transferred to Mercury effective 1 May 2022. Trustpower had a departure of requirements which allowed the use of published switching times rather than actual switching times as determined by an internal clock or SCADA data. The Electricity Authority has advised Mercury that the departure of requirements was granted to Trustpower, not the profiles, and therefore cannot be transferred to Mercury despite Mercury owning the profiles. Mercury issued a new application which was subsequently approved by the Authority.

1.7. ICP Data

MEEN

All "active" ICPs are summarised by metering category in the table below. "Active" ICPs with a metering category of 9 or blank are discussed in **section 2.9.**

Metering Category	Dec 2023	Nov 2022	Nov 2021	Nov 2020	2020	2019	2018
1	4,698	296,941	304,599	314,092	326,699	348131	345,836
2	1,873	3,008	3,023	3,074	3,050	3,299	3,100
3	923	930	809	607	574	556	550
4	371	357	307	234	207	181	160
5	30	26	23	23	22	19	19
9	65	456	467	461	461	472	469
Blank	229	595	576	616	664	638	590

Status	Dec 2023	Nov 2022	Nov 2021	Nov 2020	2020	2019	2018
Active (2,0)	8,189	302,313	309,804	319,107	331,677	350,724	343,392
Inactive – new connection in progress (1,12)	182	738	564	4	2	3	2
Inactive – electrically disconnected vacant property (1,4)	995	5,705	4,818	4,699	4,275	3,998	4,201
Inactive - reconciled elsewhere (1,5)	1	3	1	2	2	1	5
Inactive – electrically disconnected ready for decommissioning (1,6)	323	281	238	180	167	313	511
Inactive – electrically disconnected remotely by AMI meter (1,7)	2	34	26	28	19	24	13
Inactive – electrically disconnected at pole fuse (1,8)	13	26	25	18	15	14	10
Inactive – electrically disconnected due to meter disconnected (1,9)	1,738	1,776	1,743	1,695	1,662	1,373	226
Inactive – electrically disconnected at meter box fuse (1,10)	1	1	1	2	1	1	-
Inactive – electrically disconnected at meter box switch (1,11)	1	1	-	1	1	4	-
Decommissioned (3)	28,690	27,830	27,002	25,825	24,865	22,751	21,852

TRUS

All "active" ICPs are summarised by metering category in the table below. "Active" ICPs with a metering category of 9 or blank are discussed in **section 2.9.**

Metering Category	Dec 2023	Nov 2022
1	552,240	254,455
2	1,907	721
3	-	-
4	-	-

5	-	-
9	45	21
Blank	379	141

Status	Dec 2023	Nov 2022
Active (2,0)	554,571	255,338
Inactive – new connection in progress (1,12)	1,687	1,625
Inactive – electrically disconnected vacant property (1,4)	9,584	4,643
Inactive - reconciled elsewhere (1,5)	-	1
Inactive – electrically disconnected ready for decommissioning (1,6)	148	150
Inactive – electrically disconnected remotely by AMI meter (1,7)	665	880
Inactive – electrically disconnected at pole fuse (1,8)	100	79
Inactive – electrically disconnected due to meter disconnected (1,9)	72	70
Inactive – electrically disconnected at meter box fuse (1,10)	3	2
Inactive – electrically disconnected at meter box switch (1,11)	2	1
Decommissioned (3)	31,004	29,728

1.8. Authorisation Received

Mercury provided a letter of authorisation to collect information from other parties.

1.9. Scope of Audit

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

The audit was carried out at remotely via teams from 19 March to 3 April 2024.

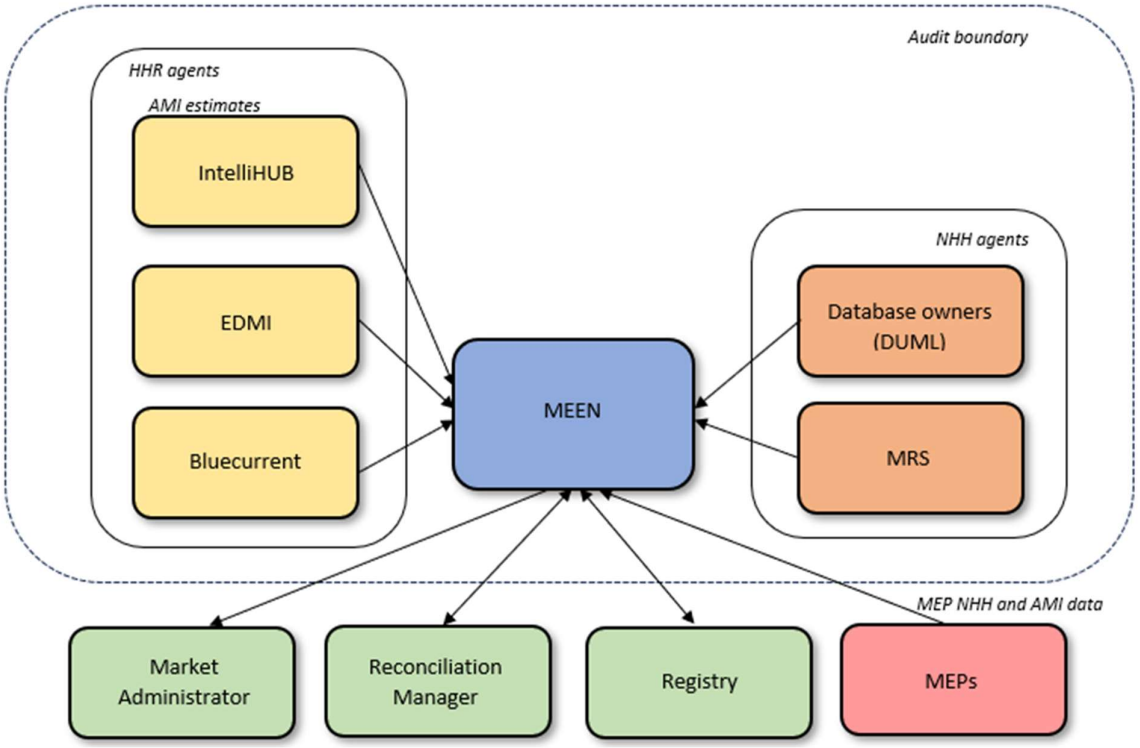
Mercury NZ Limited operates three reconciliation participant codes:

- **MRPL** which is a grid connected generator,
- **MEEN** for NHH and HHR settled ICPs, and
- **TRUS** for NHH and HHR settled ICPs.

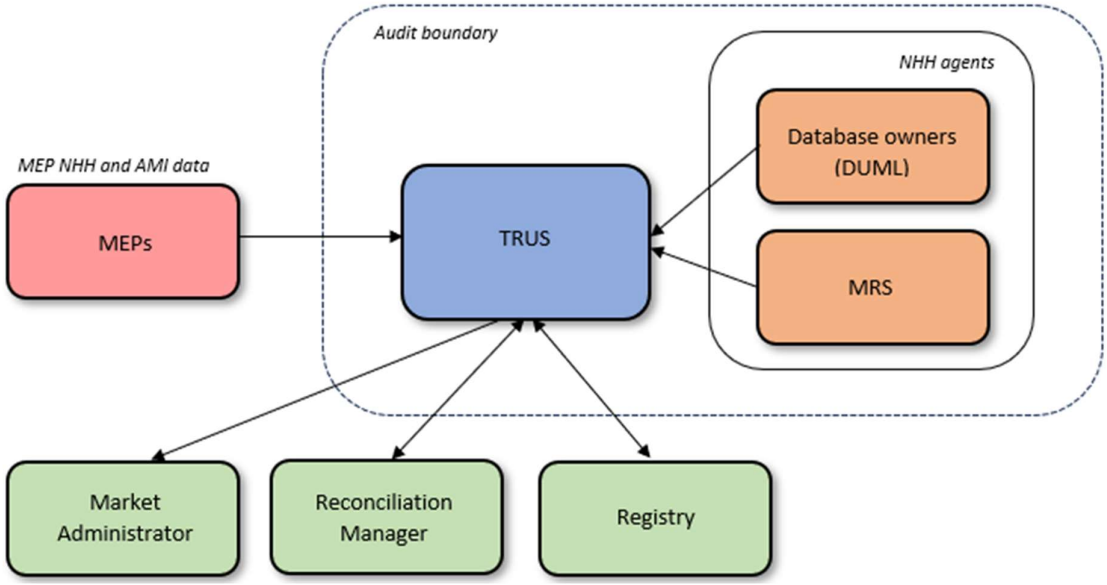
Mercury NZ Limited is also the "ultimate holding company" for Glo-bug Limited, but Glo-bug is not included in the scope of this audit.

Findings relate to all the MEEN and TRUS codes unless specifically stated otherwise.

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



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



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

Tasks Requiring Certification Under Clause 15.38(1) of Part 15	Agents Involved in Performance of Tasks	MEPs providing data
(a) - Maintaining registry information and performing customer and embedded generator switching		
(b) – Gathering and storing raw meter data	MRS – NHH Bluecurrent – HHR EDMI – HHR	IntelliHUB– AMI as an MEP ARC Innovations – AMI as an MEP Bluecurrent – AMI as an MEP Smartco – AMI as an MEP Influx – AMI as an MEP Counties Power- AMI as an MEP
(c)(iii) - Creation and management of HHR and NHH volume information	Bluecurrent – HHR EDMI – HHR Various Councils – DUML data Intellihub – AMI estimates	
(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		
(f) - Provision of metering information to the Grid Owner		

Bluecurrent, Smartco and IntelliHUB conduct AMI data collection as MEPs and not as agents to reconciliation participants. MEPs are subject to a separate audit regime.

Mercury receives DUML data from a number of Councils, who are considered agents under clause 15.34 of part 15. These databases are audited separately. A summation of these audits is detailed in **section 5.4**.

TRUS also receives data from Powerco, who provide NHH meter readings from their substations. These parties provide digital photos of the meters, and the readings are entered into GTV by TRUS personnel. They are considered contractors rather than agents and they operate under the control of TRUS.

The remaining agents listed above have been audited in accordance with the Guidelines for Reconciliation Participant Audits V7.2. Their audit reports are expected to be submitted with this audit. This report only contains details of those areas where issues were identified or where additional analysis was conducted specifically for Mercury and the agents' reports contain all the remaining detail. Where the report was more than seven months old on the audit due date, I confirmed with the agent that that there had been no changes to systems or processes which could affect Mercury's compliance.

1.10. Summary of previous audit

The previous RP audit report conducted in May 2023 by Steve Woods (lead auditor) of Veritek Limited was reviewed. The summary tables below show that some of the issues have been resolved and some are still existing. Further comment is made in the relevant sections of this report.

Subject	Section	Clause	Non-compliance	Status
Relevant information	2.1	10.6,11.2 & 15.2	**MEEN** Some registry discrepancies resulting in submission inaccuracies. Arc provides interval data to one decimal place, which is not considered to be sufficiently accurate. At least eight ICPs have solar generation but submission is not occurring, and notification of gifting has not been provided. ICPs 0000540450TE6E7 and 0007301973NVCDF are believed to have incorrect average daily kWh recorded resulting in a small amount of under submission (0.76 W or 3.2 kWh per annum). Generation interval data for Maraetai increments in units of 10 kWh with zero decimal places. ICP 1099569118CN9D3 has been stopped since 2019 but the correction was only conducted for the current customer, which was a five-month period back from 21 March 2022. There was at least 3,600 kWh not accounted for. **TRUS** Some registry discrepancies resulting in submission inaccuracies. ICP 0000702000MP807 unmetered load details corrected post the last audit and this is now outside the 14-month revision cycle. Unmetered load details are incorrect on the registry and two examples were found where the UNM flag was incorrect and therefore the unmetered load has not been submitted resulting in a very minor under submission. Some incorrect "active" dates. Two examples where switch reads were not applied resulting in 237 kWh of over submission for the incorrect period. Bridged meter corrections not applied for two of a sample of 13 ICPs. Two ICPs from a sample of 20 with "inactive" consumption where the actions taken did not ensure all consumption was accounted for resulting in 27 kWh of volume not being submitted. Seven ICPs with unresolved "inactive" consumption where attempts to identify a customer are delaying the inclusion of 6,078 kWh of volume in the submission process. A sample of three ICPs with unmetered load changes during the audit period where the initial daily kWh value continues to be applied to calculate consumption for	Still existing

Subject	Section	Clause	Non-compliance	Status
			submission, resulting in 2,095 kWh under submission per annum. ICP 0000901755WW6EB had generation kWh apportioned to a period where generation was not present	
Audit trails	2.4	21 Schedule 15.2	**MEEN** Audit trail not kept where SAP estimates and customer reads are made permanent estimates	Cleared as discussed in **section 2.4.**
Electrical Connection of Point of Connection	2.11	10.33A	**MEEN** No MEP nominations were raised for ICPs 0006050069RNDB1 and 0001426079UN6E1, which are "active" with metering category 9. Four metered new connections had late meter certification of a sample of 20 ICPs checked (from a potential population of 50 ICPs). 20 reconnections of metered ICPs of a sample of 20 ICPs had late meter certification (from a potential population of 135 ICPs). **TRUS** 20 reconnections of metered ICPs of a sample of 20 ICPs had late meter certification (from a potential population of 121 ICPs). One metered newly connected ICP (0110013358EL533) was not certified within five business days of becoming "active".	Still existing
Meter bridging	2.17	10.33C and 2A of Schedule 15.2	**TRUS** Corrections not conducted for two ICPs where meters were bridged.	Still existing
Changes to registry information	3.3	10 of schedule 11.1	**MEEN** 727 late reconnection updates. 340 late disconnection updates. 41,066 late trader updates. 277 ICPs did not have ANZSIC codes populated within 20 business days of switching in, or initial electrical connection. **TRUS** 512 late reconnection updates. 472 late disconnection updates. 1760 late trader updates. 79 ICPs did not have ANZSIC codes populated within 20 business days of switching in, or initial electrical connection.	Still existing
Trader responsibility for an ICP	3.4	11.18	**MEEN** 5 (0.05%) of the 9,459 MEP nominations identified on the event detail report were issued to the wrong MEP and rejected. ICP 1100000219WM256's MEP nomination was not issued and accepted within 14 business days of initial electrical connection. **TRUS** One invalid MEP nomination was sent.	Still existing
Provision of information to the registry manager	3.5	9 of Schedule 11.1	**MEEN** Alleged breach 2209MERC2. 947 late updates to "active" status for new connections. 12 late MEP nominations for new connections.	Still existing

Subject	Section	Clause	Non-compliance	Status
			Nine ICPs had incorrect "active" status event dates. Two were corrected during the audit and seven remain incorrect. **TRUS** 661 late updates to "active" status for new connections. 28 late MEP nominations for new connections. 11 new ICPs had incorrect "active" status dates of the sample of 29 new connections checked.	
ANZSIC codes	3.6	9 (1(k) of Schedule 11.1	**MEEN** 2,978 ICPs with T994 ANZSIC codes. A sample of 30 ICPs were checked and corrected to residential ANZSIC codes before or during the audit. One meter category three ICP had a residential ANZSIC code assigned in error and was corrected during the audit. Six category two meters of a sample of 20 ICPs had a residential ANZSIC code assigned in error and were corrected during the audit. Nine of a sample of 80 "active" ICPs had incorrect ANZSIC codes assigned and were corrected during the audit. **TRUS** One category 2 ICP with a residential ANZSIC code applied. Four ICPs of the 80 ICPs sampled with an incorrect ANZSIC code applied.	Still existing
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	**MEEN** DUML ICP 0000043663HR00F has its UNM flag set to N but should have its UNM flag set to Y. No MEP nominations were raised for ICPs 0006050069RNDB1 and 0001426079UN6E1, which are "active" with metering category 9. Three ICPs missed having shared unmetered load re-added when users processed meter changes and were corrected during the audit. Ten ICPs with no unmetered load recorded by the distributor had incorrect trader unmetered load information and were corrected during the audit. ICPs 0000540450TE6E7 and 0007301973NVCDF are believed to have incorrect average daily kWh recorded resulting in a small amount of under submission (0.76 W or 3.2 kWh per annum). 15 DUML ICPs which had the unmetered flag set to no, and a blank unmetered daily kWh. 14 were corrected during the audit and DUML ICP 0000043663HR00F remains incorrect. **TRUS** 27 ICPs had an incorrect daily unmetered kWh value recorded on the registry.	Still existing
Management of "active" status	3.8	17 Schedule 11.1	**MEEN** Ten new connections had incorrect "active" status dates. Three were corrected during the audit and seven remain incorrect. **TRUS** Ten new ICPs had the incorrect "active" status dates of the samples checked. All but one ICP has since been corrected. ICP 0001853487ALE7F reconnected on 31 July 2019 but updated to "active" from 1 August 2019.	Still existing
Management of "inactive" status	3.9	19 Schedule 11.1	**MEEN** Two ICPs had incorrect "inactive" status dates and were corrected during the audit.	Still existing

Subject	Section	Clause	Non-compliance	Status
			TRUS Two ICPs with incorrect "inactive" events applied. Two ICPs where "inactive" consumption was not included in the submission process resulting in an under submission of 27 kWh. Seven ICPs with unresolved "inactive" consumption where attempts to identify a customer are delaying the inclusion of 6,078 kWh of volume in the submission process.	
Inform registry of switch request for ICPs - standard switch	4.1	2 Schedule 11.3	**TRUS** One ICP loaded as a transfer switch in error.	Still existing
Losing trader response to switch request and event dates - standard switch	4.2	3 & 4 of schedule 11.3	**MEEN** Five of a sample of 46 transfer AN files with the AA response code checked contained incorrect response code. **TRUS** One of a sample of 22 AN files checked contained incorrect response code of AA. Three ANs had proposed event dates more than ten business days after NT receipt.	Still existing
Losing trader must provide final information - standard switch	4.3	5 of schedule 11.3	**MEEN** 11 CS breaches. The CS average daily kWh will be incorrect if the ICP has less than two validated readings in the last six months, or the file is generated manually. Ten CS files checked had incorrect average daily kWh applied because of this. Six CS files had incorrect last actual read dates. One manually created CS file had an incorrect event read and event read type and was later withdrawn. **TRUS** Four WR breaches. S Seven CS files sent with the incorrect last actual read date. Six due to human error and one system (ICP 0000492310WPEB5) generated error.	Still existing
Retailers must use same reading - standard switch	4.4	(1) and 6A Schedule 11.3	**MEEN** Four RR breaches. Seven of the ten RRs checked had an actual read type applied in SAP instead of an estimate. **TRUS** Three RR breaches. The read for one accepted RR not applied in GTV. Estimated CS read not used and no RR issued for ICP 0000062604TR22A resulting in an estimated 238 kWh of over submission for the incorrect period.	Still existing
Non-half hour switch event meter reading - standard switch	4.5	6(2) and (3) Schedule 11.3	**TRUS** One RR incorrectly rejected.	Cleared
Gaining trader informs registry of switch request - switch move	4.7	9 Schedule 11.3	**MEEN** Switch move is also applied for any ICP switching to MEEN from GBUG where GBUG has switched the ICP in and then discovered they cannot supply it. 11 ICPs switching from GBUG had switch move applied when no customer was moving in on the switch event date.	Still existing
Losing trader provides information - switch move	4.8	10 of schedule 11.3	**MEEN** Eight of a sample of 63 move switch AN file with the AA response code checked contained the incorrect response code.	Still existing

Subject	Section	Clause	Non-compliance	Status
			Four AN breaches. 12 WR breaches. 137 T2 breaches. **TRUS** Five of a sample of six move switch AN file with the AA response code checked contained the incorrect response code. All five move switch AN files sampled with the OC response code checked contained the incorrect response code. One AN had a proposed event date more than ten business days of NT receipt.	
Losing trader must provide final information - switch move	4.10	11 of schedule 11.3	**MEEN** The CS average daily kWh will be incorrect if the ICP has less than two validated readings in the last six months, or the file is generated manually. 23 ICPs checked had incorrect average daily kWh applied because of this. Three CS files had incorrect switch event read types. Six CS files had incorrect last actual read dates. Two CS files for ICPs supplied for brief periods contained information for MEEN's last period of supply because the incoming CS had not been processed and were later withdrawn. **TRUS** Two incorrect high daily consumption values sent from a sample of five. All three sampled of a possible 43 CS files sent with an actual read from the event date incorrectly labelled as an estimated read. All five sampled of a possible 38 CS files were sent with either an incorrect read date (four instances) or one ICP was sent with an estimated read rather than the last actual read. Three of a possible nine CS files were sent with the incorrect last read date. Five sampled of a possible 20 CS files were sent with the incorrect last actual read date.	Still existing
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	**MEEN** Six of the ten RRs checked had an actual read type applied in SAP instead of estimate. For one manually created RR, the read was not updated at all on receipt of the AC. 34 RR breaches. Five AC breaches. **TRUS** 28 RR breaches.	Still existing
Gaining trader informs registry of switch request - gaining trader switch	4.12	14 Schedule 11.3	**MEEN** One ICP with category 2 metering was requested as a HH switch.	Still existing
Losing trader provision of information - gaining trader switch	4.13	15 Schedule 11.3	**TRUS** Five HH ANs were issued with the MU (unmetered supply) response code when they were metered, and no unmetered load was connected.	Cleared
Withdrawal of switch requests	4.15	17 & 18 of schedule 11.3	**MEEN** Four NWs contained some incorrect content and were rejected. One incoming NW was rejected in error and accepted on reissue by the other trader.	Still existing

Subject	Section	Clause	Non-compliance	Status
			Two NW breaches. 34 AW breaches. **TRUS** 50 NA breaches. 13 SR breaches. Seven incorrect NW codes found in the sample of 35 checked.	
Metering information	4.16	21 of schedule 11.3	**MEEN** Three CS files had incorrect switch event read types. Three CS files had incorrect switch event read information and were later withdrawn. **TRUS** All three sampled of a possible 43 MI CS files sent with an actual read from the event date incorrectly labelled as an estimated read.	Still existing
Switch protection	4.17	11.15AA to 11.15AB	**MEEN** Alleged breach 2205MER1 for contacting a customer during the switch protected period and offering an enticement.	Cleared
Maintaining shared unmetered load	5.1	11.14	**MEEN** Three ICPs missed having shared unmetered load re-added when users processed meter changes and were corrected during the audit. **TRUS** Two ICPs with shared unmetered load indicated but no value recorded on the registry.	Cleared
Distributed unmetered load	5.4	11 Schedule 15.3, Clause 15.37B	**MEEN** Inaccurate submission information for several databases. One database audit report outstanding.	Still existing
Electricity conveyed & notification by embedded generators	6.1	10.13	**MEEN** While meters were bridged, energy was not metered and quantified according to the code for five ICPs. Some ICPs with distributed generation not quantified. **TRUS** While meters were bridged, energy was not metered and quantified according to the code for 58 ICPs. ICP 0000901755WW6EB had generation kWh apportioned to a period where generation was not present.	Still existing
Responsibility for metering at GIP	6.2	10.26 (6), (7) and (8)	**MEEN** Ten meter certification expiry dates were updated late.	Still existing
Reporting of defective metering installations	6.4	10.43(2) and (3)	**TRUS** MEP not notified in a timely manner for three ICPs where metering installations could be inaccurate, defective, or not fit for purpose.	Still existing
Collection of information	6.5	2 Schedule 15.2	**MEEN** Four ICPs were not read within the maximum interrogation cycle.	Still existing
Derivation of meter readings	6.6	3(2) Schedule 15.2	**MEEN** If readings are obtained the meter condition information is not imported and actioned, therefore the following checks are not conducted: • ensure seals are present and intact,	Still existing

Subject	Section	Clause	Non-compliance	Status
			• check for phase failure (if supported by the meter), • check for signs of tampering and damage, and • check for electrically unsafe situations. The customer reading for ICP 0000712872HBF96 taken on 8 April 2022 was incorrectly labelled as an actual read. Customer reads are not being validated against another set of validated meter reads before being considered permanent estimates after six months.	
NHH meter reading application	6.7	6 Schedule 15.2	**MEEN** Three CS files contained readings which did not reflect an actual or reasonable estimate reading effective from the last day of supply. All of the switches were later withdrawn and there is no impact on reconciliation. **TRUS** All three sampled of a possible 43 MI CS files sent with an actual read from the event date incorrectly labelled as an estimated read. Disconnection reads applied to the day before the disconnection.	Still existing
Interrogate meters once	6.8	7(1) and (2) Schedule 15.2	**MEEN** The best endeavours requirement was not met for 163 ICPs not read during the period of supply. **TRUS** Exceptional circumstances not proven for three of a sample of ten ICPs not read during the period of supply.	Cleared
NHH meters interrogated annually	6.9	8(1) and (2) Schedule 15.2	**MEEN** ICP 0000020823EAE94 not read within 12 months and there was no correspondence with the customer because the ICP was on a smart round.	Still existing
Correction of HHR metering information	8.2	19(2) Schedule 15.2	**MEEN** Removed meter data not reconciled for the day of the meter change for HHR to HHR AMI meter changes	Cleared
Identification of readings	9.1	3(3) Schedule 15.2	**MEEN** Three switch move CS files contained incorrect switch event read types. 13 ICPs which had undergone read renegotiations had incorrect switch event read types recorded in SAP. No visible audit trail present for the change in treatment of estimated and customer reads in the calculation of historic estimate (HE) volumes within SAS or SAP. **TRUS** All three sampled of a possible 43 ICPs sent with the incorrect last read type of "E".	Still existing
Meter data used to derive volume information	9.3	3(5) of schedule 15.2	**MEEN** Raw meter data is rounded upon receipt and not when volume information is created. **TRUS** Raw meter data is rounded upon receipt and not when volume information is created.	Still existing
NHH metering information data validation	9.5	16 Schedule 15.2	**MEEN** Not all "inactive" consumption is being identified and investigated. **TRUS**	Still existing

Subject	Section	Clause	Non-compliance	Status
			Not all identified "inactive" consumption is being resolved in a timely manner where attempts are made to identify a potential customer.	
Electronic meter readings and estimated readings	9.6	17 Schedule 15.2	**MEEN** Clock synchronisation reports not reviewed for all MEPs. **TRUS** Event information is not analysed and acted upon for all MEPs. Voltage on the load side of the meter should be obtained and evaluated.	Still existing
Calculation of ICP days	11.2	15.6	**MEEN** Minor ICP days discrepancies identified. **TRUS** ICP days submitted for generation only ICPs.	Still existing
HHR aggregates information provision to the reconciliation manager	11.4	15.8	**TRUS** The September 2021 revision 7 HHR aggregates file did not reflect the submitted HHR volumes for nine NSPs with a difference of 571 kWh.	Still existing
Creation of submission information	12.2	15.4	**MEEN** At least eight ICPs have solar generation but submission is not occurring, and notification of gifting has not been provided. **TRUS** The September 2021 revision 7 HHR aggregates file did not reflect the submitted HHR volumes for nine NSPs with a difference of 571 kWh. Bridged meter corrections not applied for two of a sample of 13 ICPs. Two ICPs from a sample of 20 with "inactive" consumption where the actions taken did not ensure all consumption was accounted for resulting in 27 kWh of volume not being submitted. Seven ICPs with unresolved "inactive" consumption where attempts to identify a customer are delaying the inclusion of 6,078 kWh of volume in the submission process. Three ICPs with unmetered load changes during the audit period where the initial daily kWh value continues to be applied to calculate consumption for submission resulting in 2,095 kWh under submission per annum. Two shared UML ICPs did not have unmetered load included in the submission as the UML profile code was not recorded on the registry to trigger the calculation of volume and inclusion in the AV-080 NHHVOLs file. The volume impact was assessed for December 2022 as 16.6 kWh under submission.	Still existing
Accuracy of submission information	12.7	15.12	**MEEN** Inaccurate submission as follows: • precision of grid generation volumes for Maraetai generation station is insufficient as volumes are reported in increments of 10 kWh, • non-solar distributed generation submitted using PV1 profile code, • ICPs 0000540450TE6E7 and 0007301973NVCDF are believed to have incorrect average daily kWh recorded resulting in a small amount of under submission (0.76 W or 3.2 kWh per annum), and	Still existing

Subject	Section	Clause	Non-compliance	Status
			• seven new connections have incorrect "active" status dates causing a minor impact on the accuracy of volume and ICP days submissions. **TRUS** Bridged meter corrections not applied for two of a sample of 13 ICPs. One of 29 new connections sampled with the incorrect "active" date ICP 0000574440NRF1C was electrically connected on 15 July 2022 but due to metering issues the first "active" date is recorded as 19 August 2022. The volume for the period from 15 July 2022 to 18 August 2022 has not been reconciled. One of 20 reconnections sampled with the incorrect "active" date ICP 0001853487ALE7F was reconnected on 31 July 2019 but was incorrectly updated to "active" for 2 August 2019. The "active" date was changed to 1 August 2019 on 10 June 2022, but this is still incorrect and is now outside the 14-month revision cycle. ICP 1000599753PCDB2 made "active" on 16 April 2021 was found to have an existing electrically connected meter on site and is likely to have been consuming since mid-2018 resulting in under submission. Two examples where switch reads were not applied resulting in 237 kWh of over submission for the incorrect period. The September 2021 revision 7 HHR aggregates file did not reflect the submitted HHR volumes for nine NSPs with a difference of 571 kWh. Two ICPs from a sample of 20 with "inactive" consumption where the actions taken did not ensure all consumption was accounted for resulting in 27 kWh of volume not being submitted. Seven ICPs with unresolved "inactive" consumption where attempts to identify a customer are delaying the inclusion of 6,078 kWh of volume in the submission process. Three ICPs with unmetered load changes during the audit period where the initial daily kWh value continues to be applied to calculate consumption for submission resulting in 2,095 kWh under submission per annum. Two shared UML ICPs did not have unmetered load included in the submission as the UML profile code was not recorded on the registry to trigger the calculation of volume and inclusion in the AV-080 NHHVOLs file. The volume impact was assessed for December 2022 as 16.6 kWh under submission. ICP 0000901755WW6EB had generation kWh apportioned to a period where generation was not present.	
Permanence of meter readings for reconciliation	12.8	4 Schedule 15.2	**MEEN** All estimated reads treated as permanent estimates after six months, but the Code requires Mercury to use reasonable endeavours to get meter readings for at least 12 months. Some estimates were not replaced by revision 14.	Still existing
Reconciliation participants to prepare information	12.9	2 Schedule 15.3	**MEEN** ICPs 0000540450TE6E7 and 0007301973NVCDF are believed to have incorrect average daily kWh recorded resulting in a small amount of under submission (0.76 W or 3.2 kWh per annum). **TRUS**	Cleared, reports are aggregated correctly, and data inaccuracies are

Subject	Section	Clause	Non-compliance	Status
			Three ICPs with unmetered load changes during the audit period where the initial daily kWh value continues to be applied to calculate consumption for submission resulting in 2,095 kWh under submission per annum. Two shared UML ICPs did not have unmetered load included in the submission as the UML profile code was not recorded on the registry to trigger the calculation of volume and inclusion in the AV-080 NHHVOLs file. The volume impact was assessed for December 2022 as 16.6 kWh under submission.	recorded as non-compliance in other sections
Historic estimate process	12.11	4 and 5 Schedule 15.3	**MEEN** Some HE calculations use estimated readings, which have been made permanent after six months rather than at the 14-month point.	Cleared
Forward estimate process	12.12	6 Schedule 15.3	**MEEN** The accuracy threshold was not met for all months and revisions. **TRUS** The accuracy threshold was not met for all months and revisions	Still existing
Compulsory meter reading after profile change	12.13	7 Schedule 15.3	**MEEN** ICP 1000584371PCEA2 changed profile from RPS to HHR on 19 April 2022 but the reading used was an estimate not an actual.	Still existing
Historical estimate reporting to RM	13.3	10 of Schedule 15.3	**MEEN** Historic estimate thresholds were not met for some revisions. **TRUS** Historic estimate thresholds were not met for some revisions.	Still existing

Subject	Section	Recommendation	Status

Improve data validation processes	2.1	**MEEN**
		As a minimum I recommend:
		• Mercury reviews the registry AC020 audit compliance report accuracy queries and investigates and resolves data discrepancies, and
		• SAP data is validated against the registry at least monthly for:
		  o unmetered load flags, daily unmetered kWh and trader unmetered load details,
		  o all reconciliation report aggregation factors, including Network, NSP, dedicated NSP, loss factor, flow direction, and profile, and ICP status.
			Adopted.

Unmetered new connections	2.9	**TRUS** Review process for unmetered new connections for when the MEEN code is managed in GTV.	TRUS rarely completes new connections for unmetered load. Unmetered new connections only occur where the ICP is part of an existing customer group supplied by TRUS. They follow the normal new connection process except no meter is installed. The previous
New connections	2.9	**TRUS** Review the new connections process when Jobtrack is replaced, to ensure the streamlining of information from contractors into GTV.	

Subject	Section	Recommendation	Status
			audit recommended TRUS review their process for unmetered new connections, and this will be done if they intend to complete more unmetered load new connections in future.
Bridged meter corrections for ICPs that have switched away	2.17	**TRUS** Recommend that all bridged meter corrections applied up to a switch loss date uses the adjustment (ADJ) process and not use an estimated switch loss read to ensure the volume correction is not undone due to a switch read amendment (RR).	Adopted. A further recommendation is made in **section 2.17.**
Provision of information on Utilities Disputes using chat	2.19	**MEEN** Information on Utilities Disputes is expected to be provided at least once in any series of related communications to a customer, regardless of whether the communication is complaint related. I recommend updating processes to ensure information on Utilities Disputes is consistently provided as part of any chats.	Cleared.
Changes to registry information	3.3	**TRUS** Modify reporting to exclude decommissioned ICPs from any changes to the registry post the decommissioning date.	Cleared before previous audit report was finalised
Monitor MN responses for rejections.	3.4	**MEEN** Monitor MN responses for rejections. Where rejections occur investigate to determine the correct MEP and whether the nomination should be reissued.	Not adopted. MEEN does not intend to reinstate this monitoring; due to the reduced number of ICPs supplied and most being commercial, meter changes are now managed closely by the commercial operations team.
Active ICPs with T994 (don't know) ANZSIC codes.	3.6	**MEEN** Check the customer industry for "active" ICPs with T994 (don't know) ANZSIC codes and update where the correct customer industry can be determined. Investigate why the number of ICPs with T994 ANZSIC codes is increasing and take action to ensure that valid codes are consistently applied where the customer industry is known.	Adopted, and found that it is caused by ANZSIC codes not being populated for some switch ins. A recommendation is raised in **section 4.1**.
Identification and correction of inaccurate unmetered load information	3.7	**MEEN** Reinstate the SAS queries to identify discrepancies between registry and SAP unmetered load information. Where an ICP switches in with trader unmetered load details but no distributor unmetered load, check to determine whether the unmetered load appears correct and reasonable and investigate to confirm the correct values if unsure. Monitor long term unmetered BTS ICPs and investigate unmetered BTS ICPs which have metering installed to determine whether the unmetered load can be removed.	Adopted, monthly validation now occurs.
Check unmetered load details	3.7	**MEEN** Check whether the trader unmetered load details are correct for these ICPs with no unmetered load recorded by the distributor:	Adopted, these ICPs have been investigated by MEEN.

Subject	Section	Recommendation	Status
		• 0006950760RN3FF 0.6 kWh per day no description, • 0006889514RN932 0.4 kWh per day no description, • 0005649089WA391 1.00 kWh per day no description, • 1000015953BP63F 0.8 kWh per day no description and category 1 MTRX metering is installed, • 1000015954BPBF5 0.8 kWh per day 0080;10;80Wx1under verandah light and category 1 MTRX metering is installed, • 0007168347RNE85 believed to be permanent metered and to be checked to confirm unmetered BTS can be removed, and 0007205264RN2D8 believed to be permanent metered and to be checked to confirm unmetered BTS can be removed.	
Unmetered load	3.7	**TRUS** Check with the WBOP DC DUML database trader (Manawa) whether the streetlights associated with ICP 1000595713PC497 are also recorded in the Council's database.	Not adopted. TRUS has not held a customer for this ICP since 1 February 2022, and is unable to confirm.
Enter reconnection reads into GTV	3.8	**TRUS** Reconnection readings should be entered wherever possible to ensure that consumption is apportioned to the correct period by the historic estimate process. Because GTV's historic estimate process allocates all consumption in each read-to-read period against the "active" days within the read period, it will be important to ensure that no consumption is present during read-to-read periods which are entirely "inactive". If consumption does occur during an "inactive" period, it is likely that the status is incorrect.	Not adopted. TRUS intends to consistently enter disconnection and reconnection readings once Jobtrack is replaced.
Enter disconnection reads into GTV	3.9	**TRUS** Disconnection readings should be entered wherever possible to ensure that consumption is apportioned to the correct period by the historic estimate process. Because GTV's historic estimate process allocates all consumption in each read-to-read period against the "active" days within the read period, it will be important to ensure that no consumption is present during read-to-read periods which are entirely "inactive". If consumption does occur during an "inactive" period, it is likely that the status is incorrect.	To be reconsidered when the Jobtrack system is replaced, as Jobtrack will not allow this.
ICPs at new and ready status	3.10	**TRUS** Recommend TRUS approach Manawa Energy who are listed as the owners of the TRPG network code on the participant register to get this ICP "decommissioned-- set up in error".	0001187170WF770 has been decommissioned set up in error as recommended.
Preventing late CS files caused by applying the gaining	4.3	**MEEN** Where a gaining trader's NT requests a backdated event date, preventing MEEN from issuing a transfer	Adopted.

Subject	Section	Recommendation	Status
trader's backdated event date		NT within five business days of the event date, consider: • proposing a different event date which is preferably within five business days of the NT receipt date, but may be ten business days of the NT receipt date, or • issuing a NW with withdrawal code CE and providing an email to the other trader explaining the event date issue.	
Calculation of CS average daily kWh for automated CS files	4.3	**MEEN** Ensure that average daily kWh is calculated in line with the requirements of the Registry Functional Specification and Authority guidance when ICPs are migrated to Gentrack.	Not adopted, no further changes to SAP will be made.
CS last actual read dates	4.3	**MEEN** Ensure that last actual read dates reflect the date of the last actual read during MEEN's period of supply when ICPs are migrated to Gentrack.	Not adopted, no further changes to SAP will be made.
Calculation of CS average daily kWh for manual CS files	4.3	**MEEN** Update procedures to ensure that average daily kWh is calculated in line with the requirements of the Registry Functional Specification and Authority guidance, instead of applying 19 kWh to all manually generated files.	Not adopted, no further changes to SAP will be made.
Average daily consumption	4.10	**TRUS** Quantify how many ICPs are sent with zero consumption due to two reads being received on the same day.	Adopted. This occurs rarely. Zero most commonly occur because they are genuine, or less than two actual readings are available.
Distributed generation exception reporting	6.1	**MEEN** Add an exception for ICPs with installation type B or G and no settled EG register.	Not adopted, no further changes to SAP will be made.
ICPs to investigate to confirm whether generation is present	6.1	**MEEN** Confirm whether generation is present and if so, arrange for compliant metering to be installed or notification of gifting to be provided: 1001252773UNA63, 1001116111UN2B1, 1001159194UN841, 0491137168LC906, 0000223388UN94E, 0000162782UN15F, 0000466087UN841, 0007178455RN34E, 1002041538LCF13, 0220523875LC32A, 0030530186PCA23, 1001142826LCE6A, 1002158415LC434, 0400404060LC46C, 0038640800PC434, 0000039113CP890, 0000610616UNA44, 0076383388WE5A3, 1001270361LCCD3, 0344418987LC7DD, 0378418698LCD01, 0000524551HB73F, 0000461116HBC88, 0085704601PCD4D, 0000181478WAB2B, 0000100353UND41, 0006983448RN10C, 1001262525LC2DB, 1002036226LC7FE, 1000584124PC1E2, 0000806302HB9DE, 0013561418ELD65, 0346767024LC814, 0000610977TU415, 0000304593HB8FF, 0000312560TE948, 0000275815HB647, and 0000381548TUB88.	Adopted.

Subject	Section	Recommendation	Status
Independently review AMI MEPs time difference reports	6.5	**TRUS** TRUS to develop a process to automatically retrieve these reports and identify any exceptions that might impact submission volume accuracy where time-of-day profiles are used.	Not adopted. Time of day profiles have been phased out, and the reports are manually reviewed.
Reinstate separate monthly summary meter condition report between MRS and Mercury	6.6	**MEEN** Reinstate separate monthly non-critical meter condition report (broken seals, different meter number, suspect tamper) between MRS and Mercury's Premise and Metering team to enable timely investigation and resolution of issues identified.	Adopted.
Photos of Category 2 installations	6.6	**MEEN** Require MRS to provide a photo of all manually read Category 2 meters to check for phase failure.	Not adopted. This recommendation could not be adopted because the meter readers do not hold information on the metering category.
Check for phase failure reporting over the last 12 months	6.6	**MEEN** Request phase failure examples from MRS for the last 12-month period to ensure there are none overlooked.	Not adopted. During this audit I confirmed that MRS is reporting phase failure examples by reviewing phase failure meter condition events.
Transition to manual read sequence for non-communicating AMI meters	6.10	**TRUS** Recommend that TRUS also uses the trigger of the registry AMI communicating flag to update the meter read sequence to ensure the earliest possible attempt to complete a manual read is undertaken.	Not adopted. TRUS still elects to wait until there are three estimates in a row before moving ICPs as it is their preference to use AMI reads where possible. The TRUS read attainment process is currently under review, and TRUS is working with the MEEN team to identify process improvements.
Meter read frequency reporting accuracy	6.10	**TRUS** Trustpower reviews the selection criteria of the meter read frequency report and confirms that the report is accurately presenting Trustpower's read attainment levels and to ensure this is understood by the relevant operations teams.	Adopted.
HHR correction audit trail	9.4	**MEEN** Extend the use of the grid generation audit trail template for corrections to all C&I interval data corrections.	Considered, but not adopted.
Stopped meter corrections	9.5	**MEEN** Confirm whether NHH corrections for stopped or faulty meters is conducted for just the current customer, or for the full period of the error.	A further recommendation is made to process corrections for the full period.
AMI events	9.6	**MEEN** Identify all meter types where "voltage on the load side of the meter" is an event and ensure it is provided in all cases.	Adopted.
HHR estimates for HHM profile	9.6	**MEEN** Develop reporting of the quantity of estimated intervals per NSP/MEP/revision to assist with managing MEP performance.	In progress. MEEN indicated that this would be reviewed following the migration of ICPs from MEEN to TRUS, and a review of read attainment processes is currently underway.

Subject	Section	Recommendation	Status
AMI events	9.6	**TRUS** Obtain event information description information from MEPs. Ensure all events, including tamper, are appropriately evaluated.	Not adopted.
Review precision of all grid generation bus metering points.	12.7	**MEEN** Review number of decimal places retrieved from all bus level grid generation metering points to ensure AV130 submission volumes are submitted to an accuracy of two decimal places.	Not adopted, this is still an issue for some NSP meters.
Monitor accuracy of profile assignment to meter register	12.7	**TRUS** Develop a process to monitor submission profile assignment to meter registers ensuring the submission data is accurate and there are no overlaps or gaps in the time-of-day profile codes applied.	TRUS confirmed that time of day profiles have been phased out, and the time synchronisation reports are manually reviewed.
Accuracy and completeness checks done before amending read types for ICPs without actual reads causing forward estimate volumes in the 14-month revision	12.8	**TRUS** Review the process to check that for the list of ICPs with interim estimate reads causing forward estimate volumes in the 14-month revision that the reasonable endeavours threshold for meter read attainment has been met.	Not adopted. Permanent estimates are entered as revision 14 occurs, and there is no opportunity for further action to be taken to meet the reasonable endeavours requirements. Because submission data is only washed up for the 14-month period, failure to enter a permanent estimate could result in submission data beyond this period changing when an actual reading is received, reducing submission accuracy.
Review selection criteria for updating interim estimate read type to permanent estimate read type once reasonable endeavours threshold has been met	12.8	**TRUS** Review the process to select the interim estimate reads to update the read type to permanent estimate once the reasonable endeavours threshold for meter read attainment has been met.	Not adopted. TRUS was concerned that if they receive actual reads for a previously unread ICP, a late permanent estimate will result in the historic estimate calculated between the actual reading and permanent estimate being spread over a shorter period than it should be, decreasing submission accuracy.
Review scheduled meter red dates for seasonal load ICPs with communicating AMI meters	12.12	**TRUS** TRUS to regularly review the NSP level submission accuracy and where the accuracy levels are not being achieved, to review the scheduled AMI meter read dates of any seasonal load at these NSPs to ensure these are close to month end as practicable.	Not adopted. NHH settled AMI ICPs have one scheduled read loaded into GTV each month, which is used for billing and to calculate historic estimate. This recommendation was considered but found not to be practical because for workload and cash flow reasons it is better to have scheduled billing dates evenly spread throughout the month.

I also reviewed the material change audit completed in October 2023 by Steve Woods of Veritek Limited which related to Mercury beginning to provide HHR submissions for the TRUS participant code. Two issues were raised:

- the process to complete HHR to HHR meter changes resulted in consumption on the old meter on the day of the change being omitted from submission; this issue has been cleared and the

consumption from the old meter is added to the new meter as an estimate for the affected intervals, and

- if an ICP has “inactive” status recorded on a day where the ICP is connected for part of the day, volumes will be submitted but no ICP day will be reported. This technical issue is caused by a discrepancy between the requirement to record readings at the end of the day, and statuses at the beginning of a day when in reality the ICP is physically active and inactive on the disconnection date.

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

MEEN

Registry Synchronisation

Trader and status information is maintained within SAP, and then transferred to the registry, but is also manually updated using the registry interface where necessary. Manual updates occur when automated updates fail due to errors, or an update requires reversal or replacement of historic registry records.

Error cases are created in SAP where registry updates fail, and I saw evidence that these are investigated and resolved daily.

Changes to registry data managed by other participants, such as NSPs, price categories, loss factors, installation types, and distributor unmetered load details are automatically updated in SAP through the registry notification process. An error case is created if there are any issues with the update, such as where a new price category has not been created in SAP.

Registry data validation

Where status and trader updates are processed automatically from SAP and are successful, registry and SAP data should be aligned. Where manual updates to status or trader data are made directly in the registry user interface and SAP is not updated at the same time, discrepancies can occur. A small number of experienced staff have access to update the registry directly.

I found that there are some manual checks of status change updates in SAP before the service order is closed, but it appears that this is not consistently identifying missed and incorrect status updates. Staff have been under pressure with the migration from MEEN to TRUS which may have contributed to an increase in errors this audit period.

The MEEN staff responsible for data validation have had heavy workloads during the audit period due to the migration of ICPs from MEEN to TRUS. While discrepancies have been identified, at times the number

of exceptions investigated and resolved has been lower than usual because of this. Now that the migration is complete, staff have more time to manage and resolve discrepancies and some additional checks have been added or reinstated. When reviewing late status and trader updates on the registry, I saw evidence that backdated corrections are occurring as older discrepancies are identified and resolved.

The following data validations are in place:

Check	Frequency	Process
Multiplier check	Monthly	A SAS query checks that the multiplier flag and meter multiplier in SAP matches the registry and takes the ICP status and whether the meter is removed into account Discrepancies are investigated to confirm whether the registry or SAP is correct, and MEEN corrects their records or advises the MEP if there is an issue with the MEP's data.
ANZSIC codes	Weekly Monthly	A SAS query checks for ANZSIC codes which are inconsistent with customer information including the account classification. A bulk file of corrections is prepared to update the registry and SAP. The AC020 trader compliance report is reviewed monthly, including AC020Trader11 (blank and unknown ANZSIC codes) and AC020Trader12 (meter category two and higher ICPs with residential ANZSIC codes).
Active ICPs with meter category 9 and no unmetered load recorded	Monthly	A SAS query checks for "active" ICPs meter category 9 and no unmetered load recorded, which are investigated to determine what action is required to arrange metering or add unmetered load. The AC020 trader compliance report is reviewed monthly, and if workloads allow the AC020Trader17 report showing ICPs with meter category 9, blank or zero and no unmetered load will be reviewed.
Expired meter certifications	Weekly	A SAS query identifies all ICPs with expired or interim meter certification which is filtered to identify any ICPs reconnected in the past month. A request is then sent to the MEP to certify the site. Between September and November 2023 this process was put on hold because ICPs were migrating from MEEN to TRUS.
Invalid status and trader updates created by SAP	Monthly	The previous four audits have found that some invalid status and trader updates are processed by SAP, including some invalid updates to "active" status from the switch in date following status event reversals. MEEN is not sure why this sometimes occurs, but it is believed to be caused by the SAP switch loader. MEEN identifies affected ICPs using the AC020 audit compliance report which shows late status updates. The Risk Control Co-ordinator checks all late status updates on the AC020 report to determine whether they are correct. The Revenue and Registry Coordinator checks all late trader updates on the AC020 report to determine whether they are correct.
Unmetered load	Monthly	Unmetered load details are validated monthly including: • identifying mismatch between the registry unmetered load and SAP's installation facts, • identifying mismatch between the registry unmetered load and SAP's time slice information which is used for submission), • identifying missing unmetered load time slices where the unmetered load flag is set to Y and there is missing information in SAP, and

Check	Frequency	Process
		• review of the AC020 audit compliance unmetered load reports. Exceptions are investigated to determine the correct values and SAP and the registry are updated as necessary. The AC020 trader compliance report is reviewed monthly, including AC020Trader08 (distributor has unmetered load recorded but the trader does not) and AC020Trader09 (mismatch between the trader and distributor unmetered load details).
Distributed generation	Monthly	A report is run monthly to compare the distributor's generation fields against Mercury's records, and investigation occurs as workloads allow. The report identifies: • ICPs with installation type B in SAP but not the registry, • ICPs with installation type B in the registry but not SAP, and • ICPs with an EG meter register without installation type B. There is no check for ICPs with installation type B or G, but no EG register. No recommendation to add this check has been raised because the migration from MEEN to TRUS for mass market ICPs has been completed, and in future most DG ICPs are expected to be supplied by TRUS.
Invalid profiles	Monthly	The AC020 trader compliance report is reviewed monthly, including AC020Trader18 (HHR submission flag without HHR profile or NHH submission flag with HHR profile) and AC020Trader19 (HHR submission and NHH submission flag both Y) and energy services is advised of any discrepancies.
MEP reversals	Approximately quarterly	A SAS query identifies ICPs where an MEP has been nominated but no MEP data has been updated. If an MEP nomination is more than three months old a trader update will be processed to revert to the old MEP.

There is no regular monitoring for:

- MEP nomination rejections,
- status discrepancies between SAP and the registry, or
- trader information discrepancies between SAP and the registry.

Recommendation	Description	Audited party comment	Remedial action
Improve data validation processes	**MEEN** I recommend the following checks are completed at least monthly: • status validation between SAP and the registry, • trader information validation between SAP and the registry, and • monitoring of any MN MEP nomination response files with an R (rejected) response, so that the	Adopted in principle but will prioritise as resource allows. In the last 12 months Mercury has migrated the majority of its ICPs from the MEEN code (SAP) to the TRUS code (GTV), as such going forward our main focus and priority is on the TRUS code.	Identified

Recommendation	Description	Audited party comment	Remedial action
	nomination can be reissued if necessary.		
Improve validation process for status changes	**MEEN** Provide further training and support to staff checking that status changes have been processed accurately in SAP, including ensuring that the correct status and event date are applied before closing the service order.	Adopted. Further training will be provided to ensure we are reviewing each job once completed to ensure the status is updated correctly, with most of this being done automatically we can't assume it was done correctly so this manual check is important.	Identified

Registry information accuracy

The analysis of the list file and AC020 report returned the following findings.

Issue	Dec 2023 Qty	Nov 2022 Qty	Nov 2021 Qty	Dec 2020 Qty	Comments
Active with blank ANZSIC	2	2	2	2	These are HHR DUML ICPs and due to registry limitations MEEN cannot update the ANZSIC code. See **section 3.6**.
Active with ANZSIC "T999" not stated	0	0	0	0	Compliant.
Active with ANZSIC "T994" don't know	44	2,978	1,398	249	All were corrected during the audit. See **section 3.6**
UML load = zero	51	28	19	6	22 SB (residual load ICPs) have zero and 29 DUML ICPs have ENG in the unmetered daily kWh field and are compliant.
Incorrect UML load	7	15	2	0	Four were corrected during the audit and ICPs 0007301973NVCDF, 0004450225ML4AC and 0004450157ML277 are to be updated. See **section 3.7**
ICPs where the metering category was 9 or blank, and the unmetered flag was set to no	27	2	70	90	All were metered or moved to "inactive" status after the report was run or had accepted MEP nominations and were awaiting meter asset data. See **section 3.7.**
UML load removed and an MEP is nominated but is still UML in SAP	0	0	0	0	Compliant.

Issue	Dec 2023 Qty	Nov 2022 Qty	Nov 2021 Qty	Dec 2020 Qty	Comments
Shared unmetered load incorrect	0	3	0	0	Compliant.
ICPs with different UNM load to that recorded by the distributor	56	66	2	5	MEEN's records were correct for 50 ICPs, four were corrected during the audit and the other two ICPs are under investigation. See **section 3.7**.
ICPs with distributor unmetered load populated but retail unmetered load is blank and UML flag =N	3	19	16	13	MEEN confirmed during the audit that the distributor unmetered load details were correct, and they intended to update the registry, but this has not been completed yet. See **section 3.7**.
Incorrect profile	At least 18	4,218	3,884	3,828	Five ICPs had the NHH submission flag with HHR profile. 13 ICPs with RPS profile recorded on the registry have distributed generation and I flow metering recorded. Review of AV080 submissions found that PTM profile was sometimes applied in error because the SAS logic did not correctly manage the configuration of FCLM seven register meters to correctly handle the I flow register. The issue was identified and corrected in August 2023 and revised submission data has been washed up.
Incorrect statuses or status event dates	23	12	18	15	23 incorrect "active" status updates. See **section 3.8**. Two incorrect "inactive" status updates. See **section 3.9**.

The following registry and static data accuracy issues were identified during the audit for MEEN, and were not resolved as soon as practicable:

- **unmetered load discrepancies**, which included some individual ICPs with unmetered load discrepancies which were not identified and corrected until during the audit as discussed in **section 3.7**,
- **status discrepancies,** which included individual ICPs with incorrect statuses or event dates as discussed in **sections 3.8** and **3.9**, and
- **profile discrepancies**, including some ICPs with distributed generation and PTM profiles incorrectly assigned as discussed in **section 12.7**.

Registry and static data issues present during the previous audit were reviewed, and I have recorded instances where the issues are still present throughout the report.

Read and volume data accuracy

Read and volume accuracy issues are identified through MEEN's validation processes, which are described in detail in **sections 9.5** and **9.6**.

Where corrections are required, the incorrect actual consumption is replaced with an estimate. Estimates are calculated using data from a period with a quantity and profile similar to the period requiring estimation, which for bridged and stopped meters is usually based on the consumption before and after the faulty period. The estimated reading is labelled as an estimate and a system note is entered which describes the reason for the change. Where a correction affects a period longer than 14 months, MEEN's policy is to calculate and apply a credit only for the last 14 months. This is a change of policy from previous audits.

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

Defective meters	MEEN provided ten examples of stopped or faulty meters, which were identified by read validation processes, the meter reader, network, MEP or customer. All had corrections to estimate consumption during the faulty period. The previous audit found ICP 1099569118CN9D3's meter has been stopped since 2019 but the correction was only conducted for the current customer, which was a five-month period back from 21 March 2022. There was at least 3,600 kWh not accounted for and this remains incorrect.
Incorrect multipliers	The Revenue and Registry Coordinator identifies multiplier discrepancies and passes them to the metering team for resolution. The bills are reversed, and the multiplier is corrected from the start date for the meter if it has always been incorrect, or using a meter reprogram process if the multiplier was changed while the meter was installed. Eight ICPs with incorrect multipliers were identified, and seven were corrected accurately. ICP 0000018156UNB84 needed its multiplier corrected from 1 to 100 from 3 May 2023, but the change was processed incorrectly. 1 is recorded for 3 May 2023 and 100 is recorded from 4 May 2023.
Bridged meters	When AMI meters have been bridged, the consumption during the bridged period is estimated and flows through to submission files. The meter is closed on an estimated read which captures the estimated consumption during the bridged period, and then restarted on the meter read that applied when the meter was unbridged. Mercury provided five examples of bridged meters which were unbridged during the audit period. Consumption during the bridged period had been estimated and correct submission occurred.
Consumption while inactive	MEEN provided a report of 221 ICPs with 21,904 kWh of "inactive" consumption. 125 of the ICPs had less than 2 kWh of "inactive" consumption recorded. A sample of the 15 ICPs with the most "inactive" consumption were reviewed, including all with over 450 kWh. All the ICPs were corrected to" active" status and had the "inactive" volumes reported.
Unmetered load corrections	I checked a sample of four changes to unmetered load details. One was handled correctly, and three ICPs had incorrect submission information in the month of the change: • 0000033569CPD1D expected submission for June 2023 was (11 days x 0.24) + (20 days x 0.26) = 7.58, but 7.8 was submitted (0.26 x 30 days). • 0000150372TR5FD expected submission for April 2023 was (20 days x 0.48) + (10 days x 0) = 9.6, but 14.4 was submitted (0.48 x 30 days).

	• 0001162165MLEE7 expected submission for June 2023 was (11 days x 0.259) + (20 days x 0.24) = 7.409, but 7.2 was submitted (0.24 x 30 days). Mercury confirmed that the values were corrected in SAP during the audit and revised submission information will be washed up at the next opportunity.

Submission accuracy issues are discussed in detail in **section 12.7**. There were some instances where inaccurate information was not corrected at the next available opportunity, including:

- ICPs missing from submissions - because of incorrect settlement units, statuses or status event dates or backdated status or trader updates, some ICPs and volumes were excluded from submission,
- under reported consumption due to a missing multiplier for ICP 0000018156UNB84 on 3 May 2023,
- unreported generation consumption was identified for 15 ICPs with confirmed generation but no I flow metering installed or loaded in SAP, and which were not recorded on the gifting register,
- incorrect profiles being assigned for some FCLM seven register meters which were identified and corrected in August 2023, and
- insufficient data precision for the Maraetai generation station, and AMI data is rounded on import into SAP.

Backdated updates to ICP information of more than 14 months requiring submission correction are not consistently identified and corrected.

Recommendation	Description	Audited party comment	Remedial action
Corrections affecting periods longer than 14 months.	**MEEN** If a correction affects a period longer than 14 months, the whole correction should be processed within the most recent 14-month window. If MEEN does not wish to pass the full correction on to their customer, a billing credit could be applied.	The 14-month window affects our submission and the data for our billing and submission is aligned, however where required we will manually apply a billing credit for the customer.	Identified

I re-checked the previous audit submission accuracy non-compliances which are not already covered in the table of inaccuracies above. The following issues were not resolved in time for revision 14 submissions:

- **incorrect NSP for two ICPs for 19 October 2021 to 20 October 2021** - HHR submission occurred against the incorrect NSP HAY0331 from 19 October 2021 to 20 October 2021 for ICPs 0000157116CKBC5 and 0000163532CKC37,
- **partial stopped meter correction for ICP 1099569118CN9D3 -** ICP 1099569118CN9D3's meter has been stopped since 2019 but the correction was only conducted for the current customer, which was a five-month period back from 21 March 2022; there was at least 3,600 kWh not accounted for, and
- **bridged meter corrections were not processed for three ICPs -** bridged meter corrections have not been processed for 0435675230LC66D, 0043223686PCC51 and 0000196942UN3A7 because no historical consumption was available to calculate an accurate correction, or the ICP had switched out.

TRUS

Registry Synchronisation

Trader and status information is maintained within GTV, and then transferred to the registry, but is also manually updated using the registry interface where necessary. Manual updates occur when automated updates fail due to errors, or an update requires reversal or replacement of historic registry records.

Changes to registry data managed by other participants, such as NSPs, price categories, loss factors, installation types, and distributor unmetered load details are automatically updated in GTV through the registry notification process. An error case is created if there are any issues with the update, such as where a new price category has not been created in GTV.

Acknowledgement files are imported into GTV and reviewed for issues like rejected MEP nominations, invalid profiles, and invalid submission types using BI reporting. Not all registry acknowledgements are checked due to the volume of files received.

Registry data validation

Data is validated using the TRUS discrepancy manager, and exceptions are directed to validation buckets by type for a workflow analyst or team to review and action. The workflow analyst is responsible for ensuring that the GTV life cycle accurately reflects what is recorded on the registry. The following data validations are in place:

Check	Frequency	Process
New connections	Daily	There is daily validation reporting in place to detect status mismatches between GTV and the registry for new connections including: • **current status mismatch,** • **new connections connected and no metering** shows ICPs which have been connected, and do not have metering recorded in the registry and/or GTV within ten, 20 and 30 business days, which are followed up with the MEP and escalated as the time period increases, and • **CO date mismatch** shows differences between GTV's "active" status date, the meter certification date, and the initial electrical connection date, which are investigated and resolved; this includes ICPs where one or more of the fields being compared is blank.
ANZSIC	Weekly	ANZSIC codes are captured at the point of customer registration and then reconfirmed as part of the welcome call to newly connected customers. ANZSIC code discrepancies are identified using a Power BI report, which displays ICPs with meter category two with residential ANZSIC codes, ICPs with missing or blank ANZSIC codes, and ICPs where the ANZSIC code in the registry differs from the one in GTV. There is also a weekly comparison between the ANZSIC code recorded in the ICP lifecycle and the ANZSIC code recorded in the background of the ICP in GTV.
MEP nominations	Daily	Daily Power BI reports are used to identify and resolve failed MEP nominations and rejected MEP nominations.
Unmetered load	Daily to every few days	Unmetered load is validated by the Revenue Assurance team using discrepancy reporting which identifies additions, removals and changes to

Check	Frequency	Process
		unmetered load, and differences between GTV, registry and distributor information. There is a: • comparison between registry unmetered load data and GTV, including descriptions and trader unmetered kWh, and a • comparison between the daily unmetered kWh recorded by TRUS and the value calculated based on the distributor's unmetered load description. Discrepancies are investigated by checking paperwork and with the customer and/or network and if necessary, site visits are completed. Discrepancies are reviewed daily to every few days, and notes are made to record progress and outcomes of any investigations into discrepancies.
Status	Daily	Inconsistencies between the GTV and registry status.
Profile	Daily	ICPs on controlled profiles which are ineligible, and inconsistencies between the GTV and registry profile and submission type. Improvements were made during the audit to create exceptions for ICPs where the Control Device Certification Flag was set to N, which were previously excluded from the report, leading to some non-compliance in **section 6.3**.
NSP and dedicated NSP	Daily	Differences between the registry and GTV NSP. Because NSPs are automatically updated through the registry notification process this normally only occurs where an update has failed. Following identification of some historic incorrect NSPs in GTV during the audit period the discrepancy reporting has been enhanced to help to identify historic mismatches.
Distributed generation	Daily Weekly	Inconsistencies between the GTV and registry installation type and fuel type. There is reporting to identify instances where the network has changed the installation type or fuel type. These ICPs are checked to determine whether a service order for import/export metering has been raised, and if not, they are investigated to determine whether generation is present and if so, a job is raised. Weekly reporting also checks for ICPs with a settled EG meter register and installation type L. TRUS normally contacts the network to determine whether generation is present and makes a note against the item on the discrepancy report.
Metering	Daily	Meter details mismatches, including meter categories, meter serials, register status, and meter start dates.

Registry information accuracy

The analysis of the list file and AC020 report returned the following findings.

Issue	Dec 2023 Qty	Nov 2022 Qty	Comments
Active with blank ANZSIC	0	0	Compliant.
Active with ANZSIC "T999" not stated	0	0	Compliant.
Active with ANZSIC "T994" don't know	1	0	See **section 3.6**.
UML load = zero	2	0	ICP 0000602090WP7E0 was correct based on the trader and distributor unmetered load details, and 1000518052PC070 had a backdated correction to its unmetered load processed during the audit. See **section 3.7**.
Incorrect UML load	24	6	23 ICPs did not have unmetered load connected but had trader unmetered load details recorded on the registry. 17 were corrected during the audit and six ICPs still have unmetered load recorded. GTV is correct, so submission information is correct. One ICP had its unmetered load details removed as part of a trader update to change a profile. They were correctly reinstated during the audit. See **section 3.7**.
ICPs where the metering category was 9 or blank, and the unmetered flag was set to no	271	67	270 ICPs had metering added after the report was run or accepted MEP nominations and were awaiting meter asset data. ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active". The incorrect status is recorded as non-compliance in **sections 2.1** and **3.9**.
Shared unmetered load incorrect	0	10	Compliant.
ICPs with different UNM load to that recorded by the Distributor	3	2	One was confirmed to be correct and the other two are under investigation. See **section 3.7**.
ICPs with distributor unmetered load populated but retail unmetered load is blank and UML flag =N	7	4	Six ICPs were confirmed to have their metered load removed and TRUS had correctly recorded no unmetered load. One ICP did have unmetered load recorded, and the details were accidentally removed as part of a trader update to change a profile. They were correctly reinstated during the audit, and revised submission information will be provided through the revision process. See **section 3.7**.
Incorrect profile	77	0	Four ICPs with profiles requiring certified control devices did not have HHR or AMI metering and their control devices were not certified. See **section 6.3**.

Issue	Dec 2023 Qty	Nov 2022 Qty	Comments
			60 ICPs with GXP or GXP T07 profile recorded on the registry have distributed generation and I flow metering recorded and are discussed further in **section 6.1**. • 49 were updated to include a generation profile or moved to HHR profile during the audit. . • One ICP was confirmed not to be generating, and one ICP was recorded on the gifting register. • ICPs 0472213008LC4AD and 0000512348CE732 are confirmed to be generating with settled I flow registers but have not had their profiles updated. • One ICP switched out after the report was run. • The other six ICPs had their settled I flow registers removed after the report was run and the TRUS profile is correct. 13 ICPs had incorrect generation profiles applied which were corrected during the audit. ICP 0000640400TE25B has no solar present but PV1 profile remains on the registry. There is no impact because no volumes are submitted. See **section 6.1**.
Incorrect statuses or status event dates	18	13	Nine new connections had incorrect "active" status dates, and were corrected during the audit. Two reconnected ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit. One ICP had a reconnection incorrectly processed and was corrected during the audit. Four out of a sample of 38 "inactive" status updates had an incorrect event date and/or status reason applied. Three have been corrected and ICP 0000206556UNF7C requires the network to reverse a decommissioning event before the incorrect date of 3 February 2022 can be replaced with an "active" status event. ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active". ICP 0000769092WAE1B had the 1,7 "electrically disconnected remotely by AMI meter" status reason code applied when there was no AMI meter. The disconnection event was processed in error and the registry has been corrected. See **sections 3.8** and **3.9**.

The following registry and static data accuracy issues were identified during the audit for TRUS, and were not resolved as soon as practicable:

- **unmetered load discrepancies**, which included some individual ICPs with unmetered load discrepancies which were not identified and corrected until during the audit as discussed in **section 3.7**,
- **status discrepancies,** which included individual ICPs with incorrect statuses or event dates as discussed in **sections 3.8** and **3.9**,

- **trader update discrepancies** which included ICPs with incorrect attributes and event dates discussed in **section 3.7,** and
- **profile discrepancies**, including some ICPs with distributed generation and profiles requiring certified control devices having incorrectly assigned profiles as discussed in **section 12.7**.

Registry and static data issues present during the previous audit were reviewed, and I have recorded instances where the issues are still present throughout the report.

Read and volume data accuracy

Read and volume accuracy issues are identified through the TRUS validation processes, which are described in detail in **sections 9.5** and **9.6**. Where a potential meter fault is identified a service order is raised to replace or unbridge the meter, and GTV updates the metering details including removal and install readings once the registry is updated and paperwork is received.

Corrections for estimated consumption during a bridged or faulty period are calculated using a template which retrieves the ICP's consumption information and creates a proposed estimate based on data from the periods before and after the fault.

Readings are locked after billing, and bills need to be reversed in order to amend readings. To process a correction TRUS will either:

- create a reconciliation "ADJ" record which has a start date, end date and correction volume which is allocated across the period between the start and end date, or
- reverse all the affected invoices, correct the readings including estimated removal readings capturing any missed consumption and then rebilling.

If correction affects periods more than 14 months ago, the full corrected volume can be entered into an "ADJ" record with start and end dates within the last 14 months to ensure that the full volume is reported. A revenue assurance case summary is attached in GTV, all corrections are peer reviewed, and a note is added to the account to confirm this has been completed.

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

Defective meters	TRUS provided ten examples of stopped or faulty meters, which were identified by read validation processes, the meter reader or customer. All had corrections to estimate consumption during the faulty period.
Incorrect multipliers	Multiplier corrections are processed by reversing invoices for the affected period up to 14 months, correcting the master data and then re-invoicing or creating an "ADJ" record to capture the missed consumption. No recent examples of multiplier corrections were identified.
Bridged meters	A list of 64 potentially bridged meters was provided. Five ICPs did not have their meters unbridged and/or a correction processed before they switched out: • ICP 0007132702RN05A was bridged from 9 February 2023 until it switched out on 13 February 2023 and did not have a correction processed, • ICP 0007213951RN640 was bridged from 3 June 2023 until it switched out on 14 June 2023 and no correction was processed, • ICP 0007132721RN1CF was bridged from 25 February 2023 until it switched out on 2 March 2023 and no correction was processed, • ICP 0007132733RNBE7 was bridged from 17 March 2023 until it switched out on 10 April 2023 and no correction was processed, • ICP 0007208674RNE54 was bridged from 25 February 2023 and was not unbridged or corrected before switching out' it had its switch out withdrawn in March 2024 and will be unbridged and corrected.

	The other 59 ICPs were unbridged by TRUS and had their meters certified on unbridging. I reviewed corrections for a sample of 21 ICPs and found 20 had corrections accurately processed. ICP 0007132718RN866 did not have a correction processed because the new meter details were not received before the ICP switched out. I rechecked bridged meter corrections which were expected to be processed during the previous audit period but had not been completed and found that corrections had been processed for ICPs 0000027169WE7AF and 0154081515LC8CC. Corrections had not been processed for 0435675230LC66D, 0043223686PCC51 and 0000196942UN3A7 because no historical consumption was available to calculate an accurate correction, or the ICP had switched out.
Consumption while inactive	The process to manage "inactive" consumption is discussed in detail in **section 3.9**. TRUS provided a list of 221 ICPs with 40,323.714 kWh[1] of consumption in periods with "inactive" status. 110 of the ICPs had less than 2 kWh of "inactive" consumption recorded. A sample of all ICPs with "inactive" consumption over 600 kWh was reviewed: • ICPs 0000169486CK8CB and 0000005362UN5B0 had misreads, and the "inactive" consumption was not genuine; the misreads were not validated and submission was correct, • ICP 0006632109MLD56 had a disconnection processed in error due to confusion about which ICP had been disconnected and was corrected to "active" status, and the full volume was reported, • 11 ICPs were returned to "active" status for the period with consumption, and the full volume was reported, and • ICP 0006302091WM93D (13,125 kWh) and 0000047413UNB7F (805.66 kWh) appear to have an incorrect switch start read, which TRUS is trying to resolve with the other trader. I rechecked "inactive" consumption corrections which were not resolved by the time the previous audit was completed and found they are still not corrected: • 1002069373LC1A9 "inactive" consumption for the day before the switch loss on 20 October 2022 has not been reported and no RR has been processed; revision 14 has now passed, and • 0000865145NV098 is still recorded as "inactive" from 20 August 2022 but should be "inactive" from 20 September 2022; revision 14 has now passed.
Unmetered load corrections	I checked an unmetered load change which occurred during the audit period and found it was processed correctly. The previous audit found that ICPs 0005741246RN2BC and 0005732298RN43C had their unmetered load excluded from submission because the UML code was not recorded in the registry, and I confirmed that this has been corrected. I rechecked unmetered load change errors found during the last audit. Two ICPs had corrections processed and ICP 0000542701TUA4C has not been corrected resulting in under submission of 58.9 kWh. Revision 14 has now passed.
"Active" date discrepancies	The previous audit found ICP 0000574440NRF1C was electrically connected on 15 July 2022, but the contractor installed an NGCM meter instead of a MTRX meter. NGCM refused to load the meter to the registry as this was not hung under their test house. Metering is loaded to Gentrack from the registry so as the meter was never loaded to the registry the first "active" date was the MTRX meter on 19 August 2022. The volume for the period from 15 July 2022 to 18 August 2022

[1] Excluding the total for ICP 0000169486CK8CB and 0000005362UN5B0 which appeared to have "inactive" consumption due to a misreads.

	has not been reconciled and is recorded as non-compliance below and in **sections 3.5, 3.8** and **12.7**. This ICP is still under investigation.

Submission accuracy issues are discussed in detail in **section 12.7**. There were some instances where inaccurate information was not corrected at the next available opportunity, including:

- ICPs missing from submissions - because of incorrect settlement units, statuses or status event dates or backdated status or trader updates, some ICPs and volumes were excluded from submission,
- unreported "vacant" consumption for ICPs 0781871145LCEF4 and 0001423099UNB7B where readings were temporarily recorded in the "unbilled" validation bucket until they were approved and moved to the ICP,
- under reported consumption during periods where meters were bridged where corrections were not processed,
- consumption is not correctly apportioned between periods where NHH boundary readings are missing for upgrades and downgrades, or a switch event reading is recorded with an incorrect read date,
- invalid forward estimate was created for some ICPs with readings for July 2023 revision three, which is being investigated by TRUS,
- there were some incorrect aggregation factors where NSP changes were not managed correctly,
- unreported generation consumption was identified for some ICPs with confirmed generation but no I flow metering, and which were not recorded on the gifting register, and
- AMI data is rounded on import into GTV.

Backdated updates to ICP information of more than 14 months requiring submission correction are not consistently identified and corrected.

Recommendation	Description	Audited party comment	Remedial action
Corrections affecting periods longer than 14 months.	**TRUS** If a correction affects a period longer than 14 months, the whole correction should be processed within the most recent 14-month window. If TRUS does not wish to pass the full correction on to their customer, a billing credit could be applied.	There is some confusion from our teams on this as they believe it is contrary to what we were advised in 2022 and what was covered in the last audit i.e. we were advised we were no longer able to submit consumption that is for a period prior to the most recent 14 month window and have been using that methodology since that time. TRUS has the reconciliation capability to account for volume outside of the 14 month timeframe; post-audit we will review the Code and liaise with the auditors to confirm 100% and remove any doubt with regards to the correct methodology and apply it going forward.	Investigating

I re-checked the previous audit submission accuracy non-compliances which are not already covered in the table of inaccuracies above. The following issues were not resolved in time for revision 14 submissions:

- **incorrect unmetered load submission for 0000542701TUA4C**; ICP 0000542701TUA4C has not been corrected resulting in under submission of 58.9 kWh,
- **bridged meter corrections were not processed for three ICPs;** corrections have not been processed for 0435675230LC66D, 0043223686PCC51 and 0000196942UN3A7 because no historical consumption was available to calculate an accurate correction, or the ICP had switched out,
- **"inactive" consumption corrections were not processed for two ICPs;** 1002069373LC1A9 which has "inactive" consumption for the day before the switch loss on 20 October 2022 has not been reported and no RR has been processed, and 0000865145NV098 is still recorded as "inactive" from 20 August 2022 but should be "inactive" from 20 September 2022.
- **incorrect status for ICP 0000574440NRF1C from 15 July 2022 to 18 August 2022;** the previous audit found ICP 0000574440NRF1C was electrically connected on 15 July 2022, but the contractor installed an NGCM meter instead of a MTRX meter, NGCM refused to load the meter to the registry as this was not hung under their test house and as metering is loaded to Gentrack from the registry and the meter was never loaded to the registry, the first "active" date was for the MTRX meter on 19 August 2022 - the volume for the period from 15 July 2022 to 18 August 2022 has not been reconciled and this ICP is still under investigation.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 10.6,11.2 & 15.2 From: 01-Apr-23 To: 29-Apr-24	**MEEN** and **TRUS** Some inaccurate registry and submission data is recorded and was not updated as soon as practicable. Some previous audit corrections not carried out. 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	The controls are moderate overall, the system processes to manage registry information and generate submission data are generally accurate, and the issues are mainly caused by data accuracy issues for individual ICPs or isolated scenarios. Mercury is working to investigate issues and improve controls, including improving processes to identify and correct data accuracy errors so that revised submission data can be provided. The impact is medium overall based on the volume differences identified and that some corrections have not yet been completed.

Actions taken to resolve the issue	Completion date	Remedial action status
Corrections have been made where possible and we continue to investigate unresolved instances and will correct if applicable.	Ongoing	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
In the last 12 months Mercury has migrated the majority of its ICPs from the MEEN code (SAP) to the TRUS code (GTV). A project is underway to migrate our Commercial/TOU ICPs to a new platform before the end of 2024 and retire SAP in due course. All of our resource is going into the new platforms and we won't be investing in making changes to SAP-related systems or processes at this time. For the TRUS code we will be focusing on several improvements as noted throughout the report. Some specific examples which will improve our submission accuracy are: New recommended VEE validations - We are looking to set up 2 new VEE validations - one for Zeros comparison and one for Maximum Value for interval. These will be set up only for ICPs that have TOU billing. By the time TOU billing is happening on a significant enough scale that we are not monitoring each individual ICP. These validations will be set up along with establishing a new business process to deal with them. >80% historic estimates for R3 submissions - We have engaged Gentrack to look at the issue with their continuous estimation process and they have advised some possible solutions. We will be instructing them whether we would like a fix/enhancement to the process or a report, either of these options should mitigate the issue and greatly reduce the portion of historic estimation. End of Month Reads/submission accuracy issues - We are implementing an update to the end of month reads process from end of May, this will import all end of month reads for all consumers who are billed within the first 15 business days of the month - the update is to include all migrated sites in this process. This should greatly increase the accuracy of the estimation and will also reduce the portion of historic estimation.	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 a number of sections in this report and compliance is confirmed with regard to timeliness and format of information in accordance with Part 15.

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

The data transfer method varies depending on the MEP or agent, and type of data being transferred:

- NHH readings from MRS and MEPs are received via SFTP,
- NHH readings from Powerco are received as PDF documents attached to an email, and
- HHR data from Bluecurrent and EDMI, and generation data from Bluecurrent is received via SFTP.

To confirm the process, I traced a sample of HHR and NHH readings from the source files to SAP and GTV, and to submission data for HHR settled ICPs.

Audit commentary

MEEN

NHH

Manual readings are provided by MRS via SFTP which are imported into SAP. Mass market ICPs have transferred from MEEN to TRUS and the remaining manually read ICPs are mostly commercial ICPs. Special reads are received daily via SFTP and reviewed manually to determine whether they should be loaded into SAP.

MEPs provide AMI readings via SFTP which are imported into the readings database (known as ADR or MDS). For NHH settled ICPs SAP imports a monthly reading against its open read order in SAP for the bill date, checking MDS for a read to match the open order for three days. Then if no reading is available MDS will try to find a reading for the day before the order date which will be loaded into SAP with the correct date. If no reading is loaded against the open read order, SAP will create an estimate. Reporting is completed on outstanding open read orders in SAP to identify missing reads.

I traced a sample of data for 11 ICPs from the raw meter data files provided by MRS, Bluecurrent, Intellihub and FCLM to SAP and confirmed that validated readings were derived from meter readings, and the data was recorded accurately.

HHR

HHR data for HHR and AMI meters is received from MEPs and agents via SFTP imported directly into SAP.

I traced a sample of data for 15 HHR settled ICPs from the raw meter data files provided by the MEPs and agents to GTV and the HHR aggregates submissions for September 2023 and confirmed that the data was recorded accurately.

Generation

Generation station data is received via SFTP from Bluecurrent, and automatically imported into SAP. Generation station information was checked by comparing the data imported into SAP against data provided by Bluecurrent for a sample of meters.

TRUS

NHH

Manual readings are provided by MRS and Powerco:

- MRS provide manual NHH reads via SFTP which are imported into GTV.
- Powerco's engineers record photo readings for Powerco's substations, where the meter readers are not allowed to enter the facility for health and safety reasons; the engineers provide the photo and a scan of a paper form which records the reading and read date via email, and the readings are loaded into GTV by TRUS staff.

MEPs provide AMI readings via SFTP which are imported into the readings database. For NHH settled ICPs GTV imports a monthly reading against its open read header for the bill date. This process retrieves reads from the database two days after the scheduled read is due.

Read files received are checked against a checklist of expected files, and any missing files are followed up with the MEP or agent.

I traced a sample of data for 11 ICPs from the raw meter data files provided by MRS, Bluecurrent, Intellihub and FCLM to GTV and confirmed that validated readings were derived from meter readings, and the data was recorded accurately.

The MRS agent audit found one ICP where the read provided by MRS was inconsistent with a photo of the meter. I confirmed that MRS had provided a replacement file, and the read was correct in GTV.

HHR

HHR data for HHR and AMI meters is received from MEPs and agents via SFTP imported directly into GTV. Files received are checked against a checklist of expected files, and any missing files are followed up with the MEP or agent.

I traced a sample of data for eight HHR settled ICPs from the raw meter data files provided by the MEPs and agents to GTV and the HHR aggregates submissions for December 2023 and confirmed that the data was recorded accurately.

Audit outcome

Compliant

2.4. Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

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

The audit trail must include details of information:

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

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

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

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

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

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

Audit observation

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

Audit commentary

MEEN

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

The previous audit raised an issue that audit trails are not available where an estimated reading is updated to a permanent estimate within SAS. This is an automated SAS process and although audit trails are not visible in the front end, it is expected that these system changes are tracked in the background.

TRUS

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

Agents

The agent audit reports record compliance with this clause.

Audit outcome

Compliant

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

Code reference

Clause 10.4

Code related audit information

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

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

Audit observation

The Mercury terms and conditions apply for both MEEN and TRUS customers. I reviewed the current terms and conditions to determine compliance.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

The trader must use its best endeavours to provide access:

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

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

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

Audit observation

The Mercury terms and conditions apply for both MEEN and TRUS customers. I reviewed the current terms and conditions to determine compliance and discussed compliance with these clauses.

Audit commentary

Mercury's contract with their customers includes consent to access for authorised parties for the duration of the contract.

MEEN

MEEN assists other parties to gain access to their customers' metering installations where requested by determining why access has been refused and contacting the customer to arrange access. I reviewed three examples where the MEP had been unable to obtain access due to customer refusal, access being blocked, or invalid customer details and confirmed MEEN used their best endeavours to arrange access.

TRUS

TRUS assists other parties to gain access to their customers' metering installations where requested. I reviewed five examples where the MEP had been unable to obtain access due to customer availability and access being blocked and confirmed TRUS used their best endeavours to arrange access.

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. A discussion was held regarding knowledge of any ICPs with loss compensation present.

Audit commentary

Mercury confirmed they do 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 subclause (1) must be expressed to be for the benefit of the Authority for the purposes of the Contracts (Privacy) Act 1982, and not be able to be amended without the consent of the Authority (clause 11.15B(2)).

Audit observation

The Mercury terms and conditions apply for both MEEN and TRUS customers. I reviewed the current terms and conditions to determine compliance.

Audit commentary

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

Audit outcome

Compliant

2.9. Connection of an ICP (Clause 10.32)

Code reference

Clause 10.32

Code related audit information

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

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

Audit observation

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

Audit commentary

MEEN

New connections

All new connections for mass market ICPs are now completed by TRUS using GTV. Before the migration of mass market ICPs from MEEN to TRUS in late 2023, MEEN managed new connections using SAP.

The new connection process varies by network.

- Where ICPs are directly requested from the network by the customer or their agent, the network sends through a notification and which MEEN accepts or declines. MEEN contacts the customer to arrange a customer supply agreement if it has not already been completed and raises a service order to complete the connection and install metering (if the ICP is to be metered).
- For ICPs requested by applying to MEEN, an application for a new ICP is raised with the network and a service order is raised to complete the connection and install metering (if the ICP is to be metered).

Jobs for Bluecurrent and Intellihub are raised using the B2B tool, which automatically sets up the ICP in SAP, claims the ICP at "inactive - new connection in progress" status, and nominates the MEP at the time the job is issued. Mercury estimates that 99% of new connections use the B2B process.

Jobs for other MEPs including Counties Power and Influx are issued from SAP. The ICP and MEP information must be manually entered into SAP, and then a trader update including MEP nomination and status update to "inactive - new connection in progress" will be automatically sent to the registry.

Open jobs are monitored for Intellihub and Bluecurrent, who complete most of the new connections. Intellihub and Bluecurrent provide weekly service level reports giving a reason if a job completion date needs to be extended, which is uploaded into SAP. Jobs for other MEPs are monitored by running a list of open jobs from SAP.

For Bluecurrent and Intellihub paperwork is returned via the B2B system, which installs the meter in SAP and moves the ICP to "active" status. The B2B team then checks that the installed details are correct and adds customer information. For other MEPs paperwork is received by email and manually attached to the job in SAP, and the meter, status and customer information is added manually in SAP. SAP sends the update to the registry.

HHR new connections are initiated by the commercial operations team on instruction from the commercial account manager and monitored using the WIP spreadsheet. HHR new connections do not use the B2B process and are updated in SAP manually, with the MEP nominated at the time a job is issued.

I checked 20 new connections and confirmed that the expected process was followed, and responsibility was accepted.

Active ICPs without metering or unmetered load recorded

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

The audit compliance report recorded 27 "active" ICPs where the metering category was 9 or blank, and the unmetered flag was set to no. All were metered or moved to "inactive" status after the report was run or had accepted MEP nominations and were awaiting meter asset data.

The audit compliance report identified a new connection for ICP 1100000650WM2A3 where an MEP nomination was not accepted within 14 business days. The nomination was not genuinely late, and the MEP nomination was accepted prior to initial electrical connection.

TRUS

New connections are completed by TRUS using GTV and Jobtrack. The new connection process varies by network.

- Where ICPs are directly requested from the network by the customer or their agent, the network sends through a notification and which TRUS accepts or declines. TRUS contacts the customer to arrange a customer supply agreement if it has not already been completed and raises a service order to complete the connection and install metering (if the ICP is to be metered). TRUS have a blanket acceptance with some networks and respond to any acceptance requests as received.
- For ICPs requested by applying to TRUS, an application for a new ICP is raised with the network and a service order is raised to complete the connection and install metering (if the ICP is to be metered).

The ICP is created in GTV once the distributor moves it to "ready" status on the registry, and TRUS is advised through email or the distributor's portal that the ICP is ready to claim. The ICP and customer information is loaded into GTV manually, and the ICPs registry address, network and pricing information

is imported into GTV though a process which is run four times daily. Daily discrepancy reporting is in place to identify ICPs where TRUS is recorded as the proposed trader and the ICP is not loaded in GTV.

Once the ICP is set up in GTV, a system work action is created for the ICP to be claimed at 1,12 "inactive - new connection in progress" status and an MEP nomination is sent at the same time. A service order for meter installation is also raised in GTV and transferred to Jobtrack if the ICP is to be metered.

Jobs remain open until completion paperwork is received; and are tracked using the Jobtrack operational reporting and followed up if paperwork is not received. Work completion paperwork is received by email and manually entered into Jobtrack by TRUS staff, except where certain networks have access to enter work details directly into Jobtrack. The job closure information is transferred from Jobtrack to GTV, and then the status update is automatically transferred from GTV to the registry.

There is daily validation reporting in place to detect status mismatches between GTV and the registry for new connections including:

- **current status mismatch,**
- **new connections connected and no metering** which shows ICPs which have been connected, and do not have metering recorded in the registry and/or GTV within ten, 20 and 30 business days, which are followed up with the MEP and escalated as the time period increases, and
- **CO date mismatch** shows differences between GTV's "active" status date, the meter certification date, and the initial electrical connection date, which are investigated and resolved; this includes ICPs where one or more of the fields being compared is blank.

Where exceptions are found and require correction they can be updated as a group using a bulk import process.

Active ICPs without metering or unmetered load recorded

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

TRUS rarely completes new connections for unmetered load. Unmetered new connections only occur where the ICP is part of an existing customer group supplied by TRUS. They follow the normal new connection process except no meter is installed. The previous audit recommended TRUS review their process for unmetered new connections, and this will be done if they intend to complete more unmetered load new connections in future.

The audit compliance report recorded 271 "active" ICPs where the metering category was 9 or blank, and the unmetered flag was set to no. 270 ICPs had metering added after the report was run or accepted MEP nominations and were awaiting meter asset data. ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active". The incorrect status is recorded as non-compliance in **sections 2.1** and **3.9**.

The audit compliance report did not record any instances where an MEP nomination was not accepted within 14 business days.

Audit outcome

Compliant

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

Code reference

Clause 10.33(1)

Code related audit information

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

- *for a point of connection to the grid – the grid owner has approved the connection,*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection,*
- *for a point of connection that is an ICP, but is not as NSP:*
    - *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, one 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 to evaluate the strength of controls. Temporary electrical connections were discussed.

Audit commentary

MEEN

MEEN 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.

Review of the AC020 report found nine ICPs had meter certification dates prior to the initial electrical connection date. I confirmed none were temporarily electrically connected.

TRUS

TRUS 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.

Any ICPs electrically connected with a meter certification date earlier than the first "active" date are investigated through the daily CO date mismatch, and if confirmed to be electrically connected the dates are amended to reflect the correct initial electrical connection date.

Review of the AC020 report found 17 ICPs had meter certification dates prior to the initial electrical connection date. I checked a sample of 11 of these ICPs and confirmed three were temporarily electrically connected during the audit period. TRUS was recorded as the trader on the registry and arrangements were made with the MEP. One ICP had the correct "active" status date applied. ICPs 1000028642BP4D4 and 1002185255LC6E6 were not made "active" from the temporary electrical connection date, which is recorded as non-compliance in **sections 2.1** and **3.8**. Both ICPs were later updated to the correct "active" date.

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 two business days of electrical connection,*
    - *if the ICP has metered load, one 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

MEEN

Active ICPs without metering or unmetered load recorded

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

The audit compliance report recorded 27 "active" ICPs where the metering category was 9 or blank, and the unmetered flag was set to no. All were metered or moved to "inactive" status after the report was run or had accepted MEP nominations and were awaiting meter asset data.

New connections

Analysis of AC020 trader compliance report found 42 metered new connections were not certified within five business days of electrical connection. A typical sample of 20 of these were examined and found:

- one ICP was unmetered,
- 17 ICPs were certified on time but the registry was updated late by the MEP, and
- two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded; they both had their status dates corrected during the audit and the incorrect "active" dates are recorded as non-compliance in **sections 3.5** and **3.8**.

Reconnections

Prior to August 2023 and since December 2023 a weekly report was used to identify any reconnected ICPs with expired meter certification. A request is then sent to the MEP to certify the site. Between September and November 2023 this process was put on hold because ICPs were migrating from MEEN to TRUS.

Metering installations at 96 metered ICPs were not certified within five business days of reconnection. A typical sample of 20 ICPs with expired meter certification were examined and found:

- for seven ICPs MEEN raised jobs for the MEP to recertify the meter, and five were completed successfully but late, and two were unable to be completed before the ICPs migrated to TRUS,
- for eight ICPs MEEN did not raise jobs for the MEP to recertify the meter because the ICPs were about to migrate to TRUS, and
- five ICPs were not genuine reconnections and were not required to be recertified; the status was automatically updated to "active" by SAP effective from the gain date and the incorrect statuses are recorded as non-compliance in **section 3.8**.

Bridged meters

Mercury confirmed five ICPs were bridged to reconnect during the audit period and were later un-bridged. All the meters were certified on un-bridging.

TRUS

Active ICPs without metering or unmetered load recorded

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

The audit compliance report recorded 271 "active" ICPs where the metering category was 9 or blank, and the unmetered flag was set to no. 270 ICPs had metering added after the report was run or accepted MEP nominations and were awaiting meter asset data. ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active". The incorrect status is recorded as non-compliance in **sections 2.1** and **3.9**.

New connections

Analysis of AC020 trader compliance report found 292 metered new connections were not certified within five business days of electrical connection. A typical sample of 30 of these were examined and found:

- two ICPs were not genuine new connections,
- 26 ICPs were certified on time but the registry was updated late by the MEP, and
- two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded; they both had their status dates corrected during the audit and the incorrect "active" dates are recorded as non-compliance in **sections 3.5** and **3.8**.

Reconnections

TRUS use a daily report within their discrepancy manager reporting tool to identify ICPs which are reconnected without full meter certification. The report is reviewed, and the MEP is emailed using an email template to advise that connection has occurred at an ICP with expired metering certification.

Metering installations at 109 metered ICPs were not certified within five business days of reconnection. A typical sample of 20 ICPs with expired meter certification were examined and found an email notification was sent to the MEP for 19 ICPs, and the other ICP switched out within five business days of reconnection.

Bridged meters

59 ICPs had their meters un-bridged by TRUS and all had their meters certified on un-bridging.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.11 With: 10.33A From: 6-Dec-22 To: 13-Dec-23	**MEEN** Up to 22 metered new connections had late meter certification. Up to 91 reconnections of metered ICPs had late meter certification. **TRUS** Up to 262 metered new connections had late meter certification. 109 reconnections of metered ICPs had late meter certification. Potential impact: Low Actual impact: Low Audit history: Multiple Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong, reporting is in place to identify meters which have been initially electrically connected or reconnected without full meter certification and advise the MEP. The audit risk rating is low as a small proportion of ICPs were affected. Uncertified meters may have unidentified accuracy issues, but other validation processes will help to identify these.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: The ICPs identified during the audit were fixed. TRUS: Current Reporting identifies both scenarios where a reconnection has taken place on an uncertified ICP and New Connections where the meter certification does not align with other dates e.g. IED & CO date.	April 2024 Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
MEEN: Further training to be provided to ensure we are updating our active status from the correct date for new connections. TRUS is comfortable that the current reporting we have in place sufficiently captures all of the scenarios identified during audit and believe this is reflected in the results of the samples that were looked at during Audit.	May 2024 Completed	

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 reviewed.

Audit commentary

MEEN

MEEN has demonstrated that arrangements are in place for existing networks during previous audits. Two new networks (ISNZ and MACQ) were added during the audit period, and I confirmed arrangements are in place.

TRUS

All arrangements are between Mercury and the network and include the TRUS participant code. TRUS began trading on three new networks during the audit period, which Mercury has existing arrangements with.

A table within GTV prevents the loading of any installation data, prior to the establishment of arrangements for line services.

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.

Audit commentary

All new connections are taken to the 1,12 “inactive - new connection in progress” status and an MEP is nominated at the same time.

MEEN

Mercury has demonstrated that arrangements are in place for existing MEPs during previous audits. MRSL was added as an MEP and an arrangement is in place.

TRUS

All arrangements are between Mercury and the MEP and include the TRUS participant code. TRUS did not begin using any new MEPs during the audit period.

GTV holds a table detailing all the MEPs that they have arrangements with. This ensures that only MEPs that have an arrangement are selected.

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

If an ICP was reconnected as part of the switching process and the switch was later withdrawn, Mercury 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

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

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

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

Audit observation

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

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

Audit commentary

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

Mercury receives work completion paperwork from MEPs and uses this information to confirm the correct ICP attributes including status and profile; and updates their system and the registry.

MEEN

Where meter seals are removed or broken by someone other than the MEP, MEEN raises a field services job to check and reseal the meter. Five examples were provided to confirm the process.

I checked a sample of disconnections, reconnections and bridged meters and found that where physical disconnection or reconnection was initiated, the MEP was advised where the ICP was metered, or remote disconnection or reconnection had occurred.

TRUS

Where meter seals are removed or broken by someone other than the MEP, TRUS raises a field services job to check and reseal the meter. Five examples were provided to confirm the process.

I checked a sample of disconnections, reconnections and bridged meters and found that where physical disconnection or reconnection was initiated, the MEP was advised where the ICP was metered, or remote disconnection or reconnection had occurred.

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 bridged meters were reviewed.

Audit commentary

Meters will only be bridged by Mercury if they cannot be reconnected without bridging, and delaying reconnection would cause significant disadvantage to the customer because they would be without hot water or power.

MEEN

Bridged meters are identified through the read validation process, or reconnection paperwork returned from the contractor, which is reviewed daily. In SAP job statuses remain open until this review is

complete, even if SAP is updated automatically through the B2B process. Once a bridged meter is identified, MEEN contacts the customer to advise them and raises a job for the meter to be unbridged as soon as possible.

MEEN confirmed five ICPs were bridged to reconnect during the audit period and were later un-bridged. All the meters were certified on un-bridging, and corrections to report the bridged consumption were processed.

Where an ICP is submitted as HHR, and a bridged meter scenario occurs then MEEN will change the ICP to NHH submission prior to the bridged meter event to enable the volume correction to be undertaken as NHH.

TRUS

Bridged meters are identified through the read validation process, or reconnection paperwork returned from the contractor. Reporting is in place for ICPs with AMI meters and zero-consumption, and there is monitoring for the word "bridged" in the daily reconnection reports. Upon discovery of a bridged meter TRUS raises a service order for the MEP to attend and check and un-bridge the meter.

If an ICP remains with TRUS after being bridged, a correction will be processed. If an ICP switches out while it is still bridged or before a correction has been prepared, no correction will be made. I recommend that corrections should be made to estimate consumption for all bridged meters before they switch out.

A list of 64 potentially bridged meters was provided. Review of a sample of 24 ICPs found the ICPs were bridged because they could not be connected remotely and not bridging would cause customer hardship, or when TRUS attempted to reconnect, they found the meter was already connected and bridged. Five ICPs did not have their meters un-bridged and/or a correction processed before they switched out:

ICP	Bridged	Switched out
0007132702RN05A	9 February 2023	13 February 2023
0007213951RN640	3 June 2023	14 June 2023
0007132721RN1CF	25 February 2023	2 March 2023
0007132733RNBE7	17 March 2023	10 April 2023
0007208674RNE54	25 February 2023	Withdrawn

The other 59 ICPs were un-bridged by TRUS and had their meters certified on un-bridging. I reviewed corrections for a sample of 21 ICPs and found 20 had corrections accurately processed. ICP 0007132718RN866 did not have a correction processed because the new meter details were not received before the ICP switched out.

I rechecked bridged meter corrections which were expected to be processed during the previous audit period but had not been completed and found that corrections had been processed for ICPs 0000027169WE7AF and 0154081515LC8CC. Corrections had not been processed for 0435675230LC66D, 0043223686PCC51 and 0000196942UN3A7 because no historical consumption was available to calculate an accurate correction, or the ICP had switched out.

Recommendation	Description	Audited party comment	Remedial action
Bridged meter corrections for ICPs which switch out	**TRUS** Ensure that corrections are processed to capture all consumption during bridged periods, including where ICPs have switched out prior to being unbridged and where ICPs switch out before a correction was processed.	Adopted in principle however there are challenges in how to handle corrections where an ICP has switched out where the new retailer may not be willing to switch the ICP back for the purpose of correction, and any correction being done without this occurring may lead to energy being submitted twice.	Investigating

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.17 With: Clause 10.33C and 2A of Schedule 15.2 From: 09-Feb-23 To: 29-Apr-24	**TRUS** Five ICPs which switched out before being unbridged or before a correction was processed did not have consumption estimated during the bridged period. One ICP later had its switch withdrawn. ICP 0007132718RN866 did not have a bridged meter correction processed because the new meter details were not received before the ICP switched out. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as moderate because TRUS does not usually process corrections where bridged ICPs switch out. The impact is estimated to be low.

Actions taken to resolve the issue	Completion date	Remedial action status
ICP 0007132718RN866 - Bridged meter was replaced 05/03/23. During the bridged period the main switch was left off, so no consumption was used.	N/A	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
We will make best endeavours to avoid recurrence, however as mentioned in our comment on the recommendation for "Bridged meter corrections for ICPs which switch out" above, there are challenges in how to handle corrections where an ICP has switched out where the new retailer may not be willing to switch the ICP back for the purpose of correction, and any correction being done without this occurring may lead to energy being submitted twice.	Ongoing	

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

All customers are issued Mercury Energy invoices but may have the MEEN or TRUS participant code assigned in the registry.

Audit commentary

Invoices and credit notes contain the ICP number, and ICP numbers are included in communications relating to the sale of electricity. Only the account number is included on correspondence relating to payments, as one account can have one or many ICPs attached.

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

All customers are issued Mercury Energy invoices but may have the MEEN or TRUS participant code assigned in the registry. A sample of invoices, correspondence, 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 Mercury's terms and conditions,
- on Mercury's website under https://www.mercury.co.nz/help/contact-us/formal-complaints.aspx,
- on invoices,
- as part of the letterhead information for outbound letters,
- in inbound calls,
- at the end of any conversations using chat, and
- as part of email footers.

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

All customers are issued Mercury Energy invoices but may have the MEEN or TRUS participant code assigned in the registry. A sample of invoices and correspondence were reviewed to determine whether clear and prominent information on Powerswitch is provided.

Audit commentary

Clear and prominent information on Powerswitch is provided:

- on Mercury's website under helpful links,
- on invoices,
- as part of the letterhead information for outbound letters, and
- as part of email footers.

Inclusion of information on Powerswitch on invoices meets the requirement to provide information on Powerswitch to consumers at least annually.

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 managed and understood by Mercury. The process is detailed in **section 2.9** above.

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**, and the accuracy and timeliness of registry updates is discussed in **section 3.5**. The processes in place ensure that the trader required information is populated as required by this clause.

I walked through the registry update process for a sample of 38 new connections for MEEN and 30 new connections for TRUS.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 11.1

Code related audit information

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

Audit observation

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 reports for each code were reviewed. A sample of late status updates, trader updates and MEP nominations were checked as described in the audit commentary.

I considered the impact of late updates to registry information on reconciliation submission data. Where a late update is made within 14 months of the event date, revised submission information will automatically be provided by SAP for MEEN and GTV for TRUS. Where status changes or trader information changes affecting submission were older than 14 months, I checked a sample of events and reviewed surrounding records, the nature of the change, and whether correct submission data was provided by revision 14. Submission issues relating to late updates are recorded as non-compliance in **section 12.7**.

Audit commentary

MEEN

Status updates

Reconnections and disconnections are completed remotely by the MEP where possible.

Jobs for Bluecurrent and Intellihub are raised using the B2B tool (99%) and jobs for other MEPs and contractors are issued from SAP. For Bluecurrent and Intellihub paperwork is returned via the B2B system, which updates the ICPs "active" status and event date in accordance with the service order type and work completion details. Exceptions are generated if the B2B process finds an error, omission or inconsistency and cannot update SAP such as missing information, a wrong meter number or invalid date. The B2B team then checks any exceptions, and reviews data for every service order completed by

the B2B process to confirm the installed details are correct before closing the service order. For other MEPs and contractors, paperwork is received by email and manually attached to the job in SAP, and the meter, status and customer information is added manually in SAP. SAP sends the update to the registry.

Intellihub and Bluecurrent provide weekly service level reports giving a reason if a job completion date needs to be extended, which is uploaded into SAP. Jobs for other MEPs are monitored by running a list of open service orders from SAP each Wednesday, which helps to identify any ICPs where paperwork has been received but SAP has not been updated, as well as ICPs where paperwork has not been received which are followed up with the MEP.

If a reconnection occurs without a corresponding disconnection service order (such as where an ICP was disconnected for vacancy by the previous trader before switching in) the B2B process will not be able to automatically process the reconnection. If a reconnection occurs after an arrears disconnection SAP will process the job but not update the status to "active". Affected ICPs are usually detected through the weekly review of open service orders and reporting on arrears disconnections that have not been updated. Any updates that are not to the current time slice are made directly on the registry, and manually in SAP.

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

Event	Period ended	ICPs notified greater than five days	Average notification days	Percentage compliant
Active	2017	205	21.2	83%
	2018	758	26.3	74%
	2019	791	17.6	80.1%
	2020	923	14.52	82.74%
	Dec 2020	624	7.97	85.93%
	Nov 2021	707	7.01	86.95%
	Nov 2022	727	10.56	87.84%
	Dec 2023	**519**	**15.4**	**87.63%**

181 of the 519 late reconnections were updated more than 30 business days after the event, 132 were updated more than 100 business days after the event, and four were updated more than 1,000 business days after the event. The latest update was 1,446 business days after the event date.

The ten latest updates, and the ten late updates between 30 and 500 business days after the event date were checked and found to be caused by:

- corrections following identification of incorrect status records through the "inactive" consumption process, audits, or validation,
- delays in receiving paperwork or information confirming the correct reconnection date,
- confusion because two reconnection service orders were raised on the same day, and
- SAP sometimes processes a backdated update to "active" without receiving reconnection paperwork (MEEN is not sure why this sometimes occurs, but it is believed to be caused by the SAP switch loader); MEEN identifies affected ICPs using the AC020 audit compliance report which shows late status updates, and the Risk Control Co-ordinator checks all late updates to determine whether they are correct.

All of the late updates had the correct status and event date applied, apart from two updates which SAP automatically processed from the gain date following a reversal[2] which are recorded as non-compliance in **section 3.8**.

The timeliness of status updates to "inactive" is set out in the table below:

Event	Period ended	ICPs notified greater than five days	Average notification days	Percentage compliant
Inactive	2019	588	11.34	86.49%
	2020	512	7.07	87.39%
	Dec 2020	337	7.86	92.16%
	Nov 2021	713	6.46	89.14%
	Nov 2022	340	3.27	96.45%
	Dec 2023	**347**	**6.13**	**94.52%**

Five of the late updates were to 1,12 "inactive - new connection in progress" status. SAP only allows connection jobs to be issued where the ICP is already at "inactive - new connection in progress" and moves the ICP to "active" once connection paperwork is received. Four of the updates to "inactive - new connection in progress" were made before the initial electrical connection date and are considered to be on time. One update was genuinely late because of a delay in processing the new connection job.

I reviewed the other 342 late "inactive" status updates and found 123 were updated more than 30 business days after the event, 81 were updated more than 100 business days after the event, and four were updated more than 1,000 business days after the event. The latest update was 2,505 business days after the event date. The late updates were to the following statuses:

Status reason	Description	Late updates	Average business days from event date to update date per late update
4	Electrically disconnected vacant property	163	100.9
6	Electrically disconnected ready for decommissioning	113	108.1
8	Electrically disconnected at pole fuse	10	83.7
9	Electrically disconnected due to meter disconnected	56	141.2

I checked an extreme case sample of 30 late status updates, including the latest status updates to each "inactive" status reason code and found they were caused by:

- corrections following identification of incorrect status records either through audits, validation or the customer changing their mind about decommissioning their ICP,

[2] 0000194946TP324 30 March 2023 and 1002054416LC718 17 March 2023.

- delays in receiving paperwork or information confirming the correct disconnection date or method, including completing investigations where the meter had been unexpectedly removed in SAP or on site, and
- one disconnection was processed in error when trying to resolve an issue and has since been corrected.

Apart from ICP 0000519670NRA9B's 4 December 2014 update, which was processed in error and later reversed, all the updates had the correct status and event date.

Trader updates

Trader updates including MEP nominations are entered into SAP manually or using a bulk import process and are then transferred to the registry. Otherwise, the trader update can be manually entered into the registry and SAP at the same time.

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

Period ended	ICPs notified greater than five days	Average notification days	Percentage compliant
2019	76,952	37	9.5%
2020	39,229	13.47	32.51%
Dec 2020	58,841	13.46	12.45%
Nov 2021	41,581	13.74	37.90%
Nov 2022	41,066	11.54	39.76%
Dec 2023	**40,980**	**17.45**	**38.94%**

192 of the 40,980 late updates were updated more than 30 business days after the event, 122 were updated more than 100 business days after the event, and two were updated more than 1,000 business days after the event. The latest update was 1,668 business days after the event date. The late updates changed the following fields:

Update type	Late updates	Average business days from event date to update date per late update	Maximum business days from event date to update date per late update
ANZSIC	158	43.85	429
Profile	8	109.8	310
Proposed MEP	1,401	28.5	752
Submission type and profile	39,171	28.05	843
Unknown	223	54.5	824
Unmetered load	19	243.5	1,668
Grand Total	40,980	28.4	1,668

I checked:

- the ten latest changes to unmetered load information,
- the 15 latest changes to submission type information,
- the five latest profile changes,
- the ten latest MEP nominations,
- the ten latest ANZSIC code changes, and
- the five latest updates which did not have a reason recorded on the AC020 report.

I found that the backdated updates were caused by:

- MEP nominations which were accidentally missed when a service order was raised for meter replacement; these were generally identified by the MEP, who contacts MEEN when they cannot update the meter details on the registry,
- corrections as part of data cleansing or to replace updates which had been reversed as part of other updates; when bulk updates such as ANZSIC code corrections occur, the team applies the current MEP as the proposed MEP which can result in an incorrect proposed MEP being recorded where a MEP change is in progress,
- backdated MEP nominations at the MEP's request,
- ANZSIC corrections backdated to the customer's move in date,
- profile changes backdated to the last actual read date,
- late receipt of paperwork or other information confirming the correct ICP attributes, and
- an incorrect event date being applied, making the update appear late when it was on time, including ICP 0025111413WE4A2 event date 1 October 2022 should be 1 November 2022, 1002153441LC2D6 event date 27 March 2022 should be 27 March 2023, and 0299368987LC70B event date 1 October 2022 should be 1 October 2023 - the incorrect event dates are recorded as non-compliance in **section 2.1**.

The audit compliance report recorded 1,237 ICPs where the ANZSIC code was updated later than 20 business days after the MEEN commenced trading. I checked the ten latest updates and found they were caused by backdated new connections or switches in.

I rechecked the incorrect trader event date for ICP 0000014898NT3F1 identified during the previous audit and found it could not practically be corrected because the ICP has switched out, and it would be necessary to reverse metering events.

TRUS

Status updates

Disconnection and reconnection service orders are raised in GTV and transferred to Jobtrack. Jobs remain open until completion paperwork is received and are tracked using the Jobtrack operational reporting and followed up if paperwork is not received.

Work completion paperwork is received by email and manually entered into Jobtrack by TRUS staff, except where certain networks have access to enter work details directly into Jobtrack. The job closure information is transferred from Jobtrack to GTV, and then the status update is automatically transferred from GTV to the registry and the status is selected based on the job type. Disconnection and reconnection reads are occasionally entered, usually only where the disconnection or reconnection coincides with a meter installation, removal or change. Because the historic estimate process forces consumption into the "active" part of any read-to-read period, GTV will report consumption against the "active" days as long as part of the read-to-read period is "active". TRUS intends to consistently enter disconnection and reconnection readings once Jobtrack is eventually replaced.

The timeliness of status updates to "active" (for reconnections) is set out in the table below and shows a consistently high level of timeliness.

Event	Period ended	ICPs notified greater than five days	Average notification days	Percentage compliant
Active	2015	183	10.5	76%
	2016	700	8.1	80%
	2017	2,942	5.4	88%
	2018	1,405	4	84%
	2020	481	2.93	90.82%
	Jan 2021	446	4.92	87.78%
	Dec 2021	377	4.11	90.06%
	Nov 2022	512	3.87	90.69%
	Dec 2023	**631**	**4.21**	**90.03%**

75 of the 631 late reconnections were updated more than 30 business days after the event, and 31 were updated more than 100 business days after the event. The latest update was 913 business days after the event date. The ten latest updates, and the ten late updates between 30 and 200 business days after the event date were examined and found they were caused by:

- corrections following identification of incorrect status records through the "inactive" consumption process, audits, or validation,
- delays in receiving paperwork or information confirming the correct reconnection date, and
- a reconnection which was successfully completed but the status failed to update; the status was updated manually when the error was detected though TRUS discrepancy reporting.

Apart from one ICP where an incorrect status was applied, all the updates had the correct status and event date. The incorrect status was updated during the audit and is recorded as non-compliance in **section 3.8**.

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

Status	Period ended	ICPs notified greater than five days	Average Business Days between Status Event and Status Input Dates	Percentage on time
Inactive	2015	39	4.14	90.74%
	2016	105	17.39	85.50%
	2017	241	5.99	92.57%
	2018	145	3.72	93.32%
	2020	913	6.81	92.68%
	Jan 2021	634	7.36	93.96%
	Dec 2021	503	6.28	95.30%

Status	Period ended	ICPs notified greater than five days	Average Business Days between Status Event and Status Input Dates	Percentage on time
	Nov 2022	857	5.28	94.23%
	Dec 2023	**1,509**	**8.67**	**91.20%**

1,036 of the late updates were to 1,12 "inactive - new connection in progress" status. 977 of the late updates are considered to be on time because they were made before initial electrical connection. The other 59 updates to 1,12 were genuinely late because they were made after initial electrical connection. I checked the 15 latest and found:

- some updates were sent late because either the status in GTV was at "inactive – new connection in progress" but the trader details were incomplete, or the ICP was not at "inactive – new connection in progress" but the trader details were complete (if the status and trader update to claim a new ICP cannot be issued in full together no update will occur); the affected ICPs were identified and corrected when the metering was installed, because the MEP could not update the registry because TRUS were not recorded as the proposed trader,
- some late updates were caused by late changes of proposed trader by the network, particularly where they were changed from MEEN to TRUS as part of the migration, and
- corrections for incorrect statuses or status dates, or reversed updates identified through validation processes.

Recommendation	Description	Audited party comment	Remedial action
Identification of missed ICP claims	**TRUS** Develop a process to identify instances where an ICP has not been claimed on the registry because the status or trader information has not been updated in GTV.	Reporting has been implemented and is delivering daily to the New Connections team for monitoring when results occur. This has delivered since being implemented and has been confirmed to correctly identify these scenarios as they occur.	Identified

The 473 late updates to other "inactive" status reasons were checked. 104 were updated more than 30 business days after the event, 58 were updated more than 100 business days after the event, and nine were updated more than 1,000 business days after the event. The latest update was 3,590 business days after the event date. The late updates were to the following statuses:

Status reason	Description	Late updates	Average business days from event date to update date per late update
4	Electrically disconnected vacant property	285	50.0
6	Electrically disconnected ready for decommissioning	85	339.3
7	Electrically disconnected remotely by AMI meter	69	12.7
8	Electrically disconnected at pole fuse	30	60.3

Status reason	Description	Late updates	Average business days from event date to update date per late update
9	Electrically disconnected due to meter disconnected	4	76.3

I checked an extreme case sample of 30 late status updates, including the latest status updates to each "inactive" status reason code and found they were caused by:

- delays in receiving paperwork or information confirming the correct disconnection date or method,
- corrections following identification of incorrect or missed status records either through audits or validation, or where the meter was removed prior to the decommissioning date, and an earlier disconnection record needed to be entered,
- confusion where multiple service orders were raised for disconnection, requiring investigation before the update could be processed, and
- for one ICP there was a delay in processing the service order once the paperwork was received.

The updates were accurately processed from the correct event date except:

- three ICPs which had invalid "inactive" status updates created either as part of a correction which should have later been reversed but were not, or because field services paperwork was not processed correctly; two have been corrected on the registry and ICP 0000206556UNF7C requires the network to reverse a decommissioning event before the incorrect date of 3 February 2022 can be replaced with an "active" status event, and
- one ICP had an incorrect event date entered and was corrected during the audit.

The incorrect information is recorded as non-compliance in **section 3.9**.

Trader updates

ANZSIC codes, proposed MEPs, submission types, profiles and unmetered load information are updated in GTV and automatically transferred to the registry. Where groups of ICPs require changes a bulk update process is used to update GTV.

The MEP nomination process is well managed. The MEP is nominated at the time the service order is raised, and bulk updates are made for AMI meter roll outs. In some cases, the MEP will initiate a change, and ask TRUS to raise an MEP nomination. There is reporting in place to identify any MEP mismatches between the job issued and the MEP nominated. This also identifies any missing MEP nominations for jobs issued.

Business rules manage profile changes in GTV, and changes to generation profiles are automatically triggered when a settled I flow register is installed.

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

Period ended	ICPs notified greater than five days	Average Business Days between Status Event and Status Input Dates	Percentage on time
2020	7,896	3.64	89.90%
Jan 2021	2,964	4.25	93.23%

Period ended	ICPs notified greater than five days	Average Business Days between Status Event and Status Input Dates	Percentage on time
Dec 2021	2,149	10.74	85.65%
Nov 2022	1,760	5.9	83.92%
Dec 2023	**3,670**	**1.33**	**96.02%**

137 of the 3,670 late updates were updated more than 30 business days after the event, 76 were updated more than 100 business days after the event, and four were updated more than 1,000 business days after the event. The latest update was 2,509 business days after the event date. The late updates changed the following fields:

Update type	Late updates	Average business days from event date to update date per late update	Maximum business days from event date to update date per late update
ANZSIC	1,230	28.65	2,509
Profile	1,174	25.27	2,377
Proposed MEP	918	17.11	728
Submission type and profile	25	31.16	479
Unknown	308	26.83	303
Unmetered load	15	166.07	291
Grand Total	**3,670**	**25.11**	**2,509**

I checked:

- the ten latest changes to unmetered load information,
- the five latest changes to submission type information,
- the ten latest profile changes,
- the ten latest MEP nominations,
- the ten latest ANZSIC code changes, and
- the five latest updates which did not have a reason recorded on the AC020 report.

I found that the backdated updates were caused by:

- corrections where the contractor installed a meter for a different MEP to what was expected when the service order was raised requiring a new MEP nomination, or corrections after an incorrect MEP nomination,
- a date correction where the MEP nomination was accidentally raised from the existing MEP's start date instead of the correct date because staff had not correctly processed the change in GTV, or date corrections where the date was found to be incorrect,
- trader updates required as part of a backdated change to move a connection from temporary to permanent, or profile changes automatically processed following a backdated metering change on the registry; some of these profile changes were invalid and were later reversed,

- backdated unmetered load corrections processed when catching up on resolving unmetered load discrepancies after migration of ICPs from MEEN to TRUS, and
- corrections where another update had reversed or replaced a proposed MEP change or profile change; this sometimes occurred where two fields were changed on the same day and only one needed to be reversed.

Of the 40 late updates checked nine contained some incorrect information, which was detected and corrected during the audit including:

- one incorrect ANZSIC code update, which was not required,
- five profile updates which were created in error as part of other changes in GTV and later reversed, including two for decommissioned ICPs, and
- three changes made as part of other corrections which should have been reversed but were accidentally left as "active" on the registry.

The previous audit recommended that decommissioned ICPs should not have trader information updated after the profile change, and I have repeated this recommendation after finding two of the incorrect trader updates were for decommissioned ICPs.

Description	Recommendation	Audited party comment	Remedial action
Changes to registry information	**TRUS** Modify reporting to exclude decommissioned ICPs from any changes to the registry post the decommissioning date.	Reporting has been updated so that sites at DEC, DED or DEA do not show on reporting and will not be incorrectly updated going forward.	Identified

The audit compliance report recorded 490 ICPs where the ANZSIC code was updated later than 20 business days after the TRUS commenced trading. I checked the ten latest updates and found they were caused by backdated new connections, switches in, reconnections on switches in, withdrawals or corrections.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.3 With: Clause 10 of schedule 11.1	**MEEN** 519 late reconnection updates. 343 late disconnection updates. 40,980 late trader updates. 1,237 ICPs did not have ANZSIC codes populated within 20 business days of switching in, or initial electrical connection. **TRUS** 631 late reconnection updates. 532 late disconnection updates. 3,670 late trader updates. 490 ICPs did not have ANZSIC codes populated within 20 business days of switching in, or initial electrical connection.

From: 01-Jan-23 To: 8-Nov-23	Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate. The majority of updates were on time but there is some room for improvement. Delays in updating the registry due to heavy workloads associated with the migration of ICPs from MEEN to TRUS are not expected to continue now that the migration is complete. The impact is low because almost all of the late updates were processed in time for revised submission information to be provided through the revision process.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: We expect to see these numbers come down significantly for the MEEN code as the majority of Mercury ICPs have migrated to the TRUS code in the last 12 months. We will continue to monitor and take timely action where updates are required.	Ongoing	Identified
TRUS continues to engage with third parties e.g. MEPs and Networks to try and reduce the number of late updates across reconnections, disconnections and trader updates impacted by late updates/job closures on their part. TRUS continues to monitor a number of reports to identify any gaps in our processes or current reporting to ensure all updates are made in as timely fashion as possible.	Ongoing	
The 490 ICPs with incorrect ANZIC codes have now been corrected.	Completed	
Preventative actions taken to ensure no further issues will occur	**Completion date**	
MEEN: As above. TRUS continues to engage with third parties around late updates that impact our ability to update Trader owned fields in a timely manner. Conversations with IHUB specifically continue around the ongoing issue of alternate MEP metering being installed causing late MEP nominations. ANZIC codes were impacted by the migration and there shouldn't be a recurrence.	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

MEEN

<u>Retailers responsibility to nominate and record MEP in the registry</u>

The new connections process requires new connections to be approved by Mercury and an arrangement with the MEP to be in place if the ICP is to be metered. MEP nominations are raised when a job for meter installation is raised with the MEP.

Mercury maintains a matrix of which MEP to nominate based on the connection type and region on Sharepoint, and the matrix is updated as changes occur. The preferred MEP is manually entered into a field in SAP to create the MEP nomination, and a bulk process can be used to upload MEP details into SAP where multiple ICPs require nominations. Otherwise, MEP nominations are entered directly into the registry user interface.

MEEN used to run a monthly query to identify rejected MEP nominations which may need to be reissued, but this is no longer monitored. Two of the 5,238 MEP nominations identified on the event detail report were rejected, and neither was reissued or required to be reissued. MEEN does not intend to reinstate this monitoring; due to the reduced number of ICPs supplied and most being commercial, meter changes are now managed closely by the commercial operations team.

The audit compliance report recorded 27 “active” ICPs where the metering category was 9 or blank, and the unmetered flag was set to no. All were metered or moved to “inactive” status after the report was run or had accepted MEP nominations and were awaiting meter asset data.

The audit compliance report identified a new connection for ICP 1100000650WM2A3 where an MEP nomination was not accepted within 14 business days. The nomination was not genuinely late, and the MEP nomination was accepted prior to initial electrical connection.

ICP Decommissioning

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

Where decommissioning is required, MEEN raises a field services job for the MEP to collect their meter and the network to decommission. Once work completion paperwork is received, the disconnection reads and status are transferred to SAP either manually or through the B2B process, and the status is manually updated to "inactive - ready for decommissioning" in SAP and transferred to the registry.

When an ICP is decommissioned, an attempt is made to read the meter at the time of removal. If this is not possible a permanent estimate reading is created.

A diverse sample of ten ICPs were examined, and an attempt to read the meter was made at the time of removal. Where an actual read could not be obtained for the disconnection date, a permanent estimate read was entered. The MEP was notified of the decommissioning by issuing a service order for meter removal, except where the MEP had advised MEEN that the meter was already removed.

TRUS

Retailers Responsibility to Nominate and Record MEP in the Registry

The new connections process requires new connections to be approved by TRUS and an arrangement with the MEP to be in place if the ICP is to be metered. MEP nominations are raised when a job for meter installation is raised with the MEP, and a spreadsheet is used to determine the preferred MEP for the ICP's area. MEP nominations are entered into GTV and then automatically transferred to the registry.

Daily Power BI reports are used to identify and resolve failed MEP nominations and rejected MEP nominations. TRUS raised 20,080 MEP nominations and seven (0.03%) were rejected. Five were rejected because the wrong MEP was nominated, and they were promptly reissued to the correct MEP or not reissued if the correct MEP was already recorded in the registry. Two were rejected in error by the MEP and later accepted.

The audit compliance report recorded 271 "active" ICPs where the metering category was 9 or blank, and the unmetered flag was set to no. 270 ICPs had metering added after the report was run or accepted MEP nominations and were awaiting meter asset data. ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active". The incorrect status is recorded as non-compliance in **sections 2.1** and **3.9**.

The audit compliance report did not record any instances where an MEP nomination was not accepted within 14 business days.

ICP Decommissioning

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

Where decommissioning is required, TRUS raises a field services job for the MEP to collect their meter and the network to decommission. Once work completion paperwork is received in Jobtrack, the disconnection reads, and status are transferred to GTV and then to the registry.

When an ICP is decommissioned, an attempt is made to read the meter at the time of removal. If this is not possible a permanent estimate reading is created. Any ICPs with meters removed on the registry

are added to a validation bucket in SAP and reviewed to ensure that actual or estimated removal readings are correctly loaded.

A diverse sample of ten ICPs were examined, and an attempt to read the meter was made at the time of removal. Where an actual read could not be obtained for the disconnection date, a permanent estimate read was entered. The MEP was notified of the decommissioning by issuing a service order for meter removal, except where the MEP had advised TRUS that the meter was already removed.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.4 With: Clause 11.18 From: 25-Jan-23 To: 25-Sep-23	**MEEN** Two of the 5,238 MEP nominations were rejected because they were initially sent to the wrong MEP. **TRUS** Five of the 20,080 MEP nominations were rejected because they were initially sent to the wrong MEP. 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, and a very small number of exceptions were identified. MEEN's controls could be improved by reinstating monitoring of rejected MEP nominations, but they do not intend to do this because of the small number of ICPs now supplied. The audit risk rating is low as the as the volume and percentage of invalid MEP nominations was small and the correct MEP was subsequently nominated if required.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: No action required. TRUS: Rejected MEP nominations were identified via reporting and corrected on a case by case basis depending on the reason the nomination was rejected.	N/A Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
MEEN: No further actions required; our measures are strong enough to avoid this occurring frequently.	N/A Completed	

TRUS: Reporting continues to be utilised to identify where MEP nominations are rejected. This is used to not only identify when this scenario occurs but also as an opportunity to identify training issues. TRUS is comfortable that all scenarios are being identified which is reflected by all scenarios having been identified and corrected prior to being identified via Audit.		

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.

I considered the impact of late updates to registry information on reconciliation submission data. Where a late update is made within 14 months of the event date, revised submission information will automatically be provided by SAP for MEEN and GTV for TRUS. Where status changes or trader information changes affecting submission were older than 14 months, I checked a sample of events and reviewed surrounding records, the nature of the change, and whether correct submission data was provided by revision 14. Submission issues relating to late updates are recorded as non-compliance in **section 12.7**.

Audit commentary

MEEN

New connection information timeliness

The new connection process is described in detail in **section 2.9**. The table below shows the timeliness of new connection updates:

Event	Year	ICPs notified greater than five days	Average Notification Days	Percentage Compliant
Change to "active" - new connections	2017	200	3.9	87%
	2018	73	4.3	79%
	2019	153	3.3	93%
	2020	488	4.71	88%
	Dec 2020	636	4.75	84.06%
	Nov 2021	1,285	8.91	65.06%
	Nov 2022	947	7.96	74.38%
	Dec 2023	**740**	**9.98**	**72.71%**

91 of the 740 late new connections were updated more than 30 business days after the event, 132 were updated more than 100 business days after the event, and four were updated more than 1,000 business days after the event. The latest update was 1,446 business days after the event date.

As discussed in **section 3.3**, there was one late update to 1,12 "inactive - new connection in progress" status which also resulted in a late MEP nomination.

I checked a sample of the ten latest unmetered load new connections, all eight late HHR new connections and the 20 latest NHH new connections and found they were delayed by:

- late receipt of connection paperwork or late confirmation of the correct connection date,
- the status update step not being completed as part of the B2B process, and not being identified by manual checks before the new connection job was closed,
- delays in manually processing new connections due to heavy workloads, especially during the period of migration from MEEN to TRUS,
- a delay in completing a residual load new connection, because these are rare for MEEN and the process needed to be confirmed, and
- a delay in completing a commercial unmetered load new connection because a commercial metered new connection job was raised; the job needed to be cancelled and re-raised before the connection paperwork could be processed.

All of the late updates had the correct status update and event date, apart from:

- 0000050578WE39F which was updated to "active" status in error because MEEN believed the connection was complete and was moved back to "inactive - new connection in progress" status,
- 0000055356HR29C which was connected on 25 July 2023 but is "active" from 12 June 2023, and
- 0007213171RNB18 which was connected on 23 December 2022 but is "active" from 12 December 2022.

The audit compliance report identified a new connection for ICP 1100000650WM2A3 where an MEP nomination was not accepted within 14 business days. The nomination was not genuinely late, and the MEP nomination was accepted prior to initial electrical connection.

During the Genesis and Pulse audits three ICPs connected by MEEN which were not updated to "active" status before they switched out were identified. They were ICP 1002167631LCA20 connected 17 February 2023 switched 8 July 2023, 1002167629LC299 connected 20 February 2023 switched 8 July 2023, and 1002167628LCEDC connected 17 February 2023 switched 20 May 2023.

New connection information accuracy

The AC020 report identified 19 ICPs with an initial electrical connection date populated which had not been made "active". All were timing differences and updated to "active" status after the report was run.

"Active" dates for new connections were compared to the distributor's initial electrical connection date, and MEP's certification date using the AC020 report. The AC020 report identified 444 ICPs with date discrepancies. For seven ICPs the "active" date and initial electrical connection date was consistent and the ICP was unmetered. The other 437 exceptions were checked:

Exception type	Quantity	Sample	Quantity incorrect	Incorrect ICP details
IECD = active date and MCD ≠ active date	7	5	4	0000052877HBC47 was connected on 3 November 2023 but is "active" from 7 November 2023. 0000062459NTB2E was connected on 15 December 2023 but is "active" from 16 December 2023. 0010000985TE72F was connected on 22 June 2023 but is "active" from 23 June 2023. 0010001105TE3C8 was connected on 5 July 2023 but is "active" from 6 July 2023.
IECD ≠ active date and MCD = active date	41	5	-	
IECD ≠ active date and MCD ≠ active date	3	3	3	1002165029LC7DF was connected on 17 August 2023 but is "active" from 18 August 2023. 1002161321UNA5C was connected on 10 October 2023 but is "active" from 11 October 2023. 1100000374WMBF99 was connected on 13 December 2022 but is "active" from 13 January 2023.
IECD = active date and no MCD	21	5	-	
IECD ≠ active date and no MCD	3	3	-	
No IECD and MCD = active date	332	5	-	

Exception type	Quantity	Sample	Quantity incorrect	Incorrect ICP details
No IECD and MCD ≠ active date	1	1	-	
No IECD and no MCD	24	5	2	0007213008RN910 was connected on 17 February 2023 but is "active" from 7 December 2022. 1002162380UNCE6 was connected on 28 July 2022 but is "active" from 23 July 2022.
No IECD and unmetered	5	5	1	0007213171RNB18 was connected on 23 December 2022 but is "active" from 12 December 2022.
Total	437	37	10	

Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit.

I checked ICPs which were found to have incorrect "active" status dates during the previous audit and found they have been resolved except where the ICPs switched out before a correction could be processed.

TRUS

New connection information timeliness

The new connection process is described in detail in **section 2.9**. MEP nomination occurs when the ICP is at "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 in the table below:

Review period end	ICPs notified greater than five days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2015	358	14%	14.3
2016	140	80%	4.7
2017	169	91%	2.8
2018	120	91%	2.9
2020	487	92.60%	3.17
Jan 2021	642	88.26%	6.81
Dec 2021	417	92.14%	4.22
Nov 2022	661	90.40%	5.11
Dec 2023	**937**	**90.08%**	**3.75**

44 of the 937 late new connections were updated more than 30 business days after the event, 19 were updated more than 100 business days after the event, and one was updated more than 1,000 business days after the event. The latest update was 6,004 business days after the event date. No HHR or unmetered new connections were late, and I checked the 30 latest NHH new connections and found they were delayed by:

- late receipt of connection paperwork or late confirmation of the correct connection date, including where the MEP advised they had initially provided incorrect information,
- corrections following the previous audit, or corrections processed after errors were identified through validation processes, and
- confusion about ICP addressing which needed to be investigated to confirm the update was made to the correct ICP.

All of the late updates had the correct status update and event date, apart from one ICP which was corrected during the audit.

As discussed in **section 3.3**, there were 59 late updates to 1,12 "inactive - new connection in progress" status for new connections, which also resulted in late MEP nominations.

New connection information accuracy

The AC020 report identified 11 ICPs with an initial electrical connection date populated which had not been made "active". All were timing differences and the ICPs were moved to "active" status effective from the initial electrical connection date after the report was run.

"Active" dates for new connections were compared to the distributor's initial electrical connection date and the MEP's certification date using the AC020 report. The AC020 report identified 1,665 ICPs with date discrepancies. One discrepancy was not genuine because the ICPs was unmetered, and the "active" status date matched the initial electrical connection date. The 1,664 ICPs with genuine discrepancies were checked:

Exception type	Quantity	Sample	Quantity incorrect	Comment
IECD = active date and MCD ≠ active date	13	5	2	Both were corrected during the audit, including temporarily connected ICP 1000028642BP4D4.
IECD ≠ active date and MCD = active date	159	5	-	
IECD ≠ active date and MCD ≠ active date	6	5	5	All five were corrected during the audit.
IECD = active date and no MCD	172	5	-	
IECD ≠ active date and no MCD	1	1	-	
No IECD and MCD = active date	1177	5	-	
No IECD and MCD ≠ active date	1	5	1	The ICP was connected by the previous trader and the switch has been withdrawn so that they can correct the "active" status date.
No IECD and no MCD	135	5	-	

Exception type	Quantity	Sample	Quantity incorrect	Comment
Total	**1664**	**36**	**8**	

Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit.

I checked ICPs which were found to have incorrect "active" status dates during the previous audit and found they have been resolved.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.5 With: Clause 9 of schedule 11.1 From: 05-Jan-23 To: 11-Dec-23	**MEEN** 740 late updates to "active" status for new connections. One late MEP nomination for a new connection. 12 new connections had incorrect "active" status dates, and one was corrected during the audit. Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit. Three ICPs connected by MEEN were not updated to "active" status before they switched out. **TRUS** 937 late updates to "active" status for new connections. 59 late MEP nominations for new connections. Nine new connections had incorrect "active" status dates, and one was corrected during the audit. Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit. 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	Overall, the controls are moderate. For TRUS the controls are strong, robust daily validation processes are in place and most late updates were for reasons not within their direct control. For MEEN the controls are moderate, because validation processes are not consistently identifying missed or incorrect updates, and heavy workloads have led

	to an increase in late updates and average business days to process updates. Delays in updating the registry due to heavy workloads associated with the migration of ICPs from MEEN to TRUS are not expected to continue now that the migration is complete. The impact is low because most late updates were processed in time for revised submission information to be provided through the revision process.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: ICPs identified were fixed during audit. TRUS has robust reporting across the New Connections processes. Reports are delivered and worked daily to identify all sites with date mismatches between first active date, IED and meter certification date. A new report has been created to look for where GTV has been updated with Trader details for a New Connection but this has not flowed to the registry. This is currently delivering daily when results appear.	April 2024 Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
MEEN: Dates for connection were confirmed by network, this is what we used to update SAP and registry. Further training will be provided to ensure manual checks are completed where statuses are automatically updated to ensure we are picking up where the status date is incorrect. TRUS will continue to utilise exception and discrepancy reporting to identify any gaps in our processes and ensure all updates are made in as timely a fashion as possible. TRUS will continue to engage with third parties where needed to minimise impacts from late updates by third parties e.g. MEPs/Networks. Where opportunities for new reporting are identified these will be implemented immediately.	May 2024 Completed	

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

Code reference

Clause 9 (1(k) of Schedule 11.1

Code related audit information

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

Audit observation

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

Audit commentary

MEEN

ANZSIC codes are confirmed as part of the customer application process. SAS queries to identify missing and unknown ANZSIC codes are run weekly, and historic ICPs with unknown ANZSIC codes are being worked through.

Missing ANZSIC codes

Two DUML ICPs with blank ANZSIC codes were identified on the AC020 report. The same two exceptions have been present since 2018, and the registry will not allow an update to the trader details until an MEP is registered for a HHR site even though these are DUML ICPs. I have not recorded non-compliance as this is a registry issue.

ICP	SAP ANZSIC	Registry ANZSIC
0001264718UN3E4	O753	Blank
0001264719UNFA1	O753	Blank

Unknown ANZSIC codes

44 "active" ICPs had ANZSIC code T994 "don't know". 36 were timing differences updated prior to the audit, and the other eight were updated during the audit. ANZSIC code is a mandatory field when entering customer applications into SAP. If an ICP has residential pricing it will default to a residential ANZSIC in SAP. If the ICP has business pricing and an ANZSIC code is not entered, it will default to a T994 don't know ANZSIC in SAP. 16 of the 76 transfer switch NTs and 463 of the 1,618 switch move NTs had a T994 ANZSIC applied. I checked a sample of ten and found they all had valid commercial ANZSIC codes with their previous trader and were changed to T994 as part of the switch, and then later corrected back to a valid code or withdrawn by MEEN. Failure to consistently populate correct ANZSIC codes for switch ins has resulted in an increase in incorrect ANZSIC codes, and a recommendation to consistently record correct ANZSIC codes in NT files is made in **section 4.1**.

Residential ANZSIC codes for ICPs with category two or higher

The AC020 report recorded nine meter category two ICPs and one meter category three ICP with residential ANZSIC codes. All were incorrect and updated to business ANZSIC codes during the audit.

Sample findings

A diverse sample of 40 "active" ICPs were checked to confirm the validity of ANZSIC codes, including ICPs assigned to each of the ten most frequently used codes. Seven were incorrect and were updated to the correct codes during the audit.

TRUS

ANZSIC codes are captured at the point of customer registration and then reconfirmed as part of the welcome call to newly connected customers. ANZSIC code discrepancies are identified using a Power BI report, which displays ICPs with meter category two with residential ANZSIC codes , ICPs with missing or blank ANZSIC codes, and ICPs where the ANZSIC code in the registry differs from the one in GTV.

There is also a weekly comparison between the ANZSIC code recorded in the ICP lifecycle and the ANZSIC code recorded in the background of the ICP in GTV.

Missing and unknown ANZSIC codes

One ICP had a T994 ANZSIC code on the AC020 report, which was updated to residential during the audit.

Residential ANZSIC codes for ICPs with category two or higher

The AC020 trader compliance report recorded 83 category two ICPs with residential ANZSIC codes and no ICPs with meter category three. I checked a sample of 50 ICPs and confirmed 33 were residential, three had switched and the other 14 ICPs had residential codes incorrectly applied and were corrected during the audit.

Sample findings

A diverse sample of 130 "active" ICPs were checked to confirm the validity of ANZSIC codes, including ICPs assigned to each of the ten most frequently used codes. Three ICPs were found to have incorrect ANZSIC codes which were identified and corrected during the audit.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.6 With: 9 (1(k) of Schedule 11.1 From: 09-Dec-23 To: 29-Apr-24	**MEEN** Eight ICPs with T994 "don't know" ANZSIC codes, and ten meter category two or three ICPs with residential ANZSIC codes had incorrect ANZSIC codes applied, and were identified and corrected during the audit. Seven of a sample of 40 ICPs sampled (17.5%) had incorrect ANZSIC codes assigned and were corrected during the audit. **TRUS** One ICP with a T994 "don't know" ANZSIC code, and 14 meter category two ICPs with residential ANZSIC codes were corrected during the audit. Three ICPs of the 130 ICPs sampled (2.3%) had incorrect ANZSIC codes applied and were identified and corrected during the audit. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate. For MEEN failure to update ANZSIC codes in SAP for ICPs switching in can result in invalid ANZSIC codes being applied on the registry. For TRUS exceptions are identified, but not always resolved promptly due to workloads. Incorrect ANZSIC codes have no direct impact on reconciliation therefore the audit risk rating is low. There is an impact on reporting by the Electricity Authority.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: T994s have decreased dramatically since the last audit and we expect to see these numbers come down further for the MEEN code as the majority of Mercury ICPs have migrated to the TRUS code in the last 12 months. We will continue to monitor and take timely action where updates are required. TRUS: All incorrect ANZSIC codes were corrected during the audit	Ongoing Complete	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
MEEN: As above TRUS: ANZIC codes were impacted by the migration and there shouldn't be a recurrence.	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 AC020 reports were examined to identify ICPs where:

- unmetered load is identified by the distributor, and none is recorded by Mercury,
- unmetered load is identified by Mercury, and none is recorded by the distributor,
- unmetered load is indicated but the unmetered daily kWh is zero or blank, and
- Mercury's unmetered load figure does not match with the distributor's figure (where it is possible to calculate this if the distributor is using the recommended format) and the variance is greater than 0.1 kWh per day (0.1 kWh per day was chosen as a sample only; this does not indicate compliance is achieved if an error is found that is less than 0.1 kWh per day).

Audit commentary

MEEN

Management of unmetered load information

MEEN supplies 48 ICPs with DUML and 202 ICPs with standard unmetered load recorded by the distributor. No ICPs with shared unmetered load are supplied.

All new connections for unmetered load are now completed by TRUS using GTV. Before the migration of mass market ICPs from MEEN to TRUS, MEEN managed new connections and changes to unmetered

load using SAP. Unmetered daily kWh is recorded in two locations in SAP; the retailer time slice table (which reflects the SAP value) and the installation facts (which reflects the registry value).

Unmetered load details are validated monthly including:

- identifying mismatch between the registry unmetered load and SAP's installation facts,
- identifying mismatch between the registry unmetered load and SAP's time slice information (which is used for submission),
- identifying missing unmetered load time slices where the unmetered load flag is set to Y and there is missing information in SAP, and
- review of the AC020 audit compliance unmetered load reports.

Exceptions are investigated to determine the correct values and SAP and the registry are updated as necessary. I saw evidence that once migration from MEEN to TRUS was completed and workloads settled, significant effort has been put into investigating and resolving unmetered load discrepancies. The previous audit recommendations to reinstate unmetered load checks and validate the unmetered load for specific ICPs have been adopted.

Active ICPs with no metering or unmetered load recorded by MEEN

The audit compliance report recorded 27 "active" ICPs where the metering category was 9 or blank, and the unmetered flag was set to no. All were metered or moved to "inactive" status after the report was run or had accepted MEP nominations and were awaiting meter asset data.

Active ICPs with unmetered load recorded by the distributor but not MEEN

The AC020 report recorded three ICPs where the distributor recorded unmetered load, but the trader did not. MEEN confirmed during the audit that the distributor unmetered load details were correct, and they intended to update the registry, but this has not been completed yet:

ICP Identifier	Unmetered daily kWh on registry	Expected unmetered daily kWh	Unmetered Load Details - Distributor
0007301973NVCDF	Null	3.17	0264;12.0;3 x 80W Mercury Under Veranda Lights
0004450225ML4AC	Null (DUML)	ENG	;;Unmetered Public Streetlighting
0004450157ML277	Null (DUML)	ENG	;;UNMETERED PUBLIC STREETLIGHTING

Active ICPs with unmetered load recorded by MEEN but not the distributor

MEEN has 39 "active" ICPs where they have recorded unmetered load, but no unmetered load is recorded by the distributor including five DUML ICPs, 23 unmetered residual load ICPs, and 11 standard unmetered load ICPs.

I checked the 11 standard unmetered load ICPs and found four switched out after the report was run. The other seven ICPs are being checked with the network to confirm whether unmetered load is present and the load connected. MEEN will leave the existing unmetered load details in the registry and SAP until the correct values are confirmed.

Accuracy of daily unmetered kWh

51 ICPs had the unmetered flag set to yes and a daily unmetered kWh of zero or ENG. 22 SB (residual load ICPs) have zero and 29 DUML ICPs have ENG in the unmetered daily kWh field and are compliant.

The AC020 report recorded 56 ICPs where the daily unmetered kWh differed from the recalculation based on the distributor information by more than ± 0.1 kWh. I found 49 ICPs had correct daily unmetered kWh

recorded by MEEN, because they were DUML ICPs and are compliant, or they invalidly appeared on the report because the distributor recorded kW instead of W.

I checked the other seven ICPs:

- one ICP had correct average daily kWh and the network updated their details during the audit,
- two ICPs are being checked with the network to confirm whether unmetered load is present and the load connected; MEEN will leave the existing unmetered load details in the registry and SAP until the correct values are confirmed, and
- four ICPs were confirmed to have incorrect average daily kWh and were corrected during the audit which is recorded as non-compliance.

Unmetered builder's temporary supply (BTS) ICPs

Two unmetered BTS ICPs with the unmetered flag set to Y were recorded on the registry list.

- 0007189650RN03A is no longer required and is to be decommissioned.
- 0000509351DEAD4 is being checked with the network to determine whether it is still required. The original owner sold the property before work was completed and the new owner is unknown.

TRUS

Management of unmetered load information

TRUS supplies two ICPs with DUML, 210 ICPs with shared unmetered load and 287 ICPs with standard unmetered load recorded by the distributor.

TRUS rarely completes new connections for unmetered load. New connections only occur where the ICP is part of an existing customer group supplied by TRUS. They follow the normal new connection process except no meter is installed.

Unmetered load is validated by the Revenue Assurance team using discrepancy reporting which identifies additions, removals and changes to unmetered load, and differences between GTV, registry and distributor information. This includes:

- a comparison between registry unmetered load data and GTV, including descriptions and trader unmetered kWh, and
- a comparison between the daily unmetered kWh recorded by TRUS and the value calculated based on the distributor's unmetered load description.

Discrepancies are investigated by checking paperwork and with the customer and/or network. If necessary, site visits are completed. Discrepancies are reviewed daily to every few days, and notes are made to record progress and outcomes of any investigations into discrepancies.

Active ICPs with no metering or unmetered load recorded by TRUS

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

The audit compliance report recorded 271 "active" ICPs where the metering category was 9 or blank, and the unmetered flag was set to no. 270 ICPs had metering added after the report was run or accepted MEP nominations and were awaiting meter asset data. ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active". The incorrect status is recorded as non-compliance in **sections 2.1** and **3.9**.

Active ICPs with unmetered load recorded by the distributor but not TRUS

The AC020 report recorded seven ICPs where the distributor recorded unmetered load, but the trader did not:

- six ICPs were confirmed to have their metered load removed and TRUS had correctly recorded no unmetered load, and
- one ICP did have unmetered load recorded, and the details were accidentally removed as part of a trader update to change a profile; they were correctly reinstated during the audit, and revised submission information will be provided through the revision process.

The previous audit found that ICPs 0005741246RN2BC and 0005732298RN43C had their unmetered load excluded from submission because the UML code was not recorded in the registry, and I confirmed that this has been corrected.

Active ICPs with unmetered load recorded by TRUS but not the distributor

43 "active" ICPs have unmetered load recorded by the trader but not the distributor:

- 16 ICPs were confirmed to have unmetered load and the TRUS unmetered load details are correct,
- 23 ICPs were confirmed not to have unmetered load connected: 17 ICPs have had their unmetered load removed in GTV and the registry, and the other six ICPs[3] have had their unmetered load removed in GTV but are still to be corrected on the registry, and
- four ICPs[4] are being checked with the customer and network to confirm whether unmetered load is still present, and unmetered volumes continue to be reported in the meantime.

Accuracy of daily unmetered kWh

Two ICPs had the unmetered flag set to yes and a daily unmetered kWh of zero. ICP 0000602090WP7E0 was correct based on the trader and distributor unmetered load details, and 1000518052PC070 had a backdated correction to its unmetered load processed during the audit.

The AC020 report recorded four ICPs where the daily unmetered kWh differed from the recalculation based on the distributor information by more than ± 0.1 kWh. One was a report calculation error for shared unmetered load. The other three ICPs were examined, and I found:

ICP	Findings
0000540450TE6E7	The unmetered load details for ICP 0000540450TE6E7 were confirmed by a site visit and the TRUS unmetered daily kWh is correct.
0000018605WEC0F	ICP 0000018605WEC0F is a shared unmetered load ICP. TRUS supplies 210 ICPs with shared unmetered load. All have the shared unmetered load flag set to Y and a non-zero unmetered daily kWh. 209 matched the calculation based on the distributor's values within ±0.1 kWh. For ICP 0000018605WEC0F, TRUS calculated the daily unmetered kWh based on the distributor information recorded against this ICP – "**0046**:11.5:2 Light across 4 ICPs", not realising that the records for the shared ICP 0000054087WEFD3 were inconsistent and showed – "**158**;11.5; 2 ROW lights across 4 ICPS" on shared ICPs 0000019009WE8B7 0000018605WEC0F 0000020054WE268 0000017705WEC6B. TRUS has applied 0.52 kWh per day, and investigation should be completed to confirm the correct shared unmetered load details.
000010328EA262	ICP 0000010328EA262 is a standard unmetered load ICP and the trader details - **0076**;12.0;2x38Watts tubes for UV light, differ from the distributor details - **0166**;12.0; 2 x 70W Lights & 2 x 13W Ballast. Further investigation will be completed to confirm

[3] 0000025570EA874, 0007725030WAFB4, 0000026313WEBC4, 0007207672RN6BB, 1000595884PC9B5, and 0007205698RNDD0.
[4] 0000512120WP803, 1000504124PCEC7, 0000483484CEEC9 and 0000046168CE847.

ICP	Findings
	the correct unmetered load details, and then the registry and GTV will be updated as necessary. The expected unmetered daily kWh is 158 x 11.5 / 4 ICPs / 1000 = 0.454 kWh per day instead of the 0.302 populated. The ICP switched out on 4 March 2024.

Recommendation	Description	Audited party comment	Remedial action
Validation of distributor unmetered load details	**TRUS** Confirm the correct unmetered load details for ICPs 0000018605WEC0F and 000010328EA262 with the distributor and make corrections to unmetered load details if necessary.	0000018605WEC0F has been corrected as of 22/05/2024. 0000010328EA262 is showing on the registry as being with TRUS but isn't visible in either GTV or SAP, we are investigating.	Investigating
Calculation of daily unmetered kWh for shared unmetered load	**TRUS** When calculating the daily unmetered kWh for shared unmetered load ICPs, check the distributor unmetered load details for the parent ICP to confirm whether the shared wattage recorded reflects the total before it is shared across the ICPs, or after.	Adopted, we will be following this process moving forward.	Identified

The previous audit recommended that TRUS should check whether ICP 1000595713PC497 is or should be recorded in the Western Bay of Plenty District Council's DUML database. TRUS has not held a customer for this ICP since 1 February 2022, and is unable to confirm.

Unmetered builder's temporary supply (BTS) ICPs

Four unmetered BTS ICPs with the unmetered flag set to Y were recorded on the registry list. The ICPs are all metered and expected to have the unmetered BTS details removed. Two were corrected during the audit, and ICPs 0007205698RNDD0 and 0007207672RN6BB remain incorrect. These ICPs are also recorded as "active" ICPs with unmetered load recorded by the trader but not the distributor, which needs to be updated.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.7 With: Clause 9(1)(f) of Schedule 11.1	**MEEN** Three "active" ICPs with unmetered load have no daily unmetered kWh recorded on the registry (0007301973NVCDF, 0004450225ML4AC and 0004450157ML277). Four ICPs were confirmed to have incorrect average daily kWh and were corrected during the audit.

From: 01-Apr-23 To: 03-Mar-24	**TRUS** 23 ICPs did not have unmetered load connected but had trader unmetered load details recorded on the registry. 17 were corrected during the audit and six ICPs still have unmetered load recorded. GTV is correct, so submission information is correct. One ICP had its unmetered load details removed as part of a trader update to change a profile. They were correctly reinstated during the audit. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating
Low	The controls are moderate, because there are good validation processes, but some exceptions were not resolved before being found during the audit. The audit risk rating is low because the impact on settlement is minor, and revised submission information will be washed up.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: Registry details have been corrected during the audit. TRUS: We are reviewing the process going forward and will identify and fix where required.	May 2024 July 2024	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
MEEN: We have given refresher training for DUML/UML ICPs when switching in. TRUS: As above.	May 2024 Ongoing	

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 processes were examined in detail as discussed in **sections 2.9** and **3.5**.

The timeliness of data for reconnections is assessed in **section 3.3**, and a sample of 20 updates were checked for accuracy using the audit compliance and event detail reports.

Audit commentary

MEEN

The status of an ICP is only changed to "active" once confirmation has been received from a contractor. Submission information is provided for all "active" ICPs. SAP will not allow more than one party per ICP, nor will it allow an ICP to be set up without either a meter, or if it is unmetered, the daily kWh.

Status information is maintained within SAP, and then transferred to the registry, but is also manually updated using the registry interface where necessary. Manual updates occur when automated updates fail due to errors, or an update requires reversal or replacement of historic registry records. The process to manage status updates is documented in more detail in **section 3.3**.

New connections

I checked the accuracy of new connection information by reviewing the AC020, registry list and event detail reports as discussed in **section 3.5**.

12 inaccuracies were found within a typical sample of 38 new connection updates, and a sample of 37 new connection updates where there were discrepancies between the "active" status date, initial electrical connection date and meter certification date if the ICP was metered:

- 0000050578WE39F which was updated to "active" status in error because MEEN believed the connection was complete and was moved back to "inactive - new connection in progress" status,
- 0000055356HR29C was connected on 25 July 2023 but is "active" from 12 June 2023,
- 0007213171RNB18 was connected on 23 December 2022 but is "active" from 12 December 2022,
- 0000052877HBC47 was connected on 3 November 2023 but is "active" from 7 November 2023,
- 0000062459NTB2E was connected on 15 December 2023 but is "active" from 16 December 2023,
- 0010000985TE72F was connected on 22 June 2023 but is "active" from 23 June 2023,
- 0010001105TE3C8 was connected on 5 July 2023 but is "active" from 6 July 2023,
- 1002165029LC7DF was connected on 17 August 2023 but is "active" from 18 August 2023,
- 1002161321UNA5C was connected on 10 October 2023 but is "active" from 11 October 2023,
- 1100000374WMBF99 was connected on 13 December 2022 but is "active" from 13 January 2023,
- 0007213008RN910 was connected on 17 February 2023 but is "active" from 7 December 2022, and
- 1002162380UNCE6 was connected on 28 July 2022 but is "active" from 23 July 2022.

During the Genesis and Pulse audits three ICPs connected by MEEN which were not updated to "active" status before they switched out were identified. They were ICP 1002167631LCA20 connected 17 February 2023 switched 8 July 2023, 1002167629LC299 connected 20 February 2023 switched 8 July 2023, and 1002167628LCEDC connected 17 February 2023 switched 20 May 2023.

Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit.

The missed and incorrect status updates were not identified and corrected through the manual check of all new connections before the service order is closed, which is where they are expected to be found and resolved.

Reconnections

A sample of 20 reconnections were checked. All had the correct status and event date applied, apart from two ICP[5] which SAP automatically processed reconnection from the gain date in error following a reversal. Review of late meter certifications for reconnections identified a further five ICPs[6] which had invalid reconnections from the gain date processed by SAP.

MEEN is not sure why this sometimes occurs, but it is believed to be caused by the SAP switch loader. MEEN identifies affected ICPs using the AC020 audit compliance report which shows late status updates. The Risk Control Co-ordinator checks all late updates to determine whether they are correct.

TRUS

The status of an ICP is only changed to "active" once confirmation has been received from a contractor. Submission information is provided for all "active" ICPs. GTV will not allow more than one party per ICP, nor will it allow an ICP to be set up without either a meter, or if it is unmetered, the daily kWh.

Status information is maintained within GTV, and then transferred to the registry. The process to manage status updates is documented in more detail in **section 3.3**.

Disconnection and reconnection reads are occasionally entered usually only where the disconnection or reconnection coincides with a meter installation, removal or change. Because the historic estimate process forces consumption into the "active" part of any read-to-read period, GTV will report consumption against the "active" days as long as part of the read-to-read period is "active". TRUS intends to consistently enter disconnection and reconnection readings once Jobtrack is replaced.

New connections

I checked the accuracy of new connection information by reviewing the AC020, registry list and event detail reports as discussed in **section 3.5**.

Nine inaccuracies were found within a typical sample of 30 new connection updates, and a sample of 36 new connection updates where there were discrepancies between the "active" status date, initial electrical connection date and meter certification date if the ICP was metered. All were corrected as soon as they were identified during the audit.

Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit.

I checked ICPs which were found to have incorrect "active" status dates during the previous audit and found they have been resolved.

Reconnections

A sample of 20 reconnections were checked. Apart from one ICP where an incorrect status was applied, all the updates had the correct status and event date. The incorrect status was updated during the audit.

Audit outcome

Non-compliant

[5] 0000194946TP324 30 March 2023 and 1002054416LC718 17 March 2023.
[6] 0000036395UNBA1 27 April 2023, 0007056249RN99A 18 February 2023, 0000033093DEC02 2 April 2023, 0001392827UN0FD 1 December 2023, 1001280794UN202 23 March 2023.

Non-compliance	Description
Audit Ref: 3.8 With: Clause 17 Schedule 11.1 From: 07-Nov-22 To: 11-Oct-23	**MEEN** 12 new connections had incorrect "active" status dates, and one was corrected during the audit. Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit. Three ICPs connected by MEEN were not updated to "active" status before they switched out. Seven ICPs had invalid reconnections processed by SAP. **TRUS** Nine new connections had incorrect "active" status dates and were corrected during the audit. Two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded. They both had their status dates corrected during the audit. One ICP had a reconnection incorrectly processed and was corrected during the audit. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate, because there are good validation processes, but some exceptions were not identified and resolved before being found during the audit. The audit risk rating is low because the impact on settlement is minor, and a small number of ICPs were non-compliant. Late or inaccurate changes to "active" can result in delays in providing submission information and billing the customer, and incorrect "active" dates can have an impact on submission data.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: ICPs identified were fixed during audit. TRUS: All ICPs with incorrect status dates have been corrected either prior to or during the audit.	April 2024 Completed	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	

MEEN: Dates for connection were confirmed by network, this is what we used to update SAP and registry. Further training will be provided to ensure manual checks are completed where statuses are automatically updated to ensure we are picking up where the status date is incorrect. TRUS will continue to utilise exception and discrepancy reporting to identify any gaps in our processes and ensure all updates are made in as timely a fashion as possible.	May 2024 Completed	

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.

The timeliness of updates to "inactive" statuses is detailed in **section 3.3**.

Audit commentary

MEEN

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

Status information is maintained within SAP, and then transferred to the registry, but is also manually updated using the registry interface where necessary. Manual updates occur when automated updates fail due to errors, or an update requires reversal or replacement of historic registry records. The process to manage status updates is documented in more detail in **section 3.3**.

Inactive - new connection in progress

ICPs at the "inactive - new connection in progress" status are monitored. Open new connection jobs are monitored for Intellihub and Bluecurrent, who complete most of the new connections. Intellihub and Bluecurrent provide weekly service level reports giving a reason if a job completion date needs to be extended, which is uploaded into SAP. Jobs for other MEPs are monitored by running a list of open jobs from SAP.

50 ICPs have been at "inactive - new connection in progress" for more than two years. I checked the 25 oldest and found:

- one ICP was migrated to TRUS and has since been moved to "active" status,

- five ICPs were confirmed not to be required and have been decommissioned, and a further two ICPs[7] are to be decommissioned, and
- 17 ICPs are being checked with the customer to determine whether they are still required.

The AC020 report identified 19 ICPs with an initial electrical connection date populated which had not been made "active". All were timing differences and were updated to "active" status after the report was run.

Other "inactive" statuses

A sample of 30 updates to "inactive" statuses other than new connection in progress were checked. Apart from ICP 0000519670NRA9B's 4 December 2014 update, which was processed in error and later reversed, all the updates had the correct status and event date. Compliance is recorded because the incorrect update was detected and resolved prior to the audit.

The AC020 report recorded no ICPs with the "electrically disconnected remotely by AMI meter" status reason code applied where AMI metering was not recorded in the registry.

Consumption while inactive

Disconnection and reconnection readings are not always entered into SAP, unless there is a change to metering which coincides with the status change. If a reconnection occurs without a corresponding disconnection service order (such as where an ICP was disconnected for vacancy by the previous trader before switching in) the B2B process will not be able to automatically process the reconnection, and reconnection readings will not be entered.

When "inactive" consumption is found, SAP is usually updated to "active" status from the date of the first reading that shows consumption. SAP's historic estimate process forces all consumption in a read-to-read period to be reported against the "active" day or days in the period, so this will ensure that all "inactive" consumption since the previous actual read is reported for reconciliation.

SAP has a process to automatically update an ICP's status to "active" from the latest reading date when "inactive" consumption is identified. An email is generated for the risk control team, who review the change to confirm that the consumption is genuine, and the correction is accurate. MEEN confirmed that these corrections are rare, and no recent examples of these emails were found.

There is also a weekly report of "inactive" consumption which only includes ICPs where MEEN has completed the disconnection; ICPs which switch in with "inactive" status are excluded. The ICPs on the report are checked to determine whether a reconnection service order has been issued or completed, and paperwork is followed up/and or processed. If it appears not to have been reconnected by MEEN, the consumption is checked to determine whether it appears genuine or to have been caused by a misread and then the status is corrected if it is genuine.

Recommendation	Description	Audited party comment	Remedial action
Identification of ICPs which switched in with "inactive" status with consumption	**MEE**N Consider whether switched in ICPs with "inactive" status could be added to the "inactive" consumption report based on the difference between the	Adopted, this is part of the report and will be monitored.	Identified

[7] 1002135880UN8FC and 1002139207UN1F6

Recommendation	Description	Audited party comment	Remedial action
	switch event read and subsequent actual readings.		

MEEN provided a report of 221 ICPs with 21,904 kWh of "inactive" consumption. 125 of the ICPs had less than 2 kWh of "inactive" consumption recorded. A sample of the 15 ICPs with the most "inactive" consumption were reviewed, including all with over 450 kWh. All the ICPs were corrected to "active" status and had the "inactive" volumes reported.

ICP 0309892023LCFC2 has been "inactive" since 4 November 2022 but was confirmed to have non-zero HHR consumption reported in May, July and September 2023 indicating that the registry ICP status is incorrect.

TRUS

The status of "inactive" is only used once an approved contractor has confirmed that the ICP has been disconnected. Status information is maintained within GTV, and then transferred to the registry. The process to manage status updates is documented in more detail in **section 3.3**.

Disconnection and reconnection reads are occasionally entered usually only where the disconnection or reconnection coincides with a meter installation, removal or change. Because the historic estimate process forces consumption into the "active" part of any read-to-read period, GTV will report consumption against the "active" days as long as part of the read-to-read period is "active". TRUS intends to consistently enter disconnection and reconnection readings once Jobtrack is replaced.

Inactive - new connection in progress

TRUS monitors any ICPs which have been at "inactive - new connection in progress" status for more than 185 days using their discrepancy reporting. The customer is contacted to determine whether the ICP is still required. If the ICP is not still required, the status is reversed back to "ready", and the distributor is advised. Action taken is recorded as a note within the discrepancy report and in the memos in GTV.

126 ICPs have been at "new connection in progress" for more than two years. I checked the 30 ICPs with the oldest creation dates and confirmed all had been followed up with the applicant:

- one ICP has been decommissioned,
- two ICPs have been connected and moved to "active" status,
- 26 ICPs have been confirmed to still be required, and connections are in progress but not complete, and
- TRUS is awaiting a response from the customer for ICP 1002143129LC2D6.

The AC020 report identified 19 ICPs with an initial electrical connection date populated which had not been made "active". All were timing differences and updated to "active" status after the report was run.

Inactive Status (excluding new connection in progress)

I reviewed a sample of 38 updates to "inactive" status, including at least five (or all) late status updates for each status reason code used during the audit period. The updates were accurately processed from the correct event date except:

- three ICPs which had invalid "inactive" status updates created either as part of a correction which should have later been reversed but were not, or because field services paperwork was not processed correctly; two have been corrected on the registry and ICP 0000206556UNF7C requires the network to reverse a decommissioning event before the incorrect date of 3 February 2022 can be replaced with an "active" status event, and
- one ICP had an incorrect event date entered and was corrected during the audit.

ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active". The incorrect status is recorded as non-compliance in **sections 2.1** and **3.9**.

The AC020 report recorded 102 ICPs with 1,7 "electrically disconnected due to meter disconnected" status where the AMI flag is set to no. All of the updates processed by TRUS had the AMI flag set to yes at the time the disconnection event was processed except 0000769092WAE1B. The ICP was updated to a disconnected status in error because the field services paperwork was not processed correctly, and the status was later corrected to active on the registry.

Consumption while inactive

"Inactive" and "vacant" consumption fails validation and is directed to an "unbilled" validation bucket for review by the vacant property team, who try to obtain a customer registration and determine whether the ICP should be disconnected.

The "vacant" consumption remains in the "unbilled" validation bucket and is not applied for submission until either a customer signs up or it is moved to an unbilled TRUS account to be included in reconciliation submissions. It is difficult to move consumption out of the unbilled TRUS account, so the team usually leaves it in the validation bucket until they are sure no customer will sign up. A card is sent one week after the ICP becomes vacant and up to three weeks is allowed to receive a response, before the vacant property team decide whether to disconnect. Consumption is normally moved to a customer or TRUS account in time for revision three to 14. Three people work on "inactive" and "vacant" consumption full time.

Review of NHH read attainment found two vacant ICPs 0781871145LCEF4 and 0001423099UNB7B had AMI readings received, but these were temporarily recorded in the "unbilled" validation bucket until they were approved and moved to the ICP. This typically involves investigation and determining whether the ICP should be disconnected. Review of submission data showed that vacant consumption is reported once the vacant consumption exception is approved, but these two ICPs did not have any AMI readings loaded in the 12 months ending October 2023.

TRUS provided a list of 221 ICPs with 40,323.714 kWh[8] of consumption in periods with "inactive" status. 110 of the ICPs had less than 2 kWh of "inactive" consumption recorded. A sample of all ICPs with "inactive" consumption over 600 kWh was reviewed:

- ICPs 0000169486CK8CB and 0000005362UN5B0 had misreads, and the "inactive" consumption was not genuine; the misreads were not validated and submission was correct,
- ICP 0006632109MLD56 had a disconnection processed in error due to confusion about which ICP had been disconnected and was corrected to "active" status, and the full volume was reported,
- 11 ICPs were returned to "active" status for the period with consumption, and the full volume was reported, and
- ICP 0006302091WM93D (13,125 kWh) and 0000047413UNB7F (805.66 kWh) appear to have an incorrect switch start read, which TRUS is trying to resolve with the other trader.

I rechecked "inactive" consumption corrections which were not resolved by the time the previous audit was completed and found they are still not corrected:

- 1002069373LC1A9 "inactive" consumption for the day before the switch loss on 20 October 2022 has not been reported and no RR has been processed; revision 14 has now passed, and
- 0000865145NV098 is still recorded as "inactive" from 20 August 2022 but should be "inactive" from 20 September 2022; revision 14 has now passed.

[8] Excluding the total for ICP 0000169486CK8CB and 0000005362UN5B0 which appeared to have "inactive" consumption due to a misreads.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.9 With: Clause 19 Schedule 11.1 From: 19-Jan-23 To: 25-Aug-23	**MEEN** ICP 0309892023LCFC2 has been "inactive" since 4 November 2022 but was confirmed to have non-zero HHR consumption reported in May, July and September 2023 indicating that the registry ICP status is incorrect. **TRUS** Four out of a sample of 38 "inactive" status updates had an incorrect event date and/or status reason applied. Three have been corrected and ICP 0000206556UNF7C requires the network to reverse a decommissioning event before the incorrect date of 3 February 2022 can be replaced with an "active" status event. ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active". ICP 0000769092WAE1B had the 1,7 "electrically disconnected remotely by AMI meter" status reason code applied when there was no AMI meter. The disconnection event was processed in error, and the registry has been corrected to active. 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 currently rated as moderate, because there are good validation processes, but some exceptions were not identified and resolved before being found during the audit. The audit risk rating is low because the impact on settlement is minor, and a small number of ICPs were non-compliant.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: ICP 0309892023LCFC2 status is now 'ACTIVE' in the Registry. TRUS: ICPs with incorrect status dates have been corrected either prior to or during the audit where possible. ICP 0000206556UNF7C is still waiting for the Network to assist and has been followed up.	Completed Ongoing - dependant on Network assistance.	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
TRUS continues to utilise exception reporting to identify discrepancies where possible. ICPs identified in this report with incorrect status updates where due to human error and have been used as an opportunity to re-train where necessary.	Ongoing	

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 Mercury as the proposed trader, and reviewed processes to monitor new connections.

Audit commentary

MEEN

Mercury has not received any requests for information on NHH ICPs at "new" or "ready" status for more than 24 months during the audit period. If received ICPs are investigated to determine whether they are still required, and responses are provided back to the network.

NHH new connections are tracked through field service order monitoring processes, and HHR review connections are monitored using the WIP sheet. There is no monitoring of ICPs at "new" or "ready" where MEEN is selected as the proposed trader. There are no MEEN ICPs currently at "new" or "ready" status.

Recommendation	Description	Audited party comment	Remedial action
Monitoring of ICPs at "new" and "ready" status	**MEEN** New connections for mass market ICPs are normally completed by TRUS and there is no monitoring of ICPs where MEEN is assigned as the proposed trader in error. I recommend that a registry list of ICPs at "new" or "ready" status is reviewed at least quarterly to identify any ICPs assigned to MEEN.	Adopted.	Identified

TRUS

TRUS take all new connections to the "inactive - new connection in progress" status. Daily discrepancy reporting is in place to identify ICPs where TRUS is recorded as the proposed trader and the ICP is not loaded in GTV, including both "new" and "ready" status.

I checked the number of ICPs at new and ready status:

Status	Total	More than two years
ICPs at "ready" status	535	7
ICPs at "new" status	7	-

I checked a sample of the 12 ICPs which have been at "new" or "ready" status the longest periods, including all which were more than two years old:

- seven ICPs have been decommissioned, and ICP 1002072300UN521 is in the process of being decommissioned,
- two ICPs have been connected and moved to "active" status, and ICP 1100000205WMBE5 has been moved to "inactive – new connection in progress" status while the connection progresses,
- the network is to remove TRUS as the proposed trader for ICP 0000513594CEEC8, returning it to "new" status as the connection will not be completed by TRUS, and
- TRUS has not received applications for the other two ICPs.

Audit outcome

Compliant

4. PERFORMING CUSTOMER AND EMBEDDED GENERATOR SWITCHING

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

Code reference

Clause 2 Schedule 11.3

Code related audit information

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

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

A gaining trader must advise the registry manager of a switch no later than 2 business days after the arrangement comes into effect and include in its advice to the registry manager that the switch type is TR and 1 or more profile codes associated with that ICP.

Audit observation

The switch gain process was examined to determine when Mercury deem all conditions to be met. An extreme case sample of the most backdated NT files were checked to confirm that these were notified to the registry within two business days, and a typical sample were checked to confirm that the correct switch type was selected.

Audit commentary

MEEN

Customer applications are received by phone or a web-based form, and the application details are loaded into SAP. Because most customers are now commercial, most applications are by phone. The application process collects information on whether the customer is moving in or transferring between retailers, which is used to determine the switch type.

ANZSIC code is a mandatory field when entering customer applications into SAP. If an ICP has residential pricing it will default to a residential ANZSIC in SAP. If the ICP has business pricing and an ANZSIC code is not entered, it will default to a T994 don't know ANZSIC in SAP. 16 of the 76 transfer switch NTs and 463 of the 1,618 switch move NTs had a T994 ANZSIC applied. I checked a sample of ten and found they all had valid commercial ANZSIC codes with their previous trader and were changed to T994 as part of the switch, and then later corrected back to a valid code or withdrawn by MEEN. Failure to consistently populate correct ANZSIC codes for switch ins has resulted in an increase in incorrect ANZSIC codes.

Recommendation	Description	Audited party comment	Remedial action
Populate ANZSIC codes in SAP when loading customer applications	**MEEN** Collect the ANZSIC code during application and ensure that a valid code is applied in SAP. If it is difficult to determine the correct code, I suggest	Investigating, will confirm whether can be done as a process change or whether it requires a system change, if requiring a system change it may be undesirable taking into account lack of ICPs on the MEEN code.	Investigating

Recommendation	Description	Audited party comment	Remedial action
	using the previous trader's ANZSIC code if it is valid.		

As soon as the complete application details are loaded and the expected transfer date is reached, SAP will automatically issue the NT file. The process is compliant with the requirements of Section 36M of the Fair Trading Act 1986, and the withdrawal process is used if the customer changes their mind.

All 76 transfer switch NTs where the meter category information was available on the PR255 report had metering category 1 or 2. I checked the five most backdated transfer switch NT files and found they were sent within two business days of pre-conditions being cleared, and the correct switch type was recorded.

TRUS

Customer applications are received by phone, a web-based form or from a third-party provider. Website applications are automatically entered into Salesforce, and then the data entry team loads the application details for these and third-party provider applications into GTV within two business days. Phone applications are loaded directly into GTV by the service hub team.

The application process collects information on whether the customer is moving in or transferring between retailers. When investigating incoming wrong switch type withdrawals, TRUS found that the questions asked as part of the application process were unclear and sometimes resulted in the wrong switch type being applied. The original question was "have you already moved into the property?" which was changed to "are you being billed by a retailer at the property?". The question change combined with additional training for service hub and data entry team staff has improved switch type accuracy.

The process is compliant with the requirements of Section 36M of the Fair Trading Act 1986, and the withdrawal process is used if the customer changes their mind. As soon as the complete application details are loaded into GTV and the expected transfer date is reached, the NT file is automatically issued. GTV normally sets the expected transfer date to be the registration date + five days.

Switch move was applied for 301,556 ICPs which switched from MEEN to TRUS during the audit period. Most of these ICPs were expected to be part of the migration of ICPs from MEEN to TRUS rather than customer move ins, and a transfer switch type was expected. Switch move was applied to ensure that the ICPs switched on the correct date.

All 17,687 transfer switch NTs where the meter category information was available on the PR255 report had metering category 1 or 2. I checked a sample of 15 NT files and found the following exceptions:

- 0356216233LC135 NT-8504490 and 1002172944LC2FC NT-8361887 were requested as transfer switches but should have been switch moves, and
- eight NTs were issued more than two business days after pre-conditions were cleared, due to the expected transfer date being set as five days after the registration date.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.1 With: Clause 2 of schedule 11.3	**TRUS** Two switch moves were requested as transfer switches.

From: 01-Apr-23 To: 27-Oct-23	Eight NTs were issued more than two business days after pre-conditions were cleared. Switch move was applied for 301,556 ICPs which switched from MEEN to TRUS during the audit period, to ensure that the correct switch event date was applied. Potential impact: Low Actual impact: None Audit history: Once Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate. • The issue that related to switch types for migrating ICPs was isolated. Application documentation has been updated and training provided to prevent recurrence of this issue for switches from other traders. • Pushing forward expected transfer dates will result in some late NT files. The impact is low. All NT files were issued within one month of the application, so there was no impact on settlement. The incorrect application of switch type for the ICPs migrated from MEEN to TRUS ensured that the correct switch event dates were applied, and the process ran smoothly.

Actions taken to resolve the issue	Completion date	Remedial action status
Related agents were advised of issues and given retraining. Investigation was conducted to identify and address systemic causes, resulting in revisions to changes to our online registration process and training for 3rd party vendor.	12 April 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
The correct processes will be reiterated to Service Hub agents. The Energy Provisioning induction for new Service Hub agents has also been revised to address correct processes.	31 May 2024	

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 two months.

Audit observation

The event detail report was reviewed to:

- identify AN files issued by Mercury 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

MEEN

AN files are automatically generated by SAP on receipt of an incoming NT file. If the other trader requests a transfer switch for a vacant property, SAP will automatically send a wrong switch withdrawal.

Switch timeliness is managed using the switch breach report. There are two reports produced and reviewed daily at 6.15 a.m. and 8.15 a.m. The earlier report excludes T2, CS and E2 breaches and the later report includes them.

AN timeliness

The switch breach history report did not record any late AN files for transfer switches.

AN content

I compared the AN response codes applied to the latest ICP attributes on the registry list with history for the 615 ANs which had the AA (acknowledge and accept), AD (advanced metering), MU (unmetered supply) or PD (premises electrically disconnected) code applied, and five ICPs with the CO (contracted customer) code applied. 612 ANs (98.7%) had correct response codes, and I identified the following exceptions:

- five ICPs[9] had the AA (acknowledge and accept) code applied but should have had AD (advanced metering),
- two ICPs[10] had the CO (contracted customer) code applied but should have had AD (advanced metering), and
- ICP 0000147624TR5FE NN-7915295 had the PD (premises electrically disconnected) code applied but should have had AD (advanced metering).

Seven of the eight files with incorrect codes were generated by SAP, and the other was generated manually. No recommendations to improve MEEN's NHH switching processes have been raised because the migration from MEEN to TRUS for mass market ICPs has been completed, and in future NHH ICPs are expected to be supplied by TRUS.

[9] 0232972664LCC2A AN-7718088, 0000034693CH808 AN-7925072, 0274565479LC821 AN-7699771, 1000501287PCE3B AN-7711223, 0000163846TR3CD AN-7728524.
[10] 0110002093EL64A AN-7808194, 0000070054TR785 AN-7808303.

The event detail report was reviewed for 953 transfer switches to assess compliance with the setting of event dates requirements:

- 938 ANs (98.43%) had proposed event dates within five business days of NT receipt, and
- all 953 ANs (100%) had proposed event dates within ten business days of NT receipt.

TRUS

AN files are automatically generated by GTV on receipt of an incoming NT file.

AN codes are selected by GTV based on a hierarchy. In some cases, the selection criteria for the AN response code may result in a code being applied which does not align with registry data for the ICP:

- the AD (advanced metering) code is applied where an ICP is in an AMI meter reading route.; if a meter has stopped communicating it will be moved to a manual meter reading route and if an ICP is assigned to an incorrect route for its meter type, it may have an incorrect AN code assigned,
- the MU (unmetered supply) code is applied if there is no current meter open in GTV rather than only where unmetered load is indicated; metered ICPs may have no open meter in GTV while staff process meter changes or resolve metering issues, and
- the PD (premises disconnected) code will apply where the ICP has a disconnected status in GTV, which may differ from the registry status due to timing.

Event dates are normally applied as the gaining trader's requested date if available or using GTV business rules.

The "Electricity Switch Loss Approve Errors" (holds) report is reviewed daily. The holds report identifies:

- ICPs where GTV could not automatically create the AN file (e.g., where the response code cannot be determined), and
- ICPs where the AN file was created and there may be an error (e.g., the ICP is vacant and a transfer switch was requested, the existing customer does not have a final bill, or the requested event date is more than ten business days in the future).

The provisioning team works through the holds report and identifies any corrective action required. A bulk update process allows data to be updated in GTV from a spreadsheet, and then GTV will issue the AN files with the new information.

The switch breach history report is run at least twice daily, to identify AN files which are close to their due date so that they can be checked and processed.

AN timeliness

The switch breach history report did not record any late AN files for transfer switches.

AN content

I compared the AN response codes applied to the latest ICP attributes on the registry list with history for the 1,453 ANs which had the AA (acknowledge and accept), AD (advanced metering), MU (unmetered supply) or PD (premises electrically disconnected) code applied, and two ICPs with the OC (occupied premises) code applied. 1,448 ANs (99.7%) had correct response codes, and I identified the following exceptions:

- ICP 0402484436LC3BD AN-7910952 had the AA (acknowledge and accept) code applied because it was on a manual meter reading sequence but should have had AD (advanced metering),
- two ICPs[11] had the MU (unmetered supply) code applied in error because of a metering issue, and

[11] 0082468000PCB42 AN-8109371 should have AD, 0013576416EL27F AN-8118014 should have PD.

- two ICPs[12] had the OC (occupied premises) code applied in error.

The event detail report was reviewed for 1,479 transfer switches to assess compliance with the setting of event dates requirements:

- 1,353 ANs (91.48%) had proposed event dates within five business days of NT receipt,
- 1,473 ANs (99.59%) had proposed event dates within ten business days of NT receipt, and
- six ANs had proposed event dates more than ten business days of NT receipt; for five ANs the gaining trader's non-compliant future event date was automatically applied by GTV but for the other AN TRUS manually selected an invalid event date - the errors were identified using the holds report and a withdrawal was completed.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.2 With: Clauses 3 & 4 of schedule 11.3 From: 25-Jan-23 To: 17-Nov-23	**MEEN** Eight of the sample of 620 AN files contained incorrect response codes. **TRUS** Six ANs had proposed event dates more than ten business days of NT receipt. Five of the sample of 1,543 AN files contained incorrect response codes. Potential impact: Low Actual impact: None Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong overall as the process is automated and most ANs were on time and contained correct content. The impact is assessed as low as because the ANs with non-compliant event dates were identified using the holds report and a withdrawal was completed. The incorrect response codes may have a minor impact on the other party.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements to SAP related systems or processes. TRUS: Training was undertaken to prevent agents from making the same error in the future.	N/A April 2024	Identified

[12] 0001321454AL1C1 AN-8132097 should have AA, 0000020493WE44C AN-8102335 should have AD.

Preventative actions taken to ensure no further issues will occur	Completion date	
TRUS: General comms provided to all team members to draw their attention to this type of error.	May 2024	

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 Mercury 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

MEEN

CS files are automatically generated by SAP, and SAP determines CS file content based on business rules and the ICP and meter information held. Average daily kWh is recorded as the average daily kWh between the two most recent actual reads within the last year. If there are less than two actual reads, SAP records an average daily kWh of zero.

SAP generates exceptions where it cannot create a CS file and these are reviewed daily and resolved, usually by creating the CS file manually using the registry user interface.

Switch timeliness is managed using the switch breach report. There are two reports produced and reviewed daily at 6.15 a.m. and 8.15 a.m. The earlier report excludes T2, CS and E2 breaches and the later report includes them.

CS timeliness

The switch breach history report recorded 16 CS breaches where the CS arrival date was more than five business days after the CS transfer date, and the latest file was 35 days overdue. The issues occurred due to heavy workloads and training new staff members around the time of the migration of ICPs from MEEN to TRUS, and some confusion about when files were due to be sent.

CS content

I checked the average daily kWh for transfer switch CS files and found:

- no CS had negative average daily kWh,
- 33 CS had zero average daily kWh; five were checked, and four had zero invalidly reported because there were not two actual reads available, and
- no CS had average daily kWh over 200.

The switch breach history report did not record any E2 breaches where the CS event date was more than ten business days after NT receipt.

I checked a sample of 648 transfer switch CS files and found the following discrepancies between last actual read dates and switch event dates:

- eight ICPs had a last actual read date one day before the event date with an estimated switch event read type,
- three ICPs had a last actual read date more than one day before the event date with an actual switch event read type,
- two ICPs had a last actual read date after the switch event date, and
- one ICP had missing CSMETERINSTALL, CSMETERCOMP or CSMETERCHANNEL rows because it was a HHR metered ICP with the AMI flag set to no.

I checked a diverse sample of eight exceptions and found six ICPs[13] had incorrect last actual read dates, due to manual data entry errors when creating the files using the registry user interface, or SAP applying the last actual read date it held regardless of whether it was within the period of supply.

I also checked a typical sample of five CS files and found the following exceptions:

- two ICPs[14] had invalid zero average daily kWh because there were not two actual reads available, and
- three ICPs[15] had incorrect last actual read dates.

No recommendations to improve MEEN's NHH switching processes have been raised because the migration from MEEN to TRUS for mass market ICPs has been completed, and in future most NHH ICPs are expected to be supplied by TRUS.

TRUS

CS files are automatically generated by GTV, and GTV determines CS file content based on business rules and the ICP and meter information held. Average daily kWh is correctly recorded as the daily average

[13] 0000048020WE967 CS-4702498 5 March 2023 should be 4 March 2023, 0993237390LCA27 CS-4776912 13 May 2023 should be 14 April 2023, 0000629056UN36B CS-4633226 3 January 2022 should be 3 January 2023, 0666002549PCAEC CS-4820343 9 June 2023 should be 7 March 2023, 0000001039EDEEA CS-4647464 19 January 2023, 0865739717LCFDA CS-4854555 20 June 2023 should be 11 May 2023.

[14] 0122234030LCE0A CS-5354265, 0000181713CT1DE CS-4997548.

[15] 0122234030LCE0A CS-5354265 8 December 2023 should be 9 September 2023, 0001422258UNB76 CS-5321494 20 November 2023 should be 19 October 2023, 0000181713CT1DE CS-4997548 29 September 2023 should be 12 June 2023.

consumption between the last two actual readings unless there are less than two actual readings and zero is applied.

Recommendation	Description	Audited party comment	Remedial action
CS average daily kWh	**TRUS** Where there are less than two actual readings for an ICP at the time of switch out, the CS average daily kWh is expected to be the same as the incoming CS file for ICPs that have switched in, or a reasonable estimate of consumption for new connections. Currently zero is reported where there are less than two actual readings.	Adopted. Following original receipt of this guidance during audit, Comms provided to all team to correct this issue.	Identified

The "Electricity Switch Loss Approve Errors" (holds) report is reviewed daily. The holds report identifies ICPs where GTV could not automatically create the CS file. The provisioning team works through the holds report and identifies any corrective action required.

TRUS produces its own Electricity switch loss CS breach report which is reviewed daily. The TRUS report recalculates the due dates to account for calculation errors in the registry report. The report is worked through including checking that a final invoice has been produced, whether the billing and switching dates align, and whether any billing validation issues are present. The provisioning team works through the list taking corrective action as necessary so that the file can be released by GTV. If necessary, the CS file can be manually created on the registry.

Monthly switching compliance reports are generated showing the number of breaches for late CS files including CS files issued after withdrawals. Exceptions are investigated to determine whether they were caused by the system, avoidable or not controllable. The reports are used to identify trends and where improvements can be made.

CS timeliness

The switch breach history report recorded 29 CS breaches where the CS arrival date was more than five business days after the CS transfer date, and the latest file was six days overdue. The issue occurred due to heavy workloads and training new staff members around the time of the migration of ICPs from MEEN to TRUS.

CS content

I checked the average daily kWh for transfer switch CS files and found:

- no CS had negative average daily kWh,
- 24 CS had zero average daily kWh; five were checked - two new connections and three switch ins had zero reported because there were not two actual reads available, and
- two CS had average daily kWh over 200 correctly recorded.

The switch breach history report recorded four E2 breaches where the CS event date was more than ten business days after NT receipt. The event dates for the affected files were 11-15 business days after the event date due to a miscalculation by a staff member learning the switching process.

I checked a sample of 1,013 transfer switch CS files and found no discrepancies between last actual read dates and switch event dates. I checked a random sample of a seven CS files and found 0001321454AL1C1 CS-5344675 had an average daily kWh of zero reported because there were not two actual reads available.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.3 With: Clause 5 of schedule 11.3 From: 09-Jan-23 To: 5-Dec-23	**MEEN** 16 CS breaches. Six CS files had average daily kWh of zero incorrectly recorded where there were less than two actual readings available. Nine ICPs had incorrect last actual read dates, due to manual data entry errors when creating the files using the registry user interface. **TRUS** 29 CS breaches. Four E2 breaches. Six CS files had average daily kWh of zero incorrectly recorded where there were less than two actual readings available. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate. Most switch files were on time and had accurate content. If there are less than two actual reads available, the average daily kWh will inaccurately be recorded as zero. The audit risk rating is low because the files were issued in time for revised submission data to be provided through the revision process, and the incorrect read types recorded in SAP have no impact on submission. Inaccurate average daily kWh may have a minor impact on submission if the gaining trader does not receive actual readings in time for submission and relies on the average daily kWh to estimate submission data.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements to SAP-related systems or processes. TRUS: Identified as agent error. Retraining provided to prevent recurrence. Documentation was also reviewed to ensure accuracy.	N/A April 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TRUS: Training materials updated and general comms provided to all team members to draw their attention to this type of error.	May 2024	

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 SAP 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 SAP.

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

Audit commentary

MEEN

ICPs requiring RRs are generally identified through the billing validation process or customer enquiries. If subsequent validated actual readings show that the switch event read is too high, and the difference is less than -250 kWh MEEN will mark the actual reads as implausible until they catch up to the switch event read. If the difference is greater than -250 kWh or +200 kWh a RR will be issued.

The switching team raises the RR through SAP and emails the other trader. Returned ACs are reviewed and actioned in SAP's switching console, and SAP readings are updated to reflect the outcome of the RR process. If the RR is rejected the switching team liaises with the other trader to determine next steps and an agreeable reading.

MEEN issued 97 RR files for transfer switches. 71 (73%) were accepted and 26 (27%) were rejected. A sample of five rejected files and five accepted files were checked. The RRs were supported by at least two validated actual readings and SAP reflected the outcome of the RR process. For seven ICPs[16] the switch event read type recorded in SAP did not match the expected read type. The issues occurred due to a combination of occasional data entry errors because SAP is updated manually, and that SAP sometimes defaults the read type back to actual in between the team member changing the data and saving.

The switch breach history report recorded 11 RR breaches for transfer switches where the files were up to 186 days overdue. I checked the five latest files and found they were delayed while MEEN obtained two actual reads or negotiated with the other trader, they were subsequent RRs after an initial attempt was rejected, or they were advised late that an RR was required by another trader.

AC

RRs received from other retailers are identified through daily review of the switch breach history report. Each ICP on the report is checked in SAP and supporting emails from the other trader are reviewed. A response to the RR is triggered in SAP, which produces the AC file and sends it to the registry. The read history is manually updated in SAP to reflect the outcome of the RR process at the same time.

Mercury issued two AC files for transfer switches, both were accepted, and SAP reflected the outcome of the RR process. The switch breach history report did not record any late AC files for transfer switches.

CS files with estimated readings where no RR is issued

Review of five transfer CS files with estimated reads where no RR was issued confirmed that the correct readings were recorded in SAP.

[16] 0000001265UN7FE 31 May 2023 E should be A, 0000026508WE9BB 4 May 2023 A should be E, 0000029983WE749 15 June 2023 A should be E, 0000189688TR28F 7 April 2023 A should be E, 0000037618NTB9D 5 April 2023 A should be E, 0000129379TRD30 07 February 2023 A should be E, 0081728800PC7A5 5 April 2023 A should be E.

TRUS

RR

ICPs requiring RRs are generally identified through the billing validation process or customer enquiries. The billing team provides calculations to determine the expected event read, based on two validated actual readings.

The provisioning team raises the RR through GTV and emails the other trader. Returned ACs are loaded into GTV and reviewed. If accepted the switching or billing team updates GTV depending on whether the change impacts on customer billing. If rejected the provisioning team liaises with the other trader and billing team to determine next steps and an agreeable reading.

TRUS issued 71 RR files for transfer switches. 55 were accepted and 16 were rejected. A sample of five rejected files and five accepted files were checked. The RRs were supported by at least two validated actual readings and GTV reflected the outcome of the RR process.

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

AC

RRs received from other retailers are directed to work queues visible in Data Explorer for action. The provisioning team works through the items and reviews any associated email correspondence to determine whether the RR should be accepted or rejected. They choose A (accept) or R (reject) within GTV, and GTV automatically creates an AC file and sends it to the registry. If the response accepts the other trader's RR, the provisioning team will manually update the readings in GTV.

The switch breach history report is run at least twice daily, to identify AC files which are close to their due date so that they can be checked and processed.

Monthly switching compliance reports are generated showing the number of breaches for late CS files including CS files issued after withdrawals. Exceptions are investigated to determine whether they were caused by the system, avoidable or not controllable. The reports are used to identify trends and where improvements can be made.

TRUS issued two AC files for transfer switches which were both accepted, and the switches were later withdrawn. The switch breach history report did not record any late AC files for transfer switches.

CS files without RRs raised

Review of five incoming transfer CS files with estimated reads where no RR was issued confirmed that the correct readings were recorded in GTV for reconciliation.

The previous audit issue relating to ICP 0000062604TR22A has now been resolved. The ICP switched away from TRUS on read 33475 on 16 August 2022. It then switched back to TRUS on 30 August 2022 with an estimated read of 33713 but TRUS used the loss read of 33475 as their start read resulting in 238 kWh of over submission for the incorrect period. An RR should have been issued if the CS read was not accepted. Revision 14 has now passed.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.4 With: Clauses 6(1) and 6A Schedule 11.3	**MEEN** For seven ICPs the switch event read type recorded in SAP did not match the expected read type.

From: 05-Apr-23 To: 05-Dec-23	11 RR breaches. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating
Low	Controls are moderate. The RR content was correct, most files were on time and read values were correctly recorded, but some read types were incorrectly recorded in SAP due to a combination of occasional data entry errors because SAP is updated manually, and that SAP sometimes defaults the read type back to actual in between the team member changing the data and saving. The audit risk rating is low because the files were issued in time for revised submission data to be provided through the revision process, and the incorrect read types recorded in SAP have no impact on submission.

Actions taken to resolve the issue	Completion date	Remedial action status
We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements to SAP-related systems or processes.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above	N/A	

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

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

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

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

Audit observation

The 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

These RR requests are processed in the same way as those received for greater than 200 kWh. Each request is evaluated and validated against the ICP information. If the request is within validation requirements these are accepted.

MEEN

Two RR files were issued to MEEN within five business days of switch completion where the gaining trader indicated that they would use the HHR profile, and the CS file contained estimated event readings. Both were accepted.

TRUS

Two RR files were issued to TRUS within five business days of switch completion where the gaining trader indicated that they would use the HHR profile, and the CS file contained estimated event readings. Both were accepted.

Audit outcome

Compliant

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

Code reference

Clause 7 Schedule 11.3

Code related audit information

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 9 Schedule 11.3

Code related audit information

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

If the "uninvited direct sale agreement" applies, the gaining trader must identify the period within which the customer or embedded generator may cancel the arrangement in accordance with section 36M of

the Fair Trading Act 1986. The arrangement is deemed to come into effect on the day after the expiry of that period.

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

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

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

Audit observation

The switch gain process was examined to determine when Mercury deem all conditions to be met. An extreme case sample of the most backdated NT files were checked to confirm that these were notified to the registry within two business days, and a typical sample were checked to confirm that the correct switch type was selected.

Audit commentary

MEEN

Customer applications are received by phone or a web-based form, and the application details are loaded into SAP. The application process collects information on whether the customer is moving in or transferring between retailers, which is used to determine the switch type.

ANZSIC code is a mandatory field when entering customer applications into SAP. If an ICP has residential pricing it will default to a residential ANZSIC in SAP. If the ICP has business pricing and an ANZSIC code is not entered, it will default to a T994 don't know ANZSIC in SAP. 463 of the 1,618 switch move NTs had a T994 ANZSIC applied. I checked a sample of ten and found they all had valid commercial ANZSIC codes with their previous trader and were changed to T994 as part of the switch, and then later corrected back to a valid code or withdrawn by MEEN. Failure to consistently populate correct ANZSIC codes for switch ins has resulted in an increase in incorrect ANZSIC codes, and a recommendation to consistently record correct ANZSIC codes is made in **section 4.1**.

The process is compliant with the requirements of Section 36M of the Fair Trading Act 1986, and the withdrawal process is used if the customer changes their mind. As soon as the complete application details are loaded and the expected transfer date is reached, SAP will automatically issue the NT file.

All 1,618 transfer switch NTs where the meter category information was available on the PR255 report had metering category 1 or 2. I checked the ten most backdated transfer NT files and found they were sent within two business days of pre-conditions being cleared, and the correct switch type was recorded.

TRUS

Customer applications are received by phone, a web-based form or from a third-party provider. Website applications are automatically entered into Salesforce, and then the data entry team loads the application details for these and third-party provider applications into GTV within two business days. Phone applications are loaded directly into GTV by the service hub team.

The application process collects information on whether the customer is moving in or transferring between retailers. When investigating incoming wrong switch type withdrawals, TRUS found that the questions asked as part of the application process were unclear and sometimes resulted in the wrong switch type being applied. The original question was "have you already moved into the property?" which was changed to "are you being billed by a retailer at the property?". The question change combined with additional training for service hub and data entry team staff has improved switch type accuracy.

The process is compliant with the requirements of Section 36M of the Fair Trading Act 1986, and the withdrawal process is used if the customer changes their mind. As soon as the complete application details are loaded into GTV and the expected transfer date is reached, the NT file is automatically issued.

Switch move was applied for 301,556 ICPs which switched from MEEN to TRUS during the audit period. Most of these ICPs were expected to be part of the migration of ICPs from MEEN to TRUS rather than customer move ins, and a transfer switch type was expected. Switch move was applied to ensure that the ICPs switched on the correct date.

All 330,059 switch move NTs where the meter category information was available on the PR255 report had metering category 1 or 2. I checked a sample of 25 NT files and found the following exceptions:

- eight ICPs migrating between MEEN and TRUS had switch move applied but transfer switch was expected, and
- nine NTs were issued more than two business days after pre-conditions were cleared, due to move in date corrections, reissues following the wrong property being requested, or reissued due to metering issues.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.7 With: Clause 9 Schedule 11.3 From: 01-Apr-23 To: 17-Nov-23	**TRUS** Nine NTs were issued more than two business days after pre-conditions were cleared. Switch move was applied for 301,556 ICPs which switched from MEEN to TRUS during the audit period (including eight ICPs in the sample of 25 checked), to ensure that the correct switch event date was applied. Potential impact: None Actual impact: None Audit history: Twice Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate: • The issue that related to switch types for migrating ICPs was isolated. Application documentation has been updated and training provided to prevent recurrence of this issue for switches from other traders. • Pushing forward expected transfer dates will result in some late NT files. The impact is low. All NT files were issued in time for revision submissions to occur, so there was no impact on settlement and the files were delayed by corrections. The incorrect application of switch type for the ICPs migrated from MEEN to TRUS ensured that the correct switch event dates were applied, and the process ran smoothly.

Actions taken to resolve the issue	Completion date	Remedial action status
As noted this is a direct result of the migration of MEEN ICPs to the TRUS code. Although a technical non-compliance the decision was made to process these as move switches to ensure that the correct switch event date was applied and minimise billing impacts on Mercury customers. There was no impact on the market or other participants, and as the migration was a one-off event we do not expect to see a recurrence.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above.	N/A	

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 ten 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 Mercury during the audit period,
- assess compliance with the requirement to meet the setting of event dates requirement, and
- check a diverse sample ANs to determine whether the codes had been correctly applied.

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

Audit commentary

MEEN

AN files and CS files are automatically generated by SAP on receipt of an incoming NT file. Switch timeliness is managed using the switch breach report. There are two reports produced and reviewed daily at 6.15 a.m. and 8.15 a.m. The earlier report excludes T2, CS and E2 breaches and the later report includes them.

AN timeliness

The switch breach history report recorded 13 AN breaches for files issued up to 30 days late. Nine ICPs were migrating from MEEN to TRUS and were delayed by mismatch between SAP and the registry which needed to be resolved before the file could be sent, and the other four were sent late due to heavy workloads.

CS timeliness

The switch breach history report recorded:

- nine WR breaches where the CS was sent more than two business days after AW rejection which were one to three days late, and
- 43 T2 breaches where the CS was sent more than five business days after NT receipt which were up to 30 days later.

The issues occurred due to heavy workloads and training new staff members around the time of the migration of ICPs from MEEN to TRUS.

AN file content

I compared the AN response codes applied to the latest ICP attributes on the registry list with history for the 157 ANs which had the AA (acknowledge and accept), AD (advanced metering), MU (unmetered supply) or PD (premises electrically disconnected) code applied, and five ICPs with the OC (occupied premises) code applied. 154 ANs (95.1%) had correct response codes, and I identified the following exceptions:

- seven ICPs[17] had the AA (acknowledge and accept) code applied but should have had AD (advanced metering), and
- ICP 0473976897LC09D AN-7940344 had the OC (occupied premises) code but should have had AD (advanced metering).

All eight files with incorrect response codes were generated by SAP. No recommendations to improve MEEN's NHH switching processes have been raised because the migration from MEEN to TRUS for mass market ICPs has been completed, and in future NHH ICPs are expected to be supplied by TRUS.

The event detail report was reviewed for 1,750 switch moves to assess compliance with the setting of event dates requirements:

- all 1,750 ANs had proposed event dates within ten business days of NT receipt, and
- no ANs had proposed event dates prior to the gaining trader's requested date.

TRUS

AN files and CS files are automatically generated by GTV.

AN codes are selected by GTV based on a hierarchy. In some cases, the selection criteria for the AN response code may result in a code being applied which does not align with registry data for the ICP:

- the AD (advanced metering) code is applied where an ICP is in an AMI meter reading route; if a meter has stopped communicating it will be moved to a manual meter reading route and if an ICP is assigned to an incorrect route for its meter type, it may have an incorrect AN code assigned,

[17] 0000029858CH5F9 AN-7877666, 0000034330UNDB1 AN-7765116, 0000542925NRC47 AN-8063702, 1001120912LC084 AN-7792432, 1002156400LCB16 AN-8037183, 1002049546LC4D5 AN-7762466, 1000500867PCF2B AN-7956012.

- the MU (unmetered supply) code is applied if there is no current meter open in GTV rather than only where unmetered load is indicated; metered ICPs may have no open meter in GTV while staff process meter changes or resolve metering issues, and
- the PD (premises disconnected) code will apply where the ICP has a disconnected status in GTV, which may differ from the registry status due to timing.

Event dates are normally applied as the gaining trader's requested date if available or using GTV business rules.

The "Electricity Switch Loss Approve Errors" (holds) report is reviewed daily. The holds report identifies:

- ICPs where GTV could not automatically create the AN file (e.g., where the response code cannot be determined) or CS file, and
- ICPs where the AN file was created and there may be an error (e.g., the ICP is vacant and a transfer switch was requested, the existing customer does not have a final bill, or the requested event date is more than ten business days in the future).

The provisioning team works through the holds report and identifies any corrective action required. A bulk update process allows data to be updated in GTV from a spreadsheet, and then GTV will issue the AN and CS files with the new information.

The switch breach history report is run at least twice daily, to identify AN and CS files which are close to their due date so that they can be checked and processed.

AN timeliness

The switch breach history report recorded 24 AN breaches for switch moves, which were processed one business day late. The issue occurred due to heavy workloads and training new staff members around the time of the migration of ICPs from MEEN to TRUS.

CS timeliness

The switch breach history report recorded:

- three WR breaches where the CS arrival date was more than two business days after AW completion which were one business day late, and
- 36 T2 breaches for CS arrival dates more than five business days after NT receipt which were one business day late.

The issue occurred due to heavy workloads and training new staff members around the time of the migration of ICPs from MEEN to TRUS.

AN content

AN codes are selected by GTV based on a hierarchy. In some cases, the selection criteria for the AN response code may result in a code being applied which does not align with registry data for the ICP:

- the AD (advanced metering) code is applied where an ICP is in an AMI meter reading route; if a meter has stopped communicating it will be moved to a manual meter reading route and if an ICP is assigned to an incorrect route for its meter type, it may have an incorrect AN code assigned,
- the MU (unmetered supply) code is applied if there is no current meter open in GTV rather than only where unmetered load is indicated; metered ICPs may have no open meter in GTV while staff process meter changes or resolve metering issues, and
- the PD (premises disconnected) code will apply where the ICP has a disconnected status in GTV, which may differ from the registry status due to timing.

I compared the AN response codes applied to the latest ICP attributes on the registry list with history for the 910 ANs which had the AA (acknowledge and accept), AD (advanced metering), MU (unmetered supply) or PD (premises electrically disconnected) code applied, and five ICPs with the OC (occupied

premises) code applied. 899 ANs (98.8%) had correct response codes, and I identified the following exceptions:

- two ICPs[18] had the AA (acknowledge and accept) code applied but should have had AD (advanced metering),
- three ICPs[19] had the AD (advanced metering) code applied in error,
- four ICPs[20] had the MU (unmetered supply) code applied in error because of a metering issue, and
- two ICPs[21] had the OC (occupied premises) code applied in error.

The event detail report was reviewed for 965 switch moves to assess compliance with the setting of event dates requirements. All 965 ANs had proposed event dates within ten business days of NT receipt, and none had a proposed event date more than ten business days of NT receipt.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.8 With: Clause 10 of schedule 11.3 From: 24-May-23 To: 21-Nov-23	**MEEN** 13 AN breaches. Nine WR breaches. 43 T2 breaches. Eight of a sample of 162 AN files contained incorrect response codes. **TRUS** 24 AN breaches. Three WR breaches. 36 T2 breaches. 11 of a sample of 915 AN files contained incorrect response codes. 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 overall as the process is automated and most AN and CS files were on time, and most AN files contained correct content. The impact is assessed as low as because the ANs with non-compliant event dates were identified using the holds report and a withdrawal was completed, and the

[18] 0000117532UN473 AN-8086803, 0000054769HBFBE AN-8057180.
[19] 0000127477WA7DD AN-7802953 should be OC, 0000501827NRCB3 AN-7757149 should be AA, 0166381020LC125 AN-7871956 should be AA.
[20] 0320861392LC333 AN-8133845, 0002313611ALD8B AN-8133845, 0082468000PCB42 AN-8131888, 0001423841UN420 AN-8048032.
[21] 0000012092DE82A AN-8103838 and 0000052595HRBD5 AN-7876873 should both have AD.

	late CS files were issued in time for revised submission data to be provided through the revision process. The incorrect response codes may have a minor impact on the other party.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements to SAP–related systems or processes. TRUS: While we suspect human error we are investigating what has caused these non-compliances to ensure that if it is a system error we raise a job to rectify.	N/A May 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TRUS: We have strong controls and reporting in place to avoid recurrence.	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 Mercury during the audit period, and assess compliance with the requirement to meet the setting of event dates requirement.

Audit commentary

MEEN

MEEN applied the gaining trader's requested event date for all 1750 switch move AN files checked. Switches were completed as required by this clause.

TRUS

TRUS applied the gaining trader's requested event date for 813 of the 965 switch move AN files checked. All ANs had proposed event dates within ten business days of NT receipt, and none had a proposed event date more than ten business days of NT receipt. Switches were completed as required by this clause.

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 Mercury 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.

Audit commentary

MEEN

CS files are automatically generated by SAP, and SAP determines CS file content based on business rules and the ICP and meter information held. Average daily kWh is recorded as the average daily kWh between the two most recent actual reads within the last year. If there are less than two actual reads, SAP records an average daily kWh of zero.

I checked the average daily kWh for switch move CS files and found:

- no CS had negative average daily kWh,
- 103 CS had zero average daily kWh; five were checked, and four switch ins had zero invalidly reported because there were not two actual reads available, and
- four CS had average daily kWh over 200 correctly recorded.

The switch breach history report recorded five E2 breaches, including four where the CS event date was before the gaining trader's requested date and one where the CS event date was more than ten business days after NT receipt. The incorrect dates were applied due to confusion about which date should apply. Three of the switched were late withdrawn, and the other two were for ICPs switching from MEEN to TRUS as part of the migration.

I checked a sample of 893 switch move CS files and found the following discrepancies between last actual read dates and switch event dates:

- 36 ICPs had a last actual read date one day before the event date with an estimated switch event read type,
- 15 ICPs had a last actual read date more than one day before the event date with an actual switch event read type,
- 22 ICPs had a last actual read date after the switch event date,
- seven CS files had a last actual read date on the switch event date, and
- nine ICPs had missing CSMETERINSTALL, CSMETERCOMP or CSMETERCHANNEL rows because they were unmetered or HHR metered ICPs with the AMI flag set to no.

I checked a diverse sample of 12 exceptions and found:

- seven ICPs[22] had incorrect last actual read dates, either because SAP chose the last actual read ever received regardless of whether it was within the period of supply or due to a manual data entry error,
- one ICP[23] had an incorrect read type recorded, and
- four ICPs[24] had an incorrect event read recorded.

I also checked a typical sample of five CS files and found no exceptions.

No recommendations to improve MEEN's NHH switching processes have been raised because the migration from MEEN to TRUS for mass market ICPs has been completed, and in future NHH ICPs are expected to be supplied by TRUS.

TRUS

CS files are automatically generated by GTV, and GTV determines CS file content based on business rules and the ICP and meter information held. Average daily kWh is correctly recorded as the daily average consumption between the last two actual readings unless there are less than two actual readings and then zero is applied.

I checked the average daily kWh for switch move CS files and found:

- no CS had negative average daily kWh,
- 63 CS had zero average daily kWh; five were checked and two were correct, and two new connections and one switch in had zero reported because there were not two actual reads available, and
- two CS had average daily kWh over 200 correctly recorded.

The switch breach history report recorded one E2 breach where the CS event date was 12 business days before the NT proposed event date. The error occurred due to a keying error when creating the CS file using the registry user interface.

I checked a sample of 493 switch move CS files and found no discrepancies between last actual read dates and switch event dates. I checked a random sample of a seven CS files and found

[22] 0000010047ED16D CS-4702257 2 March 2023 should be 1 March 2023, 0000005749DE83F CS-4631883 31 December should be 4 November 2021, 1001243497LC185 CS-4634744 8 December 2023 should be 11 January 2022, 1099573115CN029 CS-4661248 31 January 2023 should be 28 January 2023, 0001436803UN9C1 CS-4667756 29 January 2023 should be 28 January 2023, 0327695048LCFC9 CS-4715575 6 March 2023 should be 4 February 2023, 1002155134UN015 CS-4833081 1 June 2023 should be 4 February 2023.

[23] 0000204841WE212 CS-4832057 E should be A.

[24] 0005682851RNDED CS-4652175 19 January 2023 62841 E should have been 62836 A, 1002058744LC716 CS-4639600 12 January 2023 7323 A relates to 10 January 2023 instead of 11 January 2023 no later reads available, 0234440821LCE9C CS-4653559 27 January 2023 20141 A relates to 23 January 2023 no later reads available, 1002141844LC834 CS-4682130 14 February 2023 158 A relates to 7 February 2023 no later reads available. The ICPs have low average daily kWh and the impact is expected to be low.

0126149038LC2D8 CS-5345292 had an average daily kWh of one incorrectly reported because there were not two actual reads available, and the staff member believed that when this occurs, they should report 1. Training has been provided to prevent recurrence.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.10 With: Clause 11 of schedule 11.3 From: 09-Jan-23 To: 5-Dec-23	**MEEN** Five E2 breaches. Seven ICPs had incorrect last actual read dates. One ICP had an incorrect read type recorded. Four ICPs had an incorrect event read recorded. Four CS files had average daily kWh of zero incorrectly recorded where there were less than two actual readings available. **TRUS** One E2 breach. Four CS files had average daily kWh of zero incorrectly recorded where there were less than two actual readings available. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating
Low	The controls are moderate. Most switch files were on time and had accurate content. If there are less than two actual reads available, the average daily kWh will inaccurately be recorded as zero. The audit risk rating is low because the files were issued in time for revised submission data to be provided through the revision process, and the incorrect read types recorded in SAP have no impact on submission. Inaccurate average daily kWh may have a minor impact on submission if the gaining trader does not receive actual readings in time for submission and relies on the average daily kWh to estimate submission data.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: This error was a combination of both system and human error. Team has been advised of the error. We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements in SAP-related systems or processes.	May 2024	Identified

TRUS: Identified as agent error. Retraining provided to prevent recurrence.	April 2024	
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TRUS: General comms provided to all team members to draw their attention to this type of error.	May 2024	

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 two validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):*
- *advise the gaining trader if it does not accept the switch event meter reading and the losing trader and the gaining trader must resolve the dispute in accordance with the dispute's 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 SAP 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 SAP.

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

Audit commentary

MEEN

RR

ICPs requiring RRs are generally identified through the billing validation process or customer enquiries. If subsequent validated actual readings show that the switch event read is too high, and the difference is less than -250 kWh MEEN will mark the actual reads as implausible until they catch up to the switch event read. If the difference is greater than -250 kWh or +200 kWh a RR will be issued.

The switching team raises the RR through SAP and emails the other trader. Returned ACs are reviewed and actioned in SAP's switching console, and SAP readings are updated to reflect the outcome of the RR process. If the RR is rejected the switching team liaises with the other trader to determine next steps and an agreeable reading.

MEEN issued 249 RR files for switch moves. 174 (70%) were accepted and 75 (30%) were rejected. A sample of five rejected files and five accepted files were checked:

- SAP reflected the outcome of the RR process for all ten RRs checked; for six ICPs[25] the switch event read type recorded in SAP did not match the expected read type and the issues occurred due to a combination of occasional data entry errors because SAP is updated manually, and that SAP sometimes defaults the read type back to actual in between the team member changing the data and saving, and
- nine RRs were supported by at least two validated actual readings; RR-202199 for 0000031339NTA48 was supported by one reading from meter change paperwork and one customer reading.

The switch breach history report recorded 36 RR breaches for switch moves where the files were up to 297 days overdue. I checked the five latest files and found they were delayed while MEEN obtained two actual reads or negotiated with the other trader, or they were subsequent RRs after an initial attempt was rejected.

AC

RRs received from other retailers are identified through daily review of the switch breach history report. Each ICP on the report is checked in SAP and supporting emails from the other trader are reviewed. A response to the RR is triggered in SAP, which produces the AC file and sends it to the registry. The read history is manually updated in SAP to reflect the outcome of the RR process at the same time.

Mercury issued six AC files for transfer switches, two were accepted and four were rejected:

- the ICPs which had AC rejections all had their switches withdrawn, due to issues not related to the switch event reading, and
- the ICPs with AC acceptances all had the correct agreed switch reading recorded in SAP; ICP 0000037698WEC1E RR-200500 11 July 2023 had an incorrect event read type of A when E was expected due to a data entry error.

[25] 0000000102DE568 25 February 2023 A should be E, 0000567327TP458 27 May 2023 A should be E, 1002000452TC125 12 August 2023 A should be E, 0000004073TEBB5 18 April 2023 A should be E, 0000102674DE994 1 October 2022 A should be E, 1001248036LC63E 12 June 2023 A should be E.

The switch breach history report recorded one AC file sent one business day late, due to supporting RR information being queried with the other trader before a response was provided.

CS files with estimated readings where no RR is issued

Review of five transfer CS files with estimated reads where no RR was issued confirmed that the correct readings were recorded in SAP.

TRUS

RR

ICPs requiring RRs are generally identified through the billing validation process or customer enquiries. The billing team provides calculations to determine the expected event read, based on two validated actual readings.

The provisioning team raises the RR through GTV and emails the other trader. Returned ACs are loaded into GTV and reviewed. If accepted the switching or billing team updates GTV depending on whether the change impacts on customer billing. If rejected the provisioning team liaises with the other trader and billing team to determine next steps and an agreeable reading.

TRUS issued 474 RR files for switch moves. 340 were accepted and 134 were rejected. A sample of five rejected files and five accepted files were checked. The RR files were adequately supported by actual readings and GTV reflected the outcome of the RR process. ICP 0000005253UN709 RR-202943 6 September 2023 had its switch event readings recorded as actual instead of estimated due to a data entry error when processing the AC file.

The switch breach history report recorded 20 RR breaches for switch moves, where the RR was sent more than four months after the event date. The latest file was sent 237 days late. I checked the five latest files and found they were delayed while TRUS obtained two actual reads or negotiated with the other trader, or they were subsequent RRs after an initial attempt was rejected.

AC

RRs received from other retailers are directed to work queues visible in Data Explorer for action. The provisioning team works through the items and reviews any associated email correspondence to determine whether the RR should be accepted or rejected. They choose A (accept) or R (reject) within GTV, and GTV automatically creates an AC file and sends it to the registry. If the response accepts the other trader's RR, the provisioning team will manually update the readings in GTV.

The switch breach history report is run at least twice daily, to identify AC files which are close to their due date so that they can be checked and processed.

Monthly switching compliance reports are generated showing the number of breaches for late CS files including CS files issued after withdrawals. Exceptions are investigated to determine whether they were caused by the system, avoidable or not controllable. The reports are used to identify trends and where improvements can be made.

TRUS issued two AC files for switch moves which were both accepted, and one of the switches was later withdrawn. The agreed switch event read for 1002112432LC17E RR-200385 (6563) was recorded against 20 July 2023 (the new trader's first day of supply) instead of 19 July 2024 (TRUS last day of supply), resulting in under submission of 14 kWh. TRUS intends to correct the reading date.

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

CS files without RRs raised

Review of five switch move CS files with estimated reads where no RR was issued confirmed that the correct readings were recorded in GTV.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.11 With: Clause 12 Schedule 11.3 From: 14-Mar-23 To: 06-Dec-23	**MEEN** For seven ICPs the switch event read type recorded in SAP did not match the expected read type. For one ICP the RR was not supported by two validated actual readings. 36 RR breaches. One AC breach. **TRUS** One switch event did not have its reading recorded against the correct day in GTV, resulting in under submission of 14 kWh. 20 RR breaches. For one ICP the switch event read type recorded in GTV did not match the expected read type. 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. The RR content was correct, most files were on time and read values were correctly recorded, but some read types and dates were incorrectly recorded in SAP or GTV due to a combination of occasional data entry errors because SAP and GTV are updated manually, and that SAP sometimes defaults the read type back to actual in between the team member changing the data and saving. The audit risk rating is low because the files were issued in time for revised submission data to be provided through the revision process, and the incorrect read types recorded in SAP have no impact on submission. The incorrect read date resulted in under submission of 14 kWh.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements to SAP-related systems or processes. TRUS: Identified as agent error. Retraining provided to prevent recurrence. Documentation was also reviewed to ensure accuracy.	N/A April 2024	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
TRUS: Training materials updated and general comms provided to all team members to draw their attention to this type of error.	May 2024	

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 switch gain process was examined to determine when Mercury deem all conditions to be met. An extreme case sample of the most backdated NT files were checked to confirm that these were notified

to the registry within two business days, and all were checked to confirm that the correct switch type was selected. The switch breach history report was reviewed.

Audit commentary

MEEN

Account managers enter into contracts with HH customers and advise the commercial operations team when an agreement has been entered into. The commercial operations team enter the contract details into SAP's CRM individually or using a bulk process for groups of ICPs, and then SAP generates the NT file. If SAP fails to generate the file, an exception will be generated and emailed to the commercial operations team, who will then create the NT manually on the registry.

All 97 HH switch NTs where the meter category information was available on the PR255 report had metering category 3, 4 or 5. I checked the five most backdated files and confirmed that they were sent within three business days of pre-conditions being cleared, and the correct switch type was applied.

The switch breach history report recorded three PT breaches where the HH NT proposed date was more than 90 days before the NT arrival date. In all cases the NT date was agreed with the other trader.

TRUS

TRUS has not completed any HH switches.

All 17,687 transfer switch NTs and 330,059 switch move NTs where the meter category information was available on the PR255 report had metering category 1 or 2.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.12 With: Clause 14 of Schedule 11.3 From: 04-Oct-23 To: 16-Oct-23	**MEEN** Three PT breaches. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong, and the NTs were backdated due to metering issues and agreed with the other trader. The impact is low because the dates were agreed with the other trader, and the switches were completed in time for revised data to be provided through the revision process.

Actions taken to resolve the issue	Completion date	Remedial action status
This has been identified as human error.	May 2024	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
We have provided refresher training for the team and have implemented new checks going forward to avoid recurrence.	May 2024	

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 reports were reviewed to identify HH AN files issued by Mercury during the audit period, and a sample of HH ANs were reviewed to determine whether the codes had been correctly applied. The switch breach history reports were examined for the audit period.

Audit commentary

MEEN

The switching console manages HHR switch losses, and the switch breach history report is reviewed daily to identify any AN files which are due. NT receipt starts the process, and ANs are created manually using the registry user interface once the sales team have confirmed whether an AN or NW should be sent.

Five HH ANs were issued during the period reviewed and the correct response codes were applied. The switch breach history report did not record any late HH AN files.

TRUS

No HH ANs were issued by TRUS during the audit period, and the switch breach report did not record any late HH AN files.

Audit outcome

Compliant

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 reports were reviewed to identify HH CS files issued by Mercury during the audit period, and a sample of HH CS files were reviewed to determine whether they were accurate. The switch breach history reports were examined for the audit period.

Audit commentary

MEEN

The switching console manages HHR CS process, and the switch breach history report is reviewed daily to identify any CS files which are due. If SAP fails to generate the file, an exception will be generated and emailed to the commercial operations team, who will then create the CS manually on the registry.

104 HH CS files were recorded on the event detail report and their content was correct. The switch breach history report recorded one HH CS file which was one business day late, due to an oversight.

TRUS

No HH CS files were issued, and the switch breach report did not record any late HH CS files.

Audit outcome

Compliant

Non-compliance	Description
Audit Ref: 4.14 With: Clause 16 of schedule 11.3 From: 28-Nov-23 To: 28-Nov-23	**MEEN** One CS breach. Potential impact: Low Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong, and the impact is low. One of the 104 HH CS files issued was one day late due to an oversight.

Actions taken to resolve the issue	Completion date	Remedial action status
We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements to SAP-related systems or processes.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above.	N/A	

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 2 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 2 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 Mercury, and check a sample for accuracy,
- identify all switch withdrawal acknowledgements issued by Mercury, and check a sample of rejections, and
- confirm timeliness of switch withdrawal requests.

The switch breach history report was checked for any late switch withdrawal requests or acknowledgements.

Audit commentary

MEEN

NW

The switching team identifies some ICPs where withdrawal is required themselves. Where another team finds that a withdrawal is required, the switching team is advised by email to a shared switching inbox. The emails usually contain sufficient information for the switching team to confirm the correct withdrawal advisory code and provide supporting information to the other trader, but more information can be requested as necessary.

To raise the NW, the switching team selects the ICP, switch to be withdrawn and withdrawal reason code and SAP generates the NW and sends it to the registry. The switching team manually creates the email to the other trader.

Returned AWs are added to a SAP work queue and worked through to open or close the customer account in SAP as required.

MEEN issued 1,183 NW files. 244 (13.0%) were rejected and 1,639 were accepted. I checked the withdrawal codes for a diverse sample of 22 rejected NWs and found three date fail withdrawals had incorrect advisory codes because the event date was not at least ten business days in the future. The switching team had also been applying the date fail code where event dates were more than ten business days in the past and intend to adjust their process.

Recommendation	Description	Audited party comment	Remedial action
Correct use of the date fail (DF) NW advisory code	**MEEN** Ensure that the DF code is only used where the proposed event date is more than ten business days in the future.	Adopted. DF codes and usage has been discussed with the team and both MEEN & TRUS codes are across it.	Identified

The switch breach history report recorded:

- 203 NA breaches where the NW arrival date was more than two calendar months after the CS actual transfer date, which were up to 288 days late,
- 44 SR breaches where the NW was issued more than ten business days after the initial NW which were up to 178 days late, and
- 33 NW breaches where the NW was more than three business days after the NT where no AN or CS is issued, which were up to 30 days late.

I checked a sample of 16 late files and found the delays were caused by late notification from the customer, negotiation with the other trader, investigation required to confirm a withdrawal was required, or heavy workloads during the period where ICPs were migrating from MEEN to TRUS.

At least two of the NW breaches were not genuinely late NW files; they were recorded because no AN, CS or NW was sent within three business days of NT receipt.

AW

Incoming NWs are queued in the switching console and each file is reviewed to determine whether it should be accepted or rejected before SAP is manually updated to reflect the outcome of the withdrawal process. The switch breach history is reviewed daily to identify any AW files which are due.

264 (7.8%) of the 3,404 AWs issued by Mercury were rejections. I reviewed a sample of 21 rejections by Mercury (three per NW advisory code) and confirmed they were rejected based the information available at the time the response was issued.

The switch breach history report recorded 32 AW breaches where the AW was sent one to four business days late. I checked the ten latest and found they were caused by heavy workloads during the migration of ICPs from MEEN to TRUS.

TRUS

NW

The provisioning team identifies some ICPs where withdrawal is required themselves. Where another team finds that a withdrawal is required, the provisioning team is advised by a "call wrap" being added in GTV which assigns a switching query service order to the provisioning team or email from the service hub or sales team. This contains sufficient information for the provisioning team to confirm the correct withdrawal advisory code and provide supporting information to the other trader, but more information can be requested as necessary.

To raise the NW, the provisioning team selects the ICP and switch service order that requires withdrawal and then selects the withdrawal reason code and GTV generates the NW and sends it to the registry. The provisioning team manually creates the email to the other trader.

Returned AWs are automatically delivered in a report to the switching helpdesk and attached to a withdrawal service order. These are worked through to open or close customer accounts as required. A bulk process is used to close the withdrawal work queue for the affected ICPs and update GTV.

TRUS issued 3,346 NW files. 390 (11.6%) were rejected and 3,038 were accepted. I checked the withdrawal codes for a diverse sample of 21 rejected NWs and found five were incorrect:

- a metering issue withdrawal was sent in error for 0000024181EA987 NW-1152571,
- three date fail withdrawals had incorrect advisory codes because the event date was not at least ten business days in the future; the provisioning team is aware of when the date fail code should be used and these are believed to be isolated errors, and
- one wrong premises withdrawal had an incorrect advisory code, because the premises was correct, but the customer had changed their mind.

The switch breach history report recorded:

- 125 NA breaches where the NW arrival date was more than two calendar months after the CS actual transfer date; the files were up to 207 days late - I checked five and found they were delayed by late notification from the customer or the investigation required to confirm a withdrawal was required,
- 23 SR breaches where the NW was issued more than ten business days after the initial NW; the files were up to 83 days late - I checked five and found they were delayed by investigation and negotiation with the other trader, and
- one NW breach where the NW was more than three business days after the NT where no AN or CS is issued; the file was one day late while investigation occurred to determine whether a NW or CS was required.

AW

Withdrawal requests received from other retailers are directed to work queues visible in Data Explorer for action, and responses are considered on a case-by-case basis.

The switch breach history report is run at least twice daily, to identify AW files which are close to their due date so that they can be checked and processed.

Monthly switching compliance reports are generated showing the number of breaches for late NWs and withdrawals not completed within ten business days of the initial request. Exceptions are investigated to determine whether they were caused by the system, avoidable or not controllable. The reports are used to identify trends and where improvements can be made.

303 (7.71%) of the 3,931 AWs issued by TRUS were rejections. I reviewed a sample of 20 rejections by TRUS (three per NW advisory code) and confirmed all were valid.

The switch breach history report did not record any AW breaches.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.15 With: Clauses 17 and 18 Schedule 11.3 From: 06-Jan -23 To: 11-Dec-23	**MEEN** Three incorrect NW codes found in the sample of 22 checked. 203 NA breaches. 44 SR breaches. 33 NW breaches. 32 AW breaches. **TRUS** Five incorrect NW codes found in the sample of 21 checked. 125 NA breaches. 23 SR breaches. One NW breach. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate. Most files checked had accurate withdrawal advisory codes, but errors sometimes occur. Most NW files were issued on time and most delays were due to circumstances not fully within Mercury's control such as late notification from the customer, and negotiation with the other trader. Delays due to high workloads while ICPs migrated from MEEN to TRUS are no longer an issue now that the migration is complete. The audit risk rating is low. Withdrawals were completed in time for revised data to be provided through the revision process. The impact of incorrect NW codes is reduced by supporting correspondence being provided to the other trader to explain the reasons for the withdrawal request.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: Team has been advised on the difference between DF and CE NW codes. We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements to SAP-related systems or processes. TRUS: Training undertaken to prevent agents from making the same error in the future.	Completed April 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TRUS: Team training provided. Documentation also reviewed to ensure accuracy.	May 2024	

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

MEEN

The reads applied in switching files were examined. The meter readings used in the switching process are validated meter readings or permanent estimates, and four CS files[26] with inaccurate switch event readings were identified. Three of the files were generated by SAP and one was created manually.

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

[26] 0005682851RNDED CS-4652175 19 January 2023 62841 E should have been 62836 A, 1002058744LC716 CS-4639600 12 January 2023 7323 A relates to 10 January 2023 instead of 11 January 2023 no later reads available, 0234440821LCE9C CS-4653559 27 January 2023 20141 A relates to 23 January 2023 no later reads available, 1002141844LC834 CS-4682130 14 February 2023 158 A relates to 7 February 2023 no later reads available. The ICPs have low average daily kWh and the impact is expected to be low.

TRUS

The reads applied in switching files were examined. The meter readings used in the switching process are validated meter readings or permanent estimates, and no inaccurate switch event reads were identified.

The policy regarding the management of meter reading expenses is compliant.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.16 With: Clause 21 of schedule 11.3 From: 03-Dec-21 To: 17-Nov-22	**MEEN** Four ICPs had an incorrect event read recorded in their CS file. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate. Most switch files had accurate content. The audit risk rating is low because the ICPs have low average daily kWh and the impact is expected to be low.

Actions taken to resolve the issue	Completion date	Remedial action status
We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements to SAP-related systems or processes.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above.	N/A	

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

Code reference

Clause 11.15AA to 11.15AC

Code related audit information

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

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

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

Audit observation

Win-back processes were discussed. The event detail report was analysed to identify all withdrawn switches with a CX code applied within 180 days of switch completion post 31 March 2020. A sample were checked to determine compliance.

Audit commentary

MEEN

When an incoming NT is received, MEEN issues an email or SMS message to the customer advising that they have received a switch request and asking the customer to contact MEEN if the switch is not expected. Mercury's retention process commences once the 180-day period has passed.

Review of the event detail report identified 287 NWs with a CX withdrawal reason code issued within 180 days of CS completion where Mercury was the losing trader, and four of these were rejected by the other trader. I reviewed a sample of ten CX withdrawals including all rejected NWs and found that the withdrawals were at the customer's request and no enticements were offered.

TRUS

TRUS had an off-boarding team which would contact switching customers if they were also supplied with gas, phone or broadband services to confirm which services should switch and which should remain with TRUS. No enticements were offered, and the team stopped operating in March 2024.

Audit outcome

Compliant

5. MAINTENANCE OF UNMETERED LOAD

5.1. Maintaining shared unmetered load (Clause 11.14)

Code reference

Clause 11.14

Code related audit information

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

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

Audit observation

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

Audit commentary

MEEN

Mercury does not supply any ICPs with shared unmetered load. ICPs which have shared unmetered load added by the distributor will be identified and have trader unmetered load added through the monthly validation process described in **section 3.7**.

TRUS

Unmetered load is validated by the Revenue Assurance team using discrepancy reporting which identifies additions, removals and changes to unmetered load, and differences between GTV, registry and distributor information. This includes:

- a comparison between registry unmetered load data and GTV, including descriptions and trader unmetered kWh, and
- a comparison between the daily unmetered kWh recorded by TRUS and the value calculated based on the distributor's unmetered load description.

Discrepancies are investigated by checking paperwork and with the customer and/or network. If necessary, site visits are completed. Discrepancies are reviewed daily to every few days, and notes are made to record progress and outcomes of any investigations into discrepancies.

TRUS supplies 210 ICPs with shared unmetered load. All have the shared unmetered load flag set to Y and a non-zero unmetered daily kWh. 209 matched the calculation based on the distributor's values within ±0.1 kWh. For ICP 0000018605WEC0F, TRUS calculated the daily unmetered kWh based on the distributor information recorded against this ICP – "**0046**:11.5:2 Light across 4 ICPs", not realising that the records for the shared ICP 0000054087WEFD3 were inconsistent and showed – "**158**;11.5; 2 ROW lights across 4 ICPS" on shared ICPs 0000019009WE8B7 0000018605WEC0F 0000020054WE268 0000017705WEC6B. TRUS has applied 0.52 kWh per day, and investigation should be completed to confirm the correct shared unmetered load details. A recommendation is raised in **section 3.7**.

Exceptions identified in the previous audit have been corrected.

Audit outcome

Compliant

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

Code reference

Clause 10.14 (2)(b)

Code related audit information

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

Audit observation

The AC020 reports were examined to identify all unmetered load over 3,000 kWh per annum. Any ICPs with unmetered load greater than 3,000 kWh per annum were examined.

Audit commentary

MEEN

The ten ICPs with unmetered annual loads between 3,000 kWh and 6,000 kWh have predictable load types. 20 DUML ICPs have annual loads over 6,000 kWh and are compliant.

TRUS

There are ten ICPs with standard unmetered load of between 3,000 and 6,000 kWh per annum and all have predictable loads or are DUML ICPs. One DUML ICP has annual load over 6,000 kWh and is compliant.

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 ten 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 AC020 reports were examined to identify all unmetered load over 3,000 kWh per annum. Any ICPs with unmetered load greater than 6,000 kWh per annum were examined.

Audit commentary

MEEN

20 DUML ICPs have annual load over 6,000 kWh and are compliant.

TRUS

One DUML ICP has annual load over 6,000 kWh and is compliant.

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

Mercury supplies 17 distributed unmetered load databases. 15 are supplied under the MEEN participant code and Avondale Business Association (0987369148LC0CE) and Acacia Cove Retirement Village (0949731528LC8C0) are supplied under the TRUS participant code.

Audit commentary

DUML audits for all databases were conducted by Veritek and Provera. I saw evidence during the DUML audits that Mercury's Compliance & Reconciliation Analyst and Account Managers are working closely with the DUML database owners to improve database accuracy, including providing advice and support.

The Electricity Authority issued a memo on 18 June 2019 confirming that the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed, and
- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

Some DUML customers are providing changes tracked at a daily level and revisions are completed where required. MEEN is working with customers who are still providing a snapshot of the DUML database to obtain reporting which tracks changes at a daily level.

Mercury reconciles this DUML load using the HHR profile. Mercury was granted exemption No. 233, which allowed them to provide half-hour ("HHR") submission information instead of non-half-hour ("NHH") submission information for distributed unmetered load ("DUML"). Clause 8(g) of Schedule 15.3 of the Code, which the exemption related to was removed from the Code in 2018, therefore the exemption is no longer valid. Mercury is planning to apply for a new profile which will allow them to continue to submit the DUML load as HHR.

I have included the submission variance in the last column of the main DUML table on the next page. There were no differences over 50,000 kWh per annum.

Compliance Achieved (Yes/No)												
Database	DUML Audit completed 16A.26 and 17.295F	Next audit due	Deriving submission information 11(1) of schedule 15.3	ICP identifier 11(2)(a) of schedule 15.3	Location of items of load 11(2)(b) of schedule 15.3	Description of load 11(2)(c)&(d) of schedule 15.3	All load recorded in database 11(2A) of schedule 15.3	Tracking of load changes 11(3) of schedule 15.3	Audit trail 11(4) of schedule 15.3	Database accuracy 15.2 and 15.37B(b)	Volume information accuracy 15.2 and 15.37B(c)	Database indicative kWh variance PA +=over - = under
Acacia Cove	1 June 2022	1 June 2024	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Accurate
Avondale Business Association	5 April 2023	5 April 2025	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Accurate
Carterton DC	21 May 2023	1 June 2024	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Accurate
Dunedin CC	1 February 2023	1 February 2025	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Minor
IntelliHUB Gatekeeper ICPs	31 May 2021	25 May 2024	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Accurate
Kaikoura DC	14 November 2023	1 December 2024	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Accurate
Marlborough DC	15 August 2023	1 April 2025	No	Yes	Yes	Yes	No	Yes	Yes	No	No	Accurate
Masterton DC	9 May 2023	1 December 2024	No	Yes	Yes	No	Yes	Yes	Yes	No	No	+7,300
Palmerston North CC	30 March 2023	26 March 2024	No	Yes	No	No	No	Yes	Yes	No	No	+14,900
Rotorua Lakes DC	20 February 2022	20 August 2024	No	Yes	No	Yes	No	Yes	Yes	Yes	No	Minor
Selwyn DC	17 August 2022	17 August 2024	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Accurate
South Wairarapa DC	14 September 2023	1 October 2024	No	Yes	Yes	No	No	Yes	Yes	No	No	+7,700
Stratford DC	27 April 2024	Under review	No	No	Yes	No	No	Yes	Yes	No	No	Accurate
Tararua DC	1 March 2023	1 September 2024	No	Yes	Yes	Yes	No	Yes	Yes	No	No	-9,700
Western Bay of Plenty DC	17 October 2023	1 September 2024	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	+17,200

Compliance Achieved (Yes/No)												
Database	DUML Audit completed 16A.26 and 17.295F	Next audit due	Deriving submission information 11(1) of schedule 15.3	ICP identifier 11(2)(a) of schedule 15.3	Location of items of load 11(2)(b) of schedule 15.3	Description of load 11(2)(c)&(d) of schedule 15.3	All load recorded in database 11(2A) of schedule 15.3	Tracking of load changes 11(3) of schedule 15.3	Audit trail 11(4) of schedule 15.3	Database accuracy 15.2 and 15.37B(b)	Volume information accuracy 15.2 and 15.37B(c)	Database indicative kWh variance PA +=over - = under
Western BOPDC Parks	19 May 2023	28 June 2024	No	Yes	Yes	No	No	No	No	No	No	+4,963

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 5.4 With: Clauses 11(1) of schedule 15.3, 10.14 & 15.13 From: 01-Apr-23 To: 29-Apr-24	**MEEN** Inaccurate submission information for several databases. The DUML load is submitted using HHR profile, without an exemption in place. 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	The controls are moderate. Accuracy of databases is not within MEEN's direct control, and they are working with the customers to improve the level of accuracy. The impact is medium based on the kWh differences identified in the individual DUML audits.

Actions taken to resolve the issue	Completion date	Remedial action status
We continue to work with our customers to improve database accuracy and overall DUML compliance. We have drafted profile applications for CMS Dimming, Static Dimming and Flat (no dimming) profiles; lack of resource due to the prioritisation of other projects has caused delay however we have been chipping away at drafting our applications and are hoping to submit to the EA before end of June 2024.	May/June 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above.	N/A	

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

MEEN

Metering installations installed

Mercury's new connection process includes a check that metering is installed before electrical connection occurs, and that any unmetered load is quantified. The design of the new connections process does not allow ICPs to be connected without authorisation by MEEN or an arrangement with an MEP if the ICP is to be metered.

The audit compliance report recorded 27 "active" ICPs where the metering category was 9 or blank, and the unmetered flag was set to no. All were metered or moved to "inactive" status after the report was run or had accepted MEP nominations and were awaiting meter asset data.

Submission by subtraction

Exemption 307 exempts Mercury from complying with the obligation in clause 10.24(c) of the Electricity Industry Participation Code 2010 ("Code") to not to use subtraction to determine submission information. This exemption applies only to ICP 0003133903AA777, and expires on the earlier of 1 December 2030, the date that MEEN is no longer the trader, or Accucal is no longer the MEP, or the meter is changed, reprogrammed or reconfigured, or any other consumers are connected to the same substation.

SAP automatically calculates the submissions using the kWh and KVARH interval data for ICP 0003133903AA777. I walked through the submission process and confirmed it was operating as expected.

No other ICPs have submission information determined by subtraction.

Distributed generation

A report is run monthly to compare the distributor's generation fields against trader information, and investigation occurs as workloads allow. If generation is present, the customer is asked whether they wish to gift the generated energy or have EG metering installed. All customers who wish to gift are managed in an excel spreadsheet. This is used by the Energy Services team to notify the Reconciliation Manager. The report identifies:

- ICPs with installation type B in SAP but not the registry,
- ICPs with installation type B in the registry but not SAP, and
- ICPs with an EG meter register without installation type B.

There is no check for ICPs with installation type B or G, but no EG register. No recommendation to add this check has been raised because the migration from MEEN to TRUS for mass market ICPs has been completed, and in future most DG ICPs are expected to be supplied by TRUS.

The registry list recorded 118 "active" ICPs with distributed generation capacity recorded by the distributor. Of those:

Profile on registry	ICPs	ICPs without settled I flow metering	Comment
DFP	1	1	ICP 0000001000MR7FD (Atiamuri Generation SW ICP) is an unmetered SB ICP and has the DFP profile assigned and is compliant.
HHR	105	25	The 25 ICPs without settled I flow registers were checked. Ten were either confirmed not to be generating, are recorded on the gifting register or had settled I flow metering added after the report was run. 12 have I flow data being received. For 11 ICPs the data is being used for submission and ICP 0000071621TR831 does not have its I flow register set up in SAP. The MEP has not recorded a settled I flow register on the registry. ICPs 2000000001MQA97 and 0007198361RN7C3 have service orders raised for I flow metering to be installed, and ICP 0306617560LCA47 is to have a job raised. Non-compliance is recorded for the three ICPs which are in the process of having I flow metering installed, and ICP 0000071621TR831 which does not have its I flow meter set up in SAP.
RPS	12	1	ICP 0000206312DE8DA had its I flow meter updated to settlement indicator yes after the report was run, and revised submission data will be provided.
Grand Total	118	27	

Apart from the 13 NHH settled ICPs with solar generation and RPS profile recorded on the registry, no ICPs with discrepancies between submission type and profile were identified. Energy services advised that the commercial operations team sometimes instructs them not to set up the EG registers because no volumes are expected, and there is no monitoring in place to identify recorded volumes. This resulted in

12 ICPs[27] with generation and I flow metering not having I flow submission data provided. I recommend that all ICPs with settled EG registers should be set up completely in SAP to allow readings to be loaded and submission to occur. If no volume is recorded zeros will be correctly reported.

Recommendation	Description	Audited party comment	Remedial action
Set up all settled EG registers completely in SAP	**MEEN** Settled EG registers are not always set up in SAP if consumption is not expected. These should be consistently created to ensure that all volumes are reported.	Adopted.	Identified

No ICPs had distributed generation indicated by the trader but not the distributor.

The previous audit recommendation to investigate distributed generation for specific ICPs has been adopted.

I re-checked discrepancies identified during the previous audit and found the issues had been resolved or the ICPs had switched to TRUS. Five of the ICPs which switched to TRUS[28] still do not have generation metering installed and are not recorded on the reconciliation manager's gifting register. These ICPs are counted within the TRUS discrepancies described below.

Bridged meters

Mercury confirmed five ICPs were bridged to reconnect during the audit period and were later unbridged. Energy was not quantified by the meter during the bridged periods, but reasonable estimates of consumption were created.

TRUS

Metering installations installed.

The TRUS new connection process includes a check that metering is installed before electrical connection occurs, and that any unmetered load is quantified.

The audit compliance report recorded 271 "active" ICPs where the metering category was 9 or blank, and the unmetered flag was set to no. 270 ICPs had metering added after the report was run or accepted MEP nominations and were awaiting meter asset data. ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active". The incorrect status is recorded as non-compliance in **sections 2.1** and **3.9**.

The audit compliance report did not record any instances where an MEP nomination was not accepted within 14 business days, and no load is determined by subtraction.

Distributed generation

TRUS receives distributed generation applications from the customer or from the network. If a customer approaches TRUS without network approval they are asked to obtain this first. TRUS arranges

[27] No I flow volumes are expected for ICPs 0000052074WE6C4, 0000038898WE375, 0000166840CKBC7, 1000530812PC615, 1000015863BP8C3, 0006611199ML99C and 0301412022LCBBA. I flow volumes are expected for ICPs 0000019116TR259, 1001142826LCE6A, 1002167046LC4B1, 1002175744UNA83 and 0329748033LCC12.
[28] 0005003215TU75A, 0879163805LC318, 0000048274WEA62, 0007130338RNA72 and 0000045433CP1F9.

for import/export metering either by asking the MEP to update the settlement indicator for an existing I flow register if one is present or raising a service order for meter installation. An MEP nomination is issued at the same time if the MEP will change.

Once the metering details are updated on the registry the change will be imported into SAP and checked against the metering paperwork. GTV will automatically update the profile to PV1 where a settled I flow register is present. The profile can be manually changed to EG1 in GTV if the fuel type is not solar.

If the customer does not agree to have the I flow metering installed, or multiple attempts to contact the customer to arrange for I flow metering to be installed are unsuccessful, ICPs are added to the reconciliation manager's gifting register because I flow volumes are not measured or submitted.

Distributed generation information is validated using discrepancy reports:

- daily reporting identifies inconsistencies between the GTV and registry installation type and fuel type,
- weekly reporting identifies ICPs where the network has changed the installation type or fuel type; these ICPs are checked to determine whether a service order for import/export metering has been raised, and if not, they are investigated to determine whether generation is present and if so, a job is raised, and
- weekly reporting also checks for ICPs with a settled EG meter register and installation type L; TRUS normally contacts the network to determine whether generation is present and makes a note against the item on the discrepancy report.

TRUS supplies 10,761 "active" ICPs with distributed generation recorded by the distributor:

Submission type	ICPs	ICPs without settled I flow metering	Comment
HHR	111	17	The 17 ICPs without settled I flow registers were checked. 12 ICPs are recorded on the gifting register or had settled I flow metering added after the report was run. The other five ICPs were migrated from MEEN, and TRUS is working with the customers to determine whether generation is present, and if so, arrange for an I flow meter install.
NHH	10,650	232	A sample of 143 of the 232 ICPs without settled I flow registers were checked. 61 ICPs appear on the gifting register, and 58 ICPs had settled I flow metering added after the report was run. ICPs 0000054691HRC1C and 0001132003WA6F3 have I flow meter installations in progress. Ten ICPs were confirmed not to be generating. For ten ICPS TRUS has attempted to contact the customer to determine whether generation is present, and if so, arrange for an I flow meter install. Three ICPs switched out after the report was run. ICPs 0000158209UN0A8 and 0000933391TU07D had I flow meter installations turned down by the customer and have not yet been added to the gifting register.

Submission type	ICPs	ICPs without settled I flow metering	Comment
			I also found five ICPs which switched from MEEN to TRUS[29] identified as requiring I flow metering during the previous audit still do not have generation metering installed and are not recorded on the reconciliation manager's gifting register. Non-compliance is recorded for the seven ICPs which are confirmed to be generating and in the process of having I flow metering installed, and the two ICPs where I flow meter installations were turned down by the customer which have not been added to the gifting register.
Grand Total	10,761	249	

Generation profiles are automatically applied in GTV based on the meter details. If the settlement indicator on an I flow register is Y, a generation profile will be applied. The following profile discrepancies were identified:

Issue	ICPs affected	
NHH settled ICPs with I flow metering and no generation profile	60	All 60 ICPs were checked: 49 were updated to include a generation profile or moved to HHR profile during the audit. The discrepancies occurred because the settlement indicator was not properly updated in GTV when it changed. The process is automated, and staff usually only check the changes to metering details where GTV identifies missing data. One ICP was confirmed not to be generating, and one ICP was recorded on the gifting register. ICPs 0472213008LC4AD and 0000512348CE732 are confirmed to be generating with settled I flow registers but have not had their profiles updated. One ICP switched out after the report was run. The other six ICPs had their settled I flow registers removed after the report was run and the TRUS profile is correct.
PV1 profile with no generation recorded by the distributor	269	A sample of 84 ICPs were checked: 46 ICPs were confirmed to be generating and the TRUS profile is correct, and a further three switched in with I flow metering and generation profiles and are believed to be correct. 31 ICPs are believed not to be generating and TRUS is awaiting settlement indicator corrections and paperwork from the MEP before the meter details can be updated and the generation profiles removed. One ICP had its generation profile removed after the MEP corrected the metering details.

[29] 0005003215TU75A, 0879163805LC318, 0000048274WEA62, 0007130338RNA72 and 0000045433CP1F9.

Issue	ICPs affected	
		Three ICPs are being investigated with the customer and network to confirm whether they are generating.
PV1 profile without a solar or solar+battery fuel type	173	GTV maps generation profiles based on fuel types. Solar, solar+battery and other map to PV1 and other fuel types are mapped to EG1. Staff can manually amend the fuel types where necessary. **Fuel type = wind** Six ICPs had a wind fuel type and PV1 profile recorded on the registry. Two of the ICPs were confirmed to have solar installed and the TRUS profile is correct. The other four ICPs have wind generation and the profiles were corrected during the audit. **Fuel type = other** 167 ICPs had other fuel type and PV1 profile recorded on the registry. I checked a sample of 44 ICPs and found 43 had solar and the TRUS profile is correct. ICP 0000640400TE25B has no solar present but PV1 profile remains on the registry. There is no impact because no volumes are submitted.
PV1 profile for HHR settled ICPs	7	Seven HHR ICPs had HHR PV1 profile recorded. All seven had solar fuel type but PV1 should not be recorded because the ICPs are HHR settled, and it is not used for submission. The profiles were corrected during the audit, and a new discrepancy report was created for ICPs with HHR profile and any other profile.

Recommendation	Description	Audited party comment	Remedial action
Identification of ICPs with settled I flow register and no generation compatible profile	**TRUS** Add a check to identify ICPs with settled I flow registers on the registry which do not have settled I flow registers in GTV. This could be achieved using the registry AC020 trader compliance report's AC020Trader20 which shows ICPs with I flow registers and generation recorded by the distributor where no generation compatible profiles are present.	This recommendation is accepted and work is currently in progress to create a report that will identify where the registry has a billable I flow register but this is not reflected in GTV.	Investigating

Discrepancies identified during the previous audit were rechecked. All were resolved by the MEP, distributor or TRUS correcting their records, or compliant metering be installed except those still included as exceptions above, including:

- ICP 0000158209UN0A8 which has non-compliant legacy metering which also has the meter reads recording negative consumption where the export volumes exceed the import load.

Because of this TRUS cannot consider placing this ICP on the gifting register and the customer is not engaging with TRUS to address the meter compliance issues.

- ICP 0000901755WW6EB had I flow volumes reported in submission information for periods prior to the generation profile being recorded on the registry. TRUS identified that the IHUB meter was installed in March 2021 as part of a new connection with an I flow register. However, this generation register had the settlement indicator flag set to N. This meter was set up in GTV as having both import and export registers available for submission in error. IHUB does not provide meter reads for registers not flagged for inclusion in the settlement process, so TRUS did not receive reads for the I flow register until IHUB updated the settlement indication flag on 12 February 2022. Once TRUS received the first scheduled meter read for this I flow register, the submission process apportioned the volume back to the initial installation read resulting in some generation volumes being recorded for periods where generation is not present for this ICP. This ICP is still under investigation. Non-compliance is recorded here and in **sections 2.1** and **12.7.**

Bridged meters

A list of 65 bridged meters was provided. When a meter is bridged, TRUS is not compliant with the requirement to ensure all electricity conveyed is quantified in accordance with the Code.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.1 With: Clause 10.13 From: 01-Apr-23 To: 29-Apr-24	**MEEN** Four ICPs with distributed generation do not have their I flows measured and submitted. 12 HHR ICPs with generation recorded by the distributor and I flow metering did not have their I flow meter set up in SAP and no I flow submission is occurring. While meters were bridged, energy was not metered and quantified according to the code for five ICPs. **TRUS** Nine ICPs with distributed generation do not have their I flows measured and submitted. 13 ICPs had incorrect generation profiles applied which were corrected during the audit. ICP 0000640400TE25B has no solar present but PV1 profile remains on the registry. There is no impact because no volumes are submitted. While meters were bridged, energy was not metered and quantified according to the code for 65 ICPs. 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. There are good processes in place to ensure that energy is quantified, but there are sometimes delays in investigating and metering distributed generation consumption. A small amount of under submission of I flow volumes will be occurring. There are processes in place to estimate consumption for bridged meters.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: We are investigating these and will resolve as soon as possible. TRUS: New reporting has been implemented to identify ICPs that are profiling incorrectly based on their Fuel Type. Exisiting reporting identifies ICPs where there is Generation but no I Flow metering, this continues to be monitored and all sites identified during Audit had attempts at contact made prior to Audit. For the bridged meters, we understand that the 65 instances highlighted were "customer generation" registers on meters that were bridged. The team fixed and reconciled the energy portions but were not aware that the generation elements were also affected. The team is now aware of this and we are now correcting and reconciling the generation energy in these cases.	June 2024 Completed/Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
MEEN: We will work to improve our communications with the relevant MEPs. TRUS: TRUS continues to utilise exception reporting to identify discrepancies surrounding Domestic Generation, including profiling issue, metering issues, and discrepancies between Retailer fields and Network and MEP fields in the registry. Additional resource will be given to this area as we have seen an increase in discrepancies identified through reporting since migration.	Ongoing 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 on 16 January 2024 to confirm the GIPs which Mercury is responsible for, and the certification expiry date for those GIPs. Changes to the NSP table were reviewed to determine whether they had been processed accurately.

Audit commentary

MEEN

Mercury's Revenue Meter Engineer monitors meter certification expiry dates for all meters and begins to query meter certifications which have upcoming expiry dates with the MEP from six months before they expire. He advises energy services of changes to meter certification details so that they can notify the reconciliation manager via an AV180 report.

There is only one certification expiry date recorded for each NSP although there are usually multiple meters with different expiry dates. Updates to the NSP table are only required where the most recent certification expiry date changes, and updates are not consistently provided within ten business days of the meter certification date. This is largely because there are multiple meters with different expiry dates at each NSP. When the meter with the nearest expiry date has its certification date extended, the certification expiry date for the meter with the nearest expiry date is added. Because this meter may have been certified months or years before the other meter, this technically makes it a late update because it is more than ten business days after certification.

In addition to this, MEPs may not provide meter certification paperwork immediately, which can delay meter certification updates being provided to the reconciliation manager.

Mercury is responsible for the GIPs shown in the table below as of 16 January 2024. NSPs with expired meter certification are highlighted in red, and updated meter certifications have been followed up but not received yet.

NSP	Description	Recon Type	MEP	Certification expiry date (last audit)	Certification expiry date (this audit)
ARA2201MRPLGG	ARATIATIA	GG	MRPL	12 May 2023	19 February 2024
ARI1101MRPLGG	ARAPUNI	GG	MRPL	16 December 2022	29 April 2024
ARI1102MRPLGG	ARAPUNI	GG	MRPL	16 December 2022	18 June 2024
ATI0111LINENP	ATIAMURI	NP	MRPL	16 August 2022	4 February 2024

NSP	Description	Recon Type	MEP	Certification expiry date (last audit)	Certification expiry date (this audit)
ATI0111MRPDNP	ATIAMURI	NP	MRPL	16 August 2022	4 February 2024
ATI0112HAWKNP	ATIAMURI	NP	MRPL	26 July 2023	24 April 2026
ATI0112MRPDNP	ATIAMURI	NP	MRPL	26 July 2023	24 April 2026
ATI2201MRPLGN	ATIAMURI	GN	MRPL	16 January 2023	25 January 2024
KAW1101KRGLGG	KAWERAU GEOTHERMAL	GG	MRPL	23 August 2022	21 March 2024
KPO1101MRPLGG	KARAPIRO	GG	MRPL		15 January 2024
LTN2201MRPLGG	TURITEA	GG	MRPL	27 December 2022	28 May 2024
MTI2201MRPLGG	MARAETAI	GG	MRPL	12 November 2022	2 November 2023
NAP2202MRPLGG	NGATAMARIKI	GG	MRPL	27 November 2022	25 March 2024
OHK2201MRPLGG	OHAKURI	GG	MRPL	24 June 2023	1 December 2023
WKM2201MRPLGG	WHAKAMARU	GG	MRPL	14 August 2023	5 November 2024
WKM2201TUARGN	WHAKAMARU	GN	MRPL	30 May 2023	29 October 2024
WPA2201MRPLGG	WAIPAPA	GG	MRPL		17 February 2024

TRUS

TRUS is not responsible for any grid connected metering installations.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.2 With: Clause 10.26 (6), (7) and (8) From: 16-Jan-24 To: 29-Apr-24	**MEEN** Three meters have expired certification on the NSP table. 13 meter certification expiry dates were updated more than ten business days after the meters were certified. 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 over monitoring and managing meter certification for NSP metering are robust, and the impact is low. The late certification expiry dates are a technical non-compliance which occurs because only one meter certification expiry date is recorded for NSPs with multiple meters which are certified on different dates. When the most recent expiry date is pushed out, the most recent expiry date for one of the other meters replaces it. That meter may have been certified months or years before so the update may be more than ten business days after the new certification date. There is adequate monitoring of meters with certifications which are about to expire, and the MEP has not yet provided recertification details to allow the update to be completed.

Actions taken to resolve the issue	Completion date	Remedial action status
We are following up to ensure that we have received the updated meter certifications. The technical non-compliance that arises due to there only being one meter certification expiry date recorded for NSPs with multiple meters which are certified on different dates is a longstanding one, we will actively engage with our Generation team to understand the issue better and lean on their technical knowledge to try and find any practical workaround or potentially try to work with the EA on an exemption.	December 2025	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above.	N/A	

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 report and registry list were reviewed to confirm the profiles used.

Audit commentary

MEEN

Mercury has applied the DFP, HHR, HHM, PTM, RPS, and UML profiles during the period. The profiles used by Mercury do not rely on use of control devices for reconciliation purposes.

TRUS

TRUS applies some profiles which require HHR or AMI metering, or a certified control device. They have exception reporting to identify ICPs which do not meet the requirements of the profile they have been assigned. Review of the AC020 report confirmed that all ICPs on profiles requiring a certified control device had AMI or HHR metering, or a certified control device except:

ICP Identifier	ICP Status	Profile Code	Control Device Certification Flag	AMI Comm	AMI Non Comm	HHR meter
0000038269DEB63	2	T07 GXP	N	N	N	N
0007903485WE27E	2	T07 T23	N	N	N	N
0000326250WP896	2	T07 T23	N	N	N	N
1000584890PCB53	2	T07 T23	N	N	N	N

All of the affected ICPs had their profile corrected to GXP during the audit. The incorrect profiles were not identified prior to the audit because the existing exception report ignored ICPs where the Control Device Certification Flag was set to N. The exception reporting was updated to identify this scenario during the audit.

The Authority recorded alleged breach 2309MEEN1:

Breach ref	Clause breached	Status	Comment
2309MEEN1	Part 15 Appendix 1, Schedule 15.5 clause 2 More	Closed with no warning	Mercury owned Energy Profiles TOC, TON, T07, T08, T23, T24 The above profiles were previously owned by Trustpower, ownership transferred to Mercury effective 1 May 2022. Trustpower had a departure of requirements which allowed the use of published switching times rather than actual switching times as determined by an internal clock or SCADA data. The Electricity Authority has advised Mercury that the departure of requirements was granted to Trustpower, not the profiles, and therefore cannot be transferred to Mercury despite Mercury owning the profiles. Mercury issued a new application which was subsequently approved by the Authority.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.3 With: Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3	**TRUS** Four ICPs without HHR or AMI metering or a certified control device had T07 and/or T23 profiles assigned. Alleged breach 2309MEEN1. Potential impact: Low

From: 01-Apr-23 To: 21-Feb-24	Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1

Audit risk rating	Rationale for audit risk rating
Low	The controls are strong, and the impact is low. Discrepancy reports have been updated to include this scenario, and the profiles have been corrected. Revised submission data will be washed up with the correct profile.

Actions taken to resolve the issue	Completion date	Remedial action status
An issue with reporting was identified during reporting. This has since been correct and all instances of Controlled profiling being incorrectly used have been corrected.	Completed	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TRUS continues to utilise exception reporting to identify discrepancies in profiling, these are monitored on a daily basis as discrepancies appear.	Ongoing	

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 sample of defective 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 meter reader, the distributor, the MEP, or the customer. Upon identifying a possible defective meter, a field services job is raised to investigate and resolve the defect.

MEEN

A sample of ten stopped or faulty meters and 64 bridged were checked. The MEP was notified for all faulty and bridged meters except these four meters which switched out before they could be un-bridged and one meter which switched out but later had the switch withdrawn:

ICP	Bridged	Switched out
0007132702RN05A	9 February 2023	13 February 2023
0007213951RN640	3 June 2023	14 June 2023
0007132721RN1CF	25 February 2023	2 March 2023
0007132733RNBE7	17 March 2023	10 April 2023
0007208674RNE54	25 February 2023	Withdrawn

The other 59 ICPs were un-bridged by TRUS and had their meters certified on un-bridging. I reviewed corrections for a sample of 21 ICPs and found 20 had corrections accurately processed. ICP 0007132718RN866 did not have a correction processed because the new meter details were not received before the ICP switched out.

TRUS

A sample of ten stopped or faulty meters and 64 bridged were checked. The MEP was notified for all faulty meters and 62 of the 64 bridged meters. The other two bridged meters switched out before bridging was identified and the gaining trader was notified so that they could advise the MEP. Compliance is recorded because the issue was identified after the TRUS period of supply.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.4 With: Clause 10.43(2) and (3) From: 09-Feb-23 To: 29-Apr-24	**MEEN** The MEP was not notified of five bridged meters which required un-bridging. Potential impact: Medium Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong, because the MEP was notified of almost all bridged or faulty meters checked and the exceptions related to ICPs which switched out soon after they were bridged. The impact is low based on the number of exceptions and periods supplied.

Actions taken to resolve the issue	Completion date	Remedial action status
We have reviewed our process and provided refresher training to ensure that we are notifying the MEPs as soon as possible.	May 2024	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
Our controls are strong and we believe that recurrence is unlikely.	Ongoing	

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

Agents and MEPs are responsible for the collection of HHR and AMI data. Collection of data and clock synchronisation were reviewed as part of the agent and MEP audits, and MEEN's processes for generation data were reviewed.

Audit commentary

All information used to determine volume information is collected from the services interface or the metering installation by agents or MEPs. Agents and MEPs monitor clock synchronisation, and this is covered as part of their audits.

MEEN

Data collected by agents and MEPs

Compliance with this clause has been demonstrated by Mercury's agents and MEPs as part of their agent audits, apart from one ICP which was not read within the maximum interrogation cycle:

Agent	ICP	Last collected interval	Comment
Bluecurrent	1000004624BP8E6	6 October 2022 10.30	The meter appears to have been replaced and the ICP is under investigation.

Clock synchronisation event information is provided to Mercury by its agents and MEPs. I reviewed some recent examples of clock synchronisation events sent by agents and MEPs and noted that no action by Mercury had been required.

Generation data

Generation data is collected by Bluecurrent who follow the same process as for other HHR ICPs.

Mercury's generation engineers monitor generation consumption and metering in real time and notifies Energy Services if any issues are identified. Time sync function for grid generation meters is performed between Bluecurrent and Accucal where Bluecurrent identifies a meter requiring a time correction and requests Accucal to undertake this task on behalf of Mercury.

There was one clock synchronisation event for the Whakamaru generation meter, where the time was adjusted by ten seconds by the test house on 20 February 2024. This is recorded as non-compliance in **section 7.1**.

TRUS

The agents and MEPs notify TRUS when clock synchronisation events occur for AMI meters, and any action required. I checked examples of clock synchronisation reports for each MEP and confirmed that there were no clock synchronisation events where corrections were required.

The previous audit recommended that AMI time difference reports should be automatically retrieved and analysed as they could impact on submission accuracy where time of day profiles are used. TRUS confirmed that time of day profiles have been phased out, and the time synchronisation reports are manually reviewed.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.5 With: Clause 2 Schedule 15.2 From: 6-Oct-22 To: 29-Apr-24	**MEEN** ICP 1000004624BP8E6 was not read within its maximum interrogation cycle. 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 strong, and the impact is low, because only one meter is affected, and MEEN is attempting to resolve the issue with the MEP.

Actions taken to resolve the issue	Completion date	Remedial action status
We are still investigating and will rectify as soon as possible.	May 2024	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Our controls are strong and we believe that recurrence is unlikely.	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. Processes to provide meter condition information were reviewed as part of the MRS agent audit. Mercury's processes to manage meter condition information and processes for customer and photo reads were reviewed.

Audit commentary

MEEN

Derivation of volume and labelling of readings

I traced a sample of data for 11 ICPs from the raw meter data files provided by MRS, Bluecurrent, Intellihub and FCLM to SAP and confirmed that validated readings were derived from meter readings, and the data was recorded accurately.

Manual readings

MRS data collection processes were reviewed as part of their agent audits and found to be compliant.

MRS monitors meter condition as required by schedule 15.2 and provides information on meter condition as a notes file and also provides a weekly report of meter condition events. Prior to May 2023 when MRS provided the additional weekly report, meter condition events were only reviewed where there was also a no read code, and ICPs which also had readings were not visible in MEEN's queries.

The meter condition reports are reviewed and matched to service order information to determine whether there is an existing job open to investigate the issue, otherwise the premise and metering or field services team is advised that a job needs to be raised.

I reviewed a sample of 18 meter condition events obtained during the MRS agent and audit and found:

Event type	Sample	Not actioned	Findings
Blank screen	5	-	All of the ICPs were checked and disconnected, so no action was required.
Can't read serial number	1	-	A site visit was completed.
Meter & Number of dials changed	2	-	The paperwork was followed up with the MEP and the meter change was processed.
Meter changed	5	-	For four ICPs paperwork was followed up with the MEP and the meter change was processed. The other ICP was passed to premise and metering to investigate as it is believed the meter reader information is incorrect.
Meter stopped/faulty	5	1	Site visits were completed to resolve the issues for four ICPs. For ICP 0000247881UN0C9 the meter condition event was not identified because an actual reading was received on the same day, preventing the meter condition notes from being loaded for review.
Total	**18**	**1**	

No phase failure issues have been reported by MRS during the audit period, but I checked their training material during their agent audit and confirmed the appropriate training and instruction was supplied to meter readers. Phase failure events were recorded by MRS for the TRUS code.

Customer and photo readings

MRS does not record customer readings. Customer readings are handled manually, and may be provided by telephone, in writing or by sending in a photograph of their meter. Customer reads are entered into SAP with type 01-02 (scheduled for billing – customer read), 02-02 (interim with billing – customer read) or 09-02 (interim without billing – customer read) before being validated to ensure the read is reasonable and in line with the ICPs previous consumption pattern. Customer readings are not expressly validated against a set of validated actual readings from another source and are used when calculating historic estimate.

I checked a sample of six customer readings which were classified as 02-02 (interim with billing – customer read) and correctly validated against two actual readings from another source.

I rechecked the previous audit exception where the customer reading for ICP 0000712872HBF96 taken on 8 April 2022 was incorrectly labelled as an actual read and confirmed that it is now correctly classified.

TRUS

Derivation of volume and labelling of readings

I traced a sample of data for 11 ICPs from the raw meter data files provided by MRS, Bluecurrent, Intellihub and FCLM to GTV and confirmed that validated readings were derived from meter readings, and the data was recorded accurately.

Manual readings

Manual meter readings are provided by MRS as an agent and Powerco.

MRS data collection processes were reviewed as part of their agent audits and found to be compliant. MRS provide meter condition information with their read files. A Power BI report called MRS REA Trouble Reads is used to identify meters were reads were unable to be obtained, or a meter condition event is reported.

The revenue assurance team reviews blank screen, meter stopped/faulty, suspect theft and water in meter events. They are intended to be reviewed daily but are normally only reviewed as workloads allow. I reviewed a sample of these events managed by revenue assurance and found:

Event type	Sample	Not actioned	Findings
Blank screen	4	-	Three of the ICPs were disconnected and the other had a service order completed which found the meter was not faulty
Meter stopped/faulty	12	1	Nine of the 12 ICPs with "meter stopped/faulty" events had service orders raised for site visits, and another two were confirmed not to be genuinely stopped because they had been disconnected or the zero consumption was genuine. ICP 0000942371TU1DE which had a "meter stopped/faulty" event on 16 May 2023 was assigned to a team member but no action was taken. It will be followed up.
Suspect theft	1	1	The "suspect theft" event for ICP 0000014647CPD7D on 21 April 2023 was not investigated.
Water in meter	2	2	The "water in meter" events for ICPs 0000430427TU800 and 0049103500PC64A in April 2023 were not investigated.
Total	**19**	**4**	

TRUS was unable to confirm which teams (if any) review the other meter event types. I reviewed a sample of events provided by MRS:

Event type	Sample	Not actioned	Findings
Bad dial/faulty meter	5	1	Four of the five "bad dial/faulty meter" events were resolved and TRUS intends to investigate ICP 0001306351WM271 which had an event recorded on 2 June 2023.

Event type	Sample	Not actioned	Findings
Can't read serial number	3	3	No action was taken for ICPs 0000602320WP651, 0008013916TU1F1 and 0431577714LC228 where "can't read serial number" events were recorded between April and June 2023. ICP 0000602320WP651 had an unrelated job raised due to a relay replacement.
Meter changed	5	-	All five meter changed events were timing differences and the new meters were later loaded into GTV.
New meter found	2	1	One of the two ICPs with "new meter found" events later had its meter replaced. ICP 1000028411BPA1B which had a "new meter found" event on 15 May 2023 has not been actioned and no meter replacement has occurred.
Phase failure	2	-	Field service orders were raised to investigate and resolve both phase failure events. The site visit for ICP 0000927427TU223 could not be completed for safety reasons and TRUS could not reach the customer to resolve the issue.
Total	**17**	**5**	

Powerco's engineers record photo readings for Powerco's substations, where the meter readers are not allowed to enter the facility for health and safety reasons. The engineers provide the photo and a scan of a paper form which records the reading and read date. There is no dedicated field on the form where Powerco can record whether any meter condition events have been identified and I recommend this is added.

Recommendation	Description	Audited party comment	Remedial action
Recording of meter condition issues for Powerco readings	**TRUS** Add fields to the meter reading template used by Powerco's engineers to enable meter condition information to be recorded including: • whether seals are present and intact, • phase failure (if supported by the meter), • signs of tampering and damage, and • electrically unsafe situations.	We will liaise with Powerco on this to see if they can assist.	Investigating
Review of MRS meter condition events	**TRUS** Clarify responsibilities for reviewing MRS meter condition events and ensure	Following the Mercury/Trustpower integration we are reviewing our process for monitoring and taking appropriate action on meter	Investigating

Recommendation	Description	Audited party comment	Remedial action
	that all event types are reviewed and actioned appropriately and promptly.	condition events to ensure that we have a tight process and internal responsibilities are well established.	

Customer and photo readings

MRS does not record customer readings. Customers are advised to provide any customer readings directly to TRUS by email, an application or by phone. In all cases staff manually enter the readings into GTV as customer photo readings and are validated.

If an actual reading is received after a customer reading and there is no open read order it will be loaded in SAP as an actual but unbillable read and create a "MRO (meter read order) not found" exception. The reading will be used to generate historic estimate and future invoice estimates but will not be used for billing.

I checked a sample of ten customer readings and found all had the customer read type correctly recorded. Customer reads are not used in the historic estimate process, and there is no impact on settlement.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.6 With: Clause 3(2) Schedule 15.2 From: 01-Apr-23 To: 29-Apr-24	**MEEN** One out of a sample of 18 meter condition events provided by MRS had not been resolved, reviewed or actioned. **TRUS** Nine out of a sample of 36 meter condition events provided by MRS had not been resolved, reviewed or actioned. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate overall because improvements are required to ensure all meter condition examples are reviewed and actioned for TRUS. MEEN's controls have improved to strong now that weekly files are received from MRS and reviewed. The risk level depends on the number and nature of meter condition events, whether they are genuine issues and how quickly they are resolved. Most ICPs have AMI capable metering and are not read manually so the impact is estimated to be low.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: Service Request raised in GTV as site now migrated to TRUS for us to investigate stopped metering. TRUS: Following the Mercury/Trustpower integration we are reviewing our process for monitoring and taking appropriate action on meter condition events to ensure that we have a tight process and internal responsibilities are well established.	April 2024 June 2024	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
MEEN: Meter reading team reviewing to confirm measures to avoid this being missed TRUS: As above.	May 2024 Ongoing	

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

Code reference

Clause 6 Schedule 15.2

Code related audit information

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

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

Audit observation

The process of the application of meter readings was examined.

Audit commentary

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 except in the case of a switch event meter reading which applies to the end of the day prior to the event date for the losing trader and the start of the event date for the gaining trader as required by this clause.

All AMI systems have a clock synchronisation function, which ensures correct timestamping. Manual readings taken by MRS are applied correctly.

MEEN

NHH reading application

Application of reads was reviewed as part of the historic estimate checks in **section 12.11** and found to be compliant.

Switching file content

The reads applied in switching files were examined. The meter readings used in the switching process are validated meter readings or permanent estimates, and four CS files[30] with inaccurate switch event readings were identified. Three of the files were generated by SAP and one was created manually.

Upgrades and downgrades

The industry has adopted a process that achieves accuracy in relation to submission information and ICP days, but compliance with this clause is not achieved because a NHH and HHR meter cannot be "present" on the same day in the registry.

- For upgrades, the process is to "remove" the NHH meter from the registry and Energy Database on the day before the meter change, and then the ICP becomes HHR all day on the day of the meter change, with the trading periods up until the meter change being populated with zeros.
- The reverse applies for downgrades with the ICP treated as HHR all day on the date of the removal, with zeros populated until the end of the day and the NHH meter installed the following day.

Where an upgrade or downgrade does not coincide with a meter change, a trader submission type update is made in SAP and then transferred to the registry, and there is no change to the meter static data. The change is made effective at midnight, and submission data aligns with the registry profile change date.

I checked five upgrades and five downgrades and found they were processed correctly. None of the changes coincided with a meter change, and they took effect at midnight on the day of the change.

I also checked five examples of HHM to HHR meter changes, and confirmed the old HHM meter is removed effective 11.59 p.m. on the day before the meter change. The new meter is installed effective 12.00 a.m. on the day of the meter change. Actual HHR volumes on the new meter are recorded from the first interval it registered consumption onwards, and consumption on the old HHM is recorded as estimated on the new meter in the earlier intervals on the day of installation. This ensures that all consumption is captured.

The previous audit issue relating to inaccurate profile changes for ICP 1000584371PCEA2 and 0222736046LC274 have been cleared.

TRUS

NHH reading application

Application of reads was reviewed as part of the historic estimate checks in **section 12.11** and found to be compliant.

Switching file content

The reads applied in switching files were examined and found to be accurate.

Upgrades and downgrades

Meter changes are loaded automatically into GTV based on completion paperwork entered into Jobtrack and the registry metering update. Changes are sent to a validation bucket where information missing such as meter readings is reviewed and updated.

Because TRUS only supplies meter category one and two ICPs, HHR submission type is not mandatory for any ICPs, and submission type changes are normally independent of meter changes. Where an upgrade or downgrade does not coincide with a meter change, a trader submission type update is made in GTV

[30] 0005682851RNDED CS-4652175 19 January 2023 62841 E should have been 62836 A, 1002058744LC716 CS-4639600 12 January 2023 7323 A relates to 10 January 2023 instead of 11 January 2023 no later reads available, 0234440821LCE9C CS-4653559 27 January 2023 20141 A relates to 23 January 2023 no later reads available, 1002141844LC834 CS-4682130 14 February 2023 158 A relates to 7 February 2023 no later reads available. The ICPs have low average daily kWh and the impact is expected to be low.

and then transferred to the registry, and there is no change to the meter static data. The change is made effective at midnight, and submission data aligns with the registry profile change date.

I checked five upgrades[31], five downgrades[32] and found they were processed as expected effective from midnight (12 a.m.) on the change date, and submission data was aligned with this. I found no boundary readings entered for the last day of NHH submission for upgrades, or the first day of NHH submission for downgrades. Non-compliance and a recommendation to enter NHH boundary readings is raised in **section 12.13**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.7 With: Clause 6 Schedule 15.2 From: 03-Dec-21 To: 17-Nov-22	**MEEN** Four ICPs had an incorrect event read recorded in their CS file. 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, because most switch files had accurate content. The audit risk rating is low because the ICPs have low average daily kWh.

Actions taken to resolve the issue	Completion date	Remedial action status
We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements to SAP-related systems and processes.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above.	N/A	

[31] 4701004000CHDF0 21 November 2023, 8000000092SNFDE 23 November 2023, 8000000256SN33C 23 November 2023, 8000000280SNFF1 7 December 2023, 8000000309SNDEE 21 November 2023.
[32] 0000000025TR424 25 November 2023, 0000000062TRB4B 2 December 2023, 0000000122TR0EA 2 December 2023, 0000000257CP5B0 2 December 2023, 0000000676CP8A1 24 November 2023.

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

Code reference

Clause 7(1) and (2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

The process to manage missed reads and reporting on ICPs unread during the period of supply was examined.

Audit commentary

A validated meter reading must be obtained in respect of every meter register for every NHH metered ICP for which the participant is responsible, at least once during the period of supply to the ICP by the reconciliation participant, unless exceptional circumstances prevent this from occurring. This may be a validated meter reading at the time the ICP is switched to, or from, the reconciliation participant.

The NHH meter reading frequency guidelines published by the Electricity Authority define "Exceptional circumstances" as meaning "circumstances in which access to the relevant meter is not achieved despite the reconciliation participant's best endeavours". "Best endeavours" is defined as:

"Where a reconciliation participant failed to interrogate an ICP as a result of access issues, the reconciliation participant had made a minimum of three attempts to contact the customer, by using at least two methods of communication".

MEEN

Meter read attainment process

NHH settled ICPs have reads scheduled to be obtained by MRS, or the MEP. MRS leave a card if the property can be located but the meter reader is unable to be read.

The no reads process is managed by the Readings Management team. A weekly no-reads report is produced by the IT department (ICT) and reviewed monthly. The report shows:

- **ICPs on manual readings routes with no reads** which are checked to determine whether the reason the ICP is unread is within the customer's control; if it is, MEEN attempts to contact the customer to resolve the issue and notes any action taken, and can send text messages or letters in batches (staff are aware of the requirement to attempt to contact the customer at least three times using two different communication methods, and sometimes customer letters are held if the customer has recently provided a customer reading),
- **manual to smart** shows ICPs on manual routes which have begun communicating, which are moved to smart meter routes and monitored,
- **smart to manual** shows ICPs on smart meter routes which have stopped communicating, which are moved to manual meter reading routes,

- **smart available** shows ICPs with intermittent smart readings which are manually reviewed to determine whether they should be on a manual or smart meter route, and
- **vacant** shows vacant ICPs with no readings, which are dealt with by the vacant property team.

Communications with customers to resolve no read issues and route changes were temporarily put on hold during the migration of ICPs from MEEN to TRUS in July to September.

MEPs also provide information on non-communicating meters so they can be moved to manual meter reading routes and field services jobs can be raised. MEPs are emailed by the premise and metering team to determine whether the issue can be easily resolved, in which case a site visit is initiated. MEEN has also been raising batches of field services jobs to each MEP each week in an effort to resolve communication issues, and the MEP's work through these over the next three months after the jobs are raised.

Mercury's ADR system contains all AMI meter readings delivered by AMI MEPs. When a reading is required an "order" is created which looks for a reading on the required date. If a reading is not available for the required date, readings from one day after or one day prior are used, and if these are not available then readings from two days after or two days prior are used, and the scheduled read/billed date is also amended to reflect the date the read relates to. This process maximises the quantity of readings available for use.

I observed an alert built into SAP, where a message pops up if a customer account is viewed where no actual reads have been received for the past 90 days. This prompts the staff member speaking to the customer to discuss the meter reading issues if the customer makes contact.

Readings during the period of supply

MEEN provided a list of 909 ICPs unread during the period of supply, where the period of supply ended between 1 April 2023 and 31 January 2024.

Period of supply	Count of ICPs
Within 30 Days	460
31 to 90 Days	199
91 to 365 Days	115
365 -999 days	26
1000+ days	109
Total	909

99 of the 109 ICPs unread for 1000 days of more were telecommunications ICPs where safety issues prevented readings.

I checked the five ICPs with the longest period of supply and ten supplied for between 90 and 1000 days and found reads were unable to be obtained due to health and safety issues, faults, access issues and vacancy. Four ICPs should not have been included in the list because actual readings were received, and exceptional circumstances existed, or the best endeavours requirements were met for the other 11 ICPs.

TRUS

Meter read attainment process

The TRUS read attainment process is currently under review, and TRUS is working with the MEEN team to identify process improvements.

NHH settled ICPs have reads scheduled to be obtained by MRS, the MEP or Powerco. MRS leave a card if the property can be located but the meter reader is unable to be read.

TRUS monitors meter reading sequences to ensure that ICPs are read:

- NHH, AMI and HHR read files received are checked against a checklist of expected files, and any missing files are followed up with the MEP or agent,
- there is a daily review of ICPs on smart meter sequences which are not communicating which are then moved to MRS manual reading routes, and ICPs on MRS routes which have communicating smart meters and can be moved back to smart meter sequences; ICPs are usually moved to manual routes after three months of estimated readings,
- ICPs with no meters or registers or that have switched out allocated to an MRS reading route are checked to determine whether a do not read instruction can be issued,
- ICPs with multiple meter points in different locations at the address are checked to make sure that readings are received for all meters, and
- ICPs allocated to the 4917 holding meter reading sequence for new ICPs to be read by MRS are monitored, to make sure that they are assigned to routes.

A report of ICPs without actual readings is maintained and reviewed each month, and includes the number of estimates in a row, the last read date and type, notes on why the ICP is unread, the number of times the customer has been contacted and the details. Staff are aware of the requirement to attempt to contact the customer at least three times using two different communication methods, and endeavour to achieve this within four months of no reads. There is also a 190-day memo report, which is worked separately but is linked to this report which includes ICPs which have not had a read for at least 190 days.

A Power BI report called MRS REA Trouble Reads is used to check MRS no read and meter condition information which may be preventing readings.

Readings during the period of supply

TRUS uses best endeavours to obtain at least one read during the period of supply even if the period of supply is short. A work queue is created in GTV when a NT file is received and a validated reading has not been obtained during the period of supply, and a special reading is requested, or the customer is called to request a customer reading. If a reading cannot be obtained from the steps above, the gaining retailer is contacted to see if they have an actual start reading and this is used.

Monthly switching compliance reports are generated showing the number of ICPs with reads not obtained during the period of supply. Exceptions are investigated to determine whether they were caused by the system, avoidable or not controllable. The report is used to identify trends and where improvements can be made.

TRUS provided a list of 720 metered ICPs which were unread during the period of supply where the period of supply ended between April 2023 and January 2024:

Period of supply	Count of ICPs
Within 30 Days	453
31 to 90 Days	246
91 to 365 Days	19
365 Days +	2
Total	720

I checked ten ICPs supplied for over 90 days and found reads were unable to be obtained due to health and safety issues, faults, access issues and vacancy. One of the meters was read, but the readings could not be loaded because a meter change paperwork had not been provided and the old meter was recorded in GTV. Exceptional circumstances existed or the best endeavours requirements were met for all ten ICPs.

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

The meter reading process was examined. A sample of monthly reports were provided and reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2.

A sample of ICPs not read in the previous 12 months were reviewed to determine whether reasonable endeavours were used to attain reads, and if exceptional circumstances existed.

Audit commentary

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

MEEN

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 12 months	NSPs <100% read	ICPs unread for 12 months	Overall percentage read
May-23	363	139	1,184	99.06%
Jun-23	363	139	1,174	99.01%
Jul-23	364	141	1,118	99.02%
Aug-23	364	135	1,067	99.06%
Sep-23	352	131	966	99.06%
Oct-23	283	62	319	98.55%

The meter reading attainment level is on average slightly higher than the last audit.

I checked ten unread ICPs and found reads were unable to be obtained due to health and safety issues, faults, access issues, location issues, meter communication issues and vacancy. Exceptional circumstances existed or the best endeavours requirements were met for all ten ICPs.

I reviewed meter reading reports for May to October 2023 and confirmed that they met the meter reading frequency report requirements and that the reports were submitted by the 20th business day of the month following the report period.

TRUS

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 12 months	NSPs <100% read	ICPs unread for 12 months	Overall percentage read
May-23	263	95	388	99.84%
Jun-23	266	95	389	99.71%
Jul-23	270	93	394	99.73%
Aug-23	278	90	406	99.75%
Sep-23	283	92	403	99.67%
Oct-23	287	95	396	99.80%

The meter reading attainment level is similar to the last audit.

I checked a sample of 17 ICPs from the October 2023 report and found reads were unable to be obtained due to power to an AMI meter being off, health and safety issues, faults, and access issues. Exceptional circumstances existed or the best endeavours requirements were met for 14 ICPs.

Vacant ICPs 0781871145LCEF4 and 0001423099UNB7B had AMI readings received, but these were temporarily recorded in the "unbilled" validation bucket until they were approved and moved to the ICP. This typically involves investigation and determining whether the ICP should be disconnected. Review of submission data showed that vacant consumption is reported once the vacant consumption exception is approved, but these two ICPs did not have any AMI readings loaded in the 12 months ending October 2023.

ICP 1001130291UN8F5 has AMI readings which are not loaded, because the customer provides a reading each month which is recorded in GTV instead. The customer reading is recorded against the read header, and there is no open read header for the AMI reading to be recorded against.

I reviewed meter reading reports for January to October 2022 to confirmed that they met the meter reading frequency report requirements and were submitted in the required timeframe. The previous audit found some discrepancies between expected ICP counts based on a registry list with history and the meter reading frequency report. TRUS checked and updated the report selection criteria, and it appears consistent with registry information.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.9 With: Clause 8(1) and (2) Schedule 15.2 From: 01-Nov-22 To: 31-Oct-23	**TRUS** Two vacant ICPs did not have validated readings in GTV during the 12 months ending October 2023 and the best endeavours requirement was not met because TRUS had not validated the AMI readings received in time for them to be used for submission. One AMI ICP where the customer provides readings did not have validated readings in GTV during the 12 months ending October 2023 and the best endeavours requirement was not met because TRUS had not validated and loaded the AMI readings. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong because unread ICPs are reviewed and actioned monthly, and the non-compliances relate to uncommon scenarios. The impact on settlement and participants is expected to be minor as good estimation processes are in place.

Actions taken to resolve the issue	Completion date	Remedial action status
As noted these are uncommon scenarios, we have taken learnings from these instances to avoid recurrence.	Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Our controls are strong and we do not expect to see recurrence.	Ongoing	

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

Code reference

Clause 9(1) and (2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

The meter reading process was examined. A sample of monthly reports were reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2.

A sample of ICPs not read in the previous four months at NSPs where less than 90% of ICPs were read were reviewed to determine whether exceptional circumstances existed and if Mercury had used their best endeavours to obtain readings.

Audit commentary

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

MEEN

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	Total ICPs unread for 4 months	Overall percentage read
May-23	379	32	3,757	97.06%
Jun-23	378	29	3,748	97.49%
Jul-23	384	26	3,686	97.48%
Aug-23	385	21	3,679	97.48%
Sep-23	373	24	3,543	97.36%
Oct-23	300	20	760	96.89%

The meter reading attainment level is similar to the previous audit.

I reviewed a sample of ten ICPs connected to NSPs where less than 90% of ICPs had reads within the previous four months as of October 2023. I found reads were unable to be obtained due to health and safety issues, access issues, location issues, meter communication issues and vacancy. Exceptional circumstances existed or the best endeavours requirements were met for two ICPs.

ICP 0707149788LC0B9 had a non-communicating AMI meter but did not have its route changed because changes were on hold during the migration period.

There was no communication with the customer for seven ICPs[33] where the meter could not be accessed because customer communications about meter access were suspended during the migration of ICPs from MEEN to TRUS.

TRUS

The monthly meter reading reports provided were reviewed.

[33] 0000608160WP0B3, 0110120805AP607, 0000990380LN215, 1000754286UNC94, 0000815190DFEA4, 0000560300WTE85 and 0000014387KP7B0.

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	Total ICPs unread for 4 months	Overall percentage read
May-23	297	8	1,710	98.92%
Jun-23	297	7	1,703	99.16%
Jul-23	300	7	1,672	98.91%
Aug-23	304	6	1,544	98.76%
Sep-23	306	6	1,997	98.55%
Oct-23	311	4	1,946	99.06%

The meter reading attainment level is similar to the previous audit.

There were four NSPs where less than 90% read attainment was achieved for October 2023. At least five or all ICPs connected to each of these NSPs were reviewed and I found reads were unable to be obtained due access issues. The best endeavours requirements were met for all the ICPs checked.

The previous audit recommended that TRUS use the registry AMI flag to trigger movement of non-communicating meters from AMI to manual meter reading rounds. TRUS still elects to wait until there are three estimates in a row before moving ICPs as it is their preference to use AMI reads where possible. The TRUS read attainment process is currently under review, and TRUS is working with the MEEN team to identify process improvements.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.10 With: Clause 9(1) and (2) Schedule 15.2 From: 01-Jul-23 To: 31-Oct-23	**MEEN** Eight of a sample of ten ICPs connected to NSPs where less than 90% read attainment was achieved for October 2023 did not have exceptional circumstances preventing reads or meet the best endeavours requirements. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong. The non-compliance was isolated because route changes and customer communications were temporarily suspended during the migration between MEEN and TRUS. The impact on settlement and participants is expected to be minor as good estimation processes are in place.

Actions taken to resolve the issue	Completion date	Remedial action status
The migration of MEEN ICPs to the TRUS code, which is compliant, has largely resolved this.	Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will continue to focus on ensuring that our processes for TRUS are effective.	Ongoing	

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

MEEN NHH data is collected by MEPs and MRS, and TRUS NHH data is collected by MEPs, MRS and Powerco. The data interrogation log requirements were reviewed as part of their agent and MEP audits, and data interrogation for Powerco was reviewed as part of this audit.

Audit commentary

Compliance with this clause has been demonstrated by MRS and MEPs as part of their own audits.

Powerco's reading process records the ICP and meter number, and the date and time of the meter interrogation and meets the requirements of this clause.

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 collected by EDMI and Bluecurrent, generation data is collected by Bluecurrent, and HHR AMI data is collected by MEPs. Data interrogation requirements were reviewed as part of their agent and MEP audits.

Audit commentary

Compliance with this clause has been demonstrated by the MEPs and agents.

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 collected by EDMI and Bluecurrent, generation data is collected by Bluecurrent, and HHR AMI data is collected by MEPs. Data interrogation requirements were reviewed as part of their agent and MEP audits.

Audit commentary

Compliance with this clause has been demonstrated by the MEPs and agents.

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 collected by EDMI and Bluecurrent, generation data is collected by Bluecurrent, and HHR AMI data is collected by MEPs. Data interrogation requirements were reviewed as part of their agent and MEP audits.

Audit commentary

Compliance with this clause has been demonstrated by the MEPs and agents.

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

Audit observation

Trading period duration was reviewed as part of the MEP and agent audits.

Mercury's clock synchronisation process ensures that trading period duration for generation meters is normally 30 minutes within ± 2 seconds. A sample of clock synchronisation events were reviewed.

Audit commentary

Compliance with this clause has been demonstrated by the agents and MEPs and is discussed in their audit reports. The clock synchronisation process for generation meters is discussed in **section 6.5**. Review of a sample of clock synchronisation events did not identify any errors for HHR settled meters over ±2 seconds.

For MEEN, there was one clock synchronisation event for the Whakamaru generation meter, where the time was adjusted by ten seconds by the test house on 20 February 2024.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.1 With: Clause 13 Schedule 15.2 From: 02-Apr-24 To: 02-Apr-24	**MEEN** The Whakamaru generation meter had a clock synchronisation event where the meter time differed from the system time by 10 seconds on 20 April 2024. The meter was synchronised against the system time to correct the error, resulting in trading period durations difference of 10 seconds. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	There are strong controls because the issue was identified and resolved. The impact is low because trading period duration had a difference of eight seconds more than the allowable difference.

Actions taken to resolve the issue	Completion date	Remedial action status
This time synchronisation event was corrected by our metering Approved Test House.	Completed	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
This was a rare occurrence and we have strong controls in place.	Ongoing	

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

Code reference

Clause 18 Schedule 15.2

Code related audit information

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

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

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

Audit observation

Processes to archive and store raw meter data were reviewed.

Audit commentary

Compliance with this clause has been demonstrated by Mercury's agents and MEPs as part of their agent and MEP audits.

MEEN

Metering, Billing, Energy Services and Risk Control staff have access to modify meter reading information in SAP. Readings cannot be modified without an audit trail being created. Validation occurs in a temporary table before it becomes a permanent record and meter readings are not edited. I viewed these audit trails, and they are discussed in further detail in **section 2.4**.

I reviewed raw NHH and HHR meter data for MEEN confirming that meter reading data is retained for at least 48 months.

TRUS

All data is archived for a period well in excess of the 48 months required by the code. Password protection is in place to ensure unauthorised personnel cannot access raw meter data. I reviewed raw NHH and HHR meter data for TRUS confirming that meter reading data is retained for at least 48 months.

Audit outcome

Compliant

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

Code reference

Clause 21(5) Schedule 15.2

Code related audit information

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

Audit observation

Processes to record non-metering information were discussed.

Audit commentary

Mercury collects unmetered data in relation to streetlights for the MEEN and TRUS participant codes, and this information is appropriately archived.

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

Processes for the correction of NHH meter readings were reviewed. Corrections to volumes where meter readings match the value recorded by the meter, such as where a multiplier is incorrect, a meter is defective or bridged, or "inactive" consumption is identified were reviewed in **section 2.1**.

Audit commentary

Where errors are detected through validation of NHH meter readings surrounding readings are checked or a check reading is arranged to determine whether the read is valid or should be invalidated and replaced with an estimate.

MEEN

When a meter reading is found to be transposed, Mercury swaps the readings between registers and the corrected readings are appropriately recorded as estimates. No recent examples were available.

TRUS

Where a meter reading is found to be transposed, TRUS reverses invoices for the affected period and swaps the readings between registers and the corrected readings are recorded as actuals. No recent examples were available.

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 and a sample of corrections were reviewed.

Audit commentary

MEEN

HHR

Where errors are detected during validation of HHR metering information, and check metering data is not available, then data from a period with a quantity and profile similar to that expected is used. SAP has a dropdown list for the user to select the correction technique. The common techniques are as follows:

- **extrapolate** - a previous similar time period is used,
- **interpolate** - a previous time period is used, and the result is permanent,
- **divide/multiply** - this technique is used for examples like phase failure,
- **add** - data is added to existing data, and
- **type in** - if a manual calculation is performed or if check metering is used the result can be entered.

When previous time periods are used, the day of the week is considered, so if data is missing for a Tuesday, the data for the same time period on the previous Tuesday will be considered. Statutory holidays are also taken into consideration. SAP has a built-in audit trail for all estimations and corrections.

Mercury provided ten examples of HHR data corrections where permanent estimates were created for missing intervals during meter changes, which were calculated manually as the average between the intervals immediately before and after the change and typed in. All ten were correctly calculated and applied and had an audit trail and a journal, which is recorded in either the "attachment list" in SAP or found in an email archive.

The previous audit recorded that during HHR-to-HHR meter changes, consumption on the day of the meter change on the old meter was not recorded. This issue has been resolved. I checked five examples of HHM to HHR meter changes, and confirmed the old HHM meter is removed effective 11.59 p.m. on the day before the meter change. The new meter is installed effective 12.00 a.m. on the day of the meter change. Actual HHR volumes on the new meter are recorded from the first interval it registered consumption onwards, and consumption on the old HHM is recorded as estimated on the new meter in the earlier intervals on the day of installation. This ensures that all consumption is captured.

Mercury ceased using the HHM profile in October 2023. Prior to that MEEN validated HHR data in accordance with the approved profile application, and there were no changes to the process before MEEN stopped using the profile.

Generation

Corrections to generation data seldom occur and the same process is used. No generation corrections occurred during the audit period.

TRUS

All HHR settled ICPs have metering category one or two, and use of a HHR submission type and profile is not mandatory. If errors requiring correction such as a stopped meter, faulty meter, phase failure or multiplier issue occur, TRUS will move the ICP to NHH submission type for the affected period and follow the NHH correction processes discussed in **section 2.1**. No HHR corrections were identified during the audit period.

The previous audit found that the September 2021 AV140 aggregates file was not corrected to match the AV090 HHR volumes when the volumes were corrected to adjust for daylight savings. This issue is not re-raised because revision 14 has passed, and there is no impact on the allocation results because the AV140 file is not used to calculate allocations.

Audit outcome

Compliant

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

Code reference

Clause 19(3) Schedule 15.2

Code related audit information

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

Audit observation

Error and loss compensation arrangements were discussed.

Audit commentary

Mercury confirmed that they do not deal with any data where error or loss compensation occurs. The site set-up processes are designed to identify these arrangements for any new sites.

Audit outcome

Compliant

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

Code reference

Clause 19(4) and (5) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

Corrections are discussed in **sections 2.1, 8.1** 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 was reviewed as part of their MEP audits.

Audit commentary

I reviewed journals for HHR and NHH data corrections for MEEN and TRUS and noted that they were compliant with the requirements of this clause.

Raw meter data cannot be accessed or overwritten by any person or process. The raw data is "locked down" and even if working data is edited, the raw data remains unchanged.

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 Contact's systems in **section 2.3**.

Provision of estimated reads to other participants during switching was reviewed in **section 4** and corrections were reviewed in **sections 2.1** and **8.**

Audit commentary

MEEN

All estimated readings, permanent estimates and actual readings are clearly identified as required by this clause.

SAP has an automated permanent estimate process which runs each night. If there are no validated actual readings in the last six months, but there is a validated actual reading in the last 12 months, any estimated readings will be updated to permanent estimates. Only changing readings for ICPs where an actual reading is received in the last 12 months helps to ensure that reads are only changed where the reasonable endeavours requirement to gain readings is met.

For seven transfer switch ICPs[34] and seven switch move ICPs[35] the event read type recorded in SAP did not match the expected read type. The readings were incorrectly classified due to a combination of occasional data entry errors because SAP is updated manually for read renegotiations, and that SAP sometimes defaults the read type back to actual in between the team member changing the data and saving.

Estimates are created and supplied by IntelliHUB. The process for calculating the estimates was checked during their HHR agent audit and the methodology is sound. I checked a sample of IntelliHUB estimates and confirmed that they were correctly classified.

TRUS

All estimated readings, permanent estimates and actual readings are clearly identified as required by this clause.

One incorrect switch event read type was identified for a switch move. ICP 0000005253UN709 RR-202943 6 September 2023 had its switch event readings recorded as actual instead of estimated due to a data entry error when processing the AC file.

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[34] 0000001265UN7FE 31 May 2023 E should be A, 0000026508WE9BB 4 May 2023 A should be E, 0000029983WE749 15 June 2023 A should be E, 0000189688TR28F 7 April 2023 A should be E, 0000037618NTB9D 5 April 2023 A should be E, 0000129379TRD30 7 February 2023 A should be E, 0081728800PC7A5 5 April 2023 A should be E.

[35] 0000000102DE568 25 February 2023 A should be E, 0000567327TP458 27 May 2023 A should be E, 1002000452TC125 12 August 2023 A should be E, 0000004073TEBB5 18 April 2023 A should be E, 0000102674DE994 1 October 2022 A should be E, 1001248036LC63E 12 June 2023 A should be E, 0000037698WEC1E RR-200500 11 July 2023.

TRUS does not use MEP estimates.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.1 With: Clause 3(3) Schedule 15.2 From: 14-Mar-23 To: 06-Dec-23	**MEEN** For 14 ICPs the switch event read type recorded in SAP did not match the expected read type. **TRUS** For one ICP the switch event read type recorded in GTV did not match the expected read type. 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 as strong because read types are normally recorded correctly. The issues related to ICPs which had read changes due to switch event read renegotiations which are processed manually in the systems. The impact on settlement and participants is low, because the read values were correct, and all switch event reads are treated as validated and permanent by the reconciliation process and are used to calculate historic estimate.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: We acknowledge the non-compliance, however as SAP will be phased out and considering all RESI ICPs have been migrated to GTV, it is not viable to make any changes/improvements to SAP-related systems and processes. TRUS: This was a Service Hub error which was identified to the agent's Team Leader as a training opportunity.	N/A April 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TRUS: Continue to review and update guidelines available to Service Hub agents.	May 2024	

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

Code reference

Clause 3(4) Schedule 15.2

Code related audit information

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

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

3(4)(b) - estimated readings,

3(4)(c) - permanent estimates.

Audit observation

A sample of submission data was reviewed in **sections 11** and **12**, to confirm that volume was based on readings as required.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 3(5) Schedule 15.2

Code related audit information

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

Audit observation

A sample of submission data was reviewed in **sections 11** and **12**, to confirm that volume was based on readings as required. NHH data is collected by MEPs and agents, and HHR and generation data is collected by agents.

Audit commentary

The MEPs and agents retain the raw, unrounded data. Compliance with this clause has been demonstrated by Mercury's MEPs and agents as part of their own audits.

MEEN

Mercury receives data from EDMI and Bluecurrent in the PROFVAL format which includes three decimal places. Bluecurrent, Arc, Smartco, IntelliHUB, Counties and FCLM readings are rounded to zero decimal places on import. Rounding occurs prior to the creation of volume information, and this is non-compliant.

I checked a sample of ARC HHR interval data which was provided by Bluecurrent and found it had three decimal places recorded.

Generation data for some Power Stations is rounded, including for the Maretai power station where data is rounded to 10 kWh.

TRUS

Manual meter readings do not record decimal places and are not rounded or truncated on import into GTV. AMI data is rounded to zero decimal places upon being uploaded to GTV. Rounding occurs prior to the creation of volume information, and this is non-compliant.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.3 With: Clause 3(5) of schedule 15.2 From: 01-Apr-23 To: 29-Apr-24	**MEEN** Raw AMI meter data is rounded upon receipt and not when volume information is created. **TRUS** Raw meter data is rounded upon receipt and not when volume information is created. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: None Breach risk rating: 5
Audit risk rating	**Rationale for audit risk rating**
Low	There are no controls to prevent rounding of raw meter data, the systems are designed to round as soon as the data arrives. There is little impact because no metered consumption information is "missing".

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: In the last 12 months Mercury has migrated the majority of its ICPs from the MEEN code (SAP) to the TRUS code (GTV). A project is underway to migrate our Commercial/TOU ICPs to a new platform before the end of 2024 and retire SAP in due course. All of our resource is going into the new platforms and we won't be investing in making changes to SAP-related systems or processes at this time.	N/A	Investigating
TRUS: We are investigating the viability of a system change so that AMI data is not rounded to zero decimal places upon being uploaded to GTV.	December 2024	
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above	N/A	

9.4. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

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

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

Audit observation

The HHR estimate process was examined and I checked a sample of HHR estimates for compliance with the requirement to use "reasonable endeavours" to ensure that estimated data is accurate to within 10%.

Audit commentary

MEEN

Where Mercury is advised by a HHR data collector/agent that data is unrecoverable from a HHR meter then estimates are calculated based on check or surrounding readings where possible, or data from a period with a similar expected quantity and profile to the period to be estimated. The common techniques are:

- **extrapolate** - a previous similar time period is used,
- **interpolate** - a previous time period is used, and the result is permanent,
- **divide/multiply** - this technique is used for examples like phase failure,
- **add** - data is added to existing data, and
- **type in** - if a manual calculation is performed or if check metering is used the result can be entered.

When previous time periods are used, the day of the week is considered, so if data is missing for a Tuesday, the data for the same time period on the previous Tuesday will be considered. Statutory holidays are also taken into consideration. SAP has a built-in audit trail for all estimations and corrections. I checked a sample of three estimates and confirmed that they were reasonable and calculated as expected.

The previous audit found that zero was estimated for new connections or switch ins where there was insufficient consumption history for SAP to create an estimate. This process has been changed and the new process is to check the annual consumption with the account manager, and to use this as a basis for estimation.

The previous audit recommended that MEEN's generation estimation template should also be used for C&I estimation to ensure that all correction information is available in one place instead between SAP notes, emails and spreadsheets. This recommendation was considered but has not been adopted.

MEEN was unable to confirm the total proportion of interval data which is estimated.

IntelliHUB estimates

Estimates are created and supplied by IntelliHUB. The process for calculating the estimates was checked during their HHR agent audit and the methodology is sound. IntelliHUB also produces estimates for "inactive" periods, and Mercury's submission process excludes any volumes during "inactive" periods from submission. I checked a sample of IntelliHUB estimates and confirmed that they were correctly recorded and classified.

Generation

Estimates of generation data seldom occur, and the same process is used. No generation estimates occurred during the audit period.

TRUS

Read files received are checked against a checklist of expected files, and any missing files are followed up with the MEP or agent. Where actual HHR data cannot be obtained, HHR estimates are created using the following methods in order of preference:

- **like day method** based on the closest like day from this week or last week; public holidays are mapped to Sundays,
- **average like day method** based on the same interval over the previous four weeks; public holidays are excluded from the average, and this method is not used when calculating estimates for public holidays,
- **previous year** based on the closest like day in the same two-week period of the previous year; public holidays are mapped to Sundays,
- **fallback method ADL** based on an average daily load for the data steam from the standing data, which is divided by the number of intervals in the day, and
- **fallback method global ADL** based on an average daily load estimate, which is divided by the number of intervals in the day.

If actual data becomes available at a later date, the estimates will be replaced with actual data and revised submission information will be washed up.

Use of these methods is sufficient to meet the requirement to use reasonable endeavours to ensure that estimated submission information is within the percentage specified by the Authority. I checked a sample of ten estimates and confirmed nine were calculated in accordance with the methods above and appeared reasonable. For one estimate I was unable to confirm the estimation method because it had been replaced but confirmed that the estimate was reasonable.

TRUS confirmed that 0.4% of interval data was estimated for the December 2023 revision 1, which appears reasonable.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 15.2

Code related audit information

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

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

Audit observation

I reviewed and observed the NHH data validation process, including checking a sample of data validations.

Audit commentary

For both codes, NHH manual readings are obtained by MRS. MRS perform a localised validation within their hand-held devices to ensure the reading is within expected high/low parameters. This is described further in the MRS audit report. MRS also provides information on meter condition, where it could affect meter accuracy or safety. This is discussed further in **section 6.6**.

For AMI meters, the MEPs have access to meter event and clock synchronisation information that may identify issues with meter accuracy. The process to receive and review this information is discussed in **section 9.6**.

MEEN

Read import validation

All NHH read data undergoes validation. I viewed the exception reports generated by the validation process, and a sample of data which failed validation. The read validation process includes:

- identification of reads with invalid dates and times, or a date that does not match the expected read order date, it will also identify obvious data corruption,
- checks that the data relates to an ICP, meter, and register held within SAP,
- checks that the read matches the number of digits expected for the meter,
- high consumption over 200% of the expected value, and
- first readings after switch in which are high or low relative to the event reading which are reviewed to determine whether an RR is required.

It is not possible to enter a read for a period which has already been billed unless the previous invoice is reversed and rebilled. Reads can be validated against read history and photos using the MRS portal, or the ADR database which holds all AMI reads.

Billing validation

The billing validation process identifies:

- any outstanding read orders, which are investigated to determine why a read was not received,
- high reads and reads lower than the previous read, and
- if a billing period will be less than ten days, and the invoice is not a final invoice.

Exceptions identified through the billing validation process are reviewed. Validation tools are used to assess whether consumption appears reasonable and includes comparisons with historic consumption. Based on the review findings, reads are either validated or left unvalidated. Unvalidated reads are not used by the billing or reconciliation processes.

Zero consumption

There is currently no specific reporting on zero consumption, but ICPs with zero consumption may be identified through read validation processes, customer enquiries, MEP enquiries or meter reader condition events.

The previous audit found ICP 1099569118CN9D3's meter has been stopped since 2019 but the correction was only conducted for the current customer, which was a five-month period back from 21 March 2022. There was at least 3,600 kWh not accounted for and this remains incorrect. A recommendation is made in **section 2.1** to process the full correction and apply billing credits if MEEN does not wish to pass the correction on to their customer.

Recommendation	Description	Audited party comment	Remedial action
Review of stopped meter/zero consumption reporting	**MEEN** Reinstate zero consumption reporting to identify potentially stopped or faulty meters.	May be some confusion as we thought we were still doing this, will investigate and if we aren't then we will reinstate.	Investigating

Consumption while inactive

When "inactive" consumption is found, SAP is usually updated to "active" status from the date of the first reading that shows consumption. SAP's historic estimate process forces all consumption in a read-to-read period to be reported against the "active" day or days in the period, so this will ensure that all "inactive" consumption since the previous actual read is reported for reconciliation.

SAP has a process to automatically update an ICP's status to "active" from the latest reading date when "inactive" consumption is identified. An email is generated for the risk control team, who review the change to confirm that the consumption is genuine, and the correction is accurate. MEEN confirmed that these emails were found.

There is also a weekly report of "inactive" consumption which only includes ICPs where MEEN has completed the disconnection; ICPs which switch in with "inactive" status are excluded. The ICPs on the report are checked to determine whether a reconnection service order has been issued or completed, and paperwork is followed up/and or processed. If it appears not to have been reconnected by MEEN, the consumption is checked to determine whether it appears genuine or to have been caused by a misread and then the status is corrected if it is genuine.

TRUS

Powerco read validation

Powerco's engineers record photo readings for Powerco's substations, where the meter readers are not allowed to enter the facility for health and safety reasons. The engineers provide the photo and a scan of a paper form which records the reading and read date. The previous reading is recorded on the paper form, which enables Powerco to validate the reading before it is provided to TRUS for further validation. A recommendation is raised in **section 6.6** relating to recording of meter condition events by Powerco.

Read import and billing validation

The next two levels of validation occur in GTV, pre-billing and post billing. The reading (pre-billing) validations include:

- missing readings including where there are multiple meter points for an ICP,
- ICPs with no registers,
- multiple reads available,
- transposed registers on two rate meters,
- multipliers of one which should be greater than one,
- embedded generation where GTV has load instead of generation,
- incorrect register content codes, and
- incorrect unit of measure.

Exceptions are reviewed and corrective action is taken. The revenue assurance team monitors multiplier discrepancies between GTV and the registry using a discrepancy report. Inconsistent register content codes such as CN24 are identified through discrepancy reporting and followed up with the MEP.

The billing validations include:

- high invoice dollar value,
- high consumption,
- zero consumption,
- negative consumption, and
- short and long billing periods.

Exceptions are reviewed to determine whether they appear reasonable, and zero consumption is checked by the revenue assurance team as workloads allow. If a consumption error has occurred because of an incorrect switch event reading, a second reading will be obtained to confirm the values and then a read renegotiation will be initiated if required.

If a reading is found to be invalid, staff will change the read header to interim and GTV will produce an estimate for the read date based on the ICP's history. A report of unvalidated and uninvoiced reads is reviewed to identify ICPs which have reads which have not been validated or billed.

Recommendation	Description	Audited party comment	Remedial action
Review of stopped meter/zero consumption reporting	**TRUS** Allocate resources to ensure that stopped meter/zero consumption reporting is reviewed regularly so that stopped, bridged and faulty meters can be replaced or un-bridged, and corrections processed promptly.	Mercury has 8 FTE in our Revenue Assurance team. We have a range of reports and mechanisms identifying potential instances of inactive consumption and stopped/ faulty meters. The fact that these instances are not being investigated and resolved in a "timely" manner is due a number of factors i.e. the high level of fieldwork contractor turndowns, increasing levels of meter faults (particularly LCD's), the bridging of meters for reconnection, a significant level of unaddressed meter faults migrated from MEEN to TRUS. We are working to address delays and reduce volumes, and do expect to see a steady improvement across the next 12 to 18 months.	Identified

Consumption while inactive

"Inactive" and "vacant" consumption fails validation and is directed to an "unbilled" validation bucket for review by the vacant property team, who try to obtain a customer registration and determine whether the ICP should be disconnected.

The vacant consumption remains in the "unbilled" validation bucket and is not applied for submission until either a customer signs up or it is moved to an unbilled TRUS account to be included in reconciliation submissions. It is difficult to move consumption out of the unbilled TRUS account, so the team usually leaves it in the validation bucket until they are sure no consumption will sign up. A card is sent one week after the ICP becomes vacant and up to three weeks is allowed to receive a response, before the vacant property team decide whether to disconnect. Consumption is normally moved to a customer or TRUS account in time for revision three to 14. Three people work on "inactive" and "vacant" consumption full time.

Two vacant ICPs 0781871145LCEF4 and 0001423099UNB7B had AMI readings received, but these were temporarily recorded in the "unbilled" validation bucket until they were approved and moved to the

ICP. This typically involves investigation and determining whether the ICP should be disconnected. Review of submission data showed that vacant consumption is reported once the vacant consumption exception is approved, but these two ICPs did not have any AMI readings loaded in the 12 months ending October 2023.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.5 With: Clause 16 Schedule 15.2 From: 01-Apr-23 To: 29-Apr-24	**TRUS** Not all identified "inactive" consumption and potential stopped or faulty meters are being investigated and resolved in a timely manner. 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 well designed, but how frequently the processes are completed and how promptly issues are investigated and resolved requires some improvement. The impact on settlement and participants is expected to be low, because once the issues are investigated and resolved revised submission data will be washed up.

Actions taken to resolve the issue	Completion date	Remedial action status
Mercury has 8 FTE in our Revenue Assurance team. We have a range of reports and mechanisms identifying potential instances of inactive consumption and stopped/ faulty meters. The fact that these instances are not being investigated and resolved in a "timely" manner is due a number of factors i.e. the high level of fieldwork contractor turndowns, increasing levels of meter faults (particularly LCD's), the bridging of meters for reconnection, a significant level of unaddressed meter faults migrated from MEEN to TRUS. We are working to address delays and reduce volumes, and do expect to see a steady improvement across the next 12 to 18 months.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As above.	N/A	

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 and observed the HHR, generation, and AMI data validation processes, including checking a sample of data validations.

Audit commentary

MEEN

HHR

MEEN receives HHR data from agents and AMI data from MEPs.

Any AMI ICPs with NHH register readings recorded in SAP monthly for billing have their readings validated using the NHH read validation process described in **section 9.5** which meets the requirements to check for missing data, invalid dates and times, unexpected zero values, and comparison against consumption history.

All HHR data is currently validated for:

- matching to an open ICP meter register,
- missing data where an ICP is “active” and data is unavailable, and
- a sum check where register readings are available, including review and correction of any differences over ±0.1 kWh or over ±0.5 kWh on a rolling three-month basis.

Any ICPs with missing interval data will fail billing validation, and the missing data will be followed up with the MEP and loaded once received. SAP will generate estimates for any periods where actual data is not available, and the estimates will be replaced by actual data once received.

The previous audit recommended that MEEN develop reporting of the quantity of estimated intervals per NSP/MEP/revision to assist with managing MEP performance. MEEN indicated that this would be reviewed following the migration of ICPs from MEEN to TRUS, and a review of the TRUS read attainment processes is currently underway.

The MEPs and agents provide meter event details to MEEN for review and action. IntelliHUB completes an analysis on its meter events and only sends those which require action, with detailed instructions. The other MEPs send full event lists, and some individual events for action. Events are reviewed and generally passed from the meter reading team to revenue assurance where there is potential tampering or load side voltage. Power outage and restore events, and reverse power events are investigated, and a job is raised for the MEP if necessary. Communications issues are referred to the consumer data team.

I checked a sample of events and confirmed that for some, action had not been taken, particularly where the ICP was migrated from MEEN to TRUS. Around the time of the migration field service orders were cancelled or not raised for ICPs migrating from MEEN to TRUS, and a list of ICPs requiring field service orders or investigation was provided to TRUS. It appears that some of these were lost during the migration process and MEEN and TRUS intend to work together to identify and review any ICPs with jobs that should have been raised post migration, and determine what action is required.

Recommendation	Description	Audited party comment	Remedial action
Ensure that field services jobs cancelled by MEEN before the ICPs migrated to TRUS have been appropriately actioned by TRUS	**MEEN** and **TRUS** Ensure that any MEEN ICPs where field services jobs such as site investigations were cancelled or not raised before the ICP was migrated to TRUS are identified and checked to make sure TRUS has taken appropriate action to resolve the issue. Affected ICPs include 0304657026LCA8F (memory failure metering events) and 1001138133UNE6C (phase failure events).	MEEN: We will review the original list of jobs cancelled under MEEN to identify any that haven't had a new job raised in GTV under TRUS. TRUS: We will follow up with our SAP based staff and former MEEN personnel on this recommendation as we are not aware of any records having been kept of the field services jobs and site investigations that were cancelled. NB: the consumption being recorded and billed in GTV for these 2 ICP's does not indicate a revenue assurance concern for either.	Identified

The EDMI agent audit recorded that a meter event for ICP 0004862980CNE78's battery alarms on 3 April 2023 was not sent to MEEN. I found that the event was not sent later, and because MEEN was unaware of it, no action was taken.

HHM

Mercury ceased using the HHM profile in October 2023. Prior to that MEEN validated HHR data in accordance with the approved profile application, and there were no changes to the process before MEEN stopped using the profile.

Generation

Reads are received via SFTP from Bluecurrent. They are imported into SAP automatically and validated using the same process as other HHR data.

Generation staff monitor meter data in real time and advise the energy services team if they become aware of any issues which could affect submission accuracy. The generation team works directly with the

MEP and/or test house where issues or suspected issues are found. No meter events which could affect meter accuracy were identified during the audit period.

Generation submissions are validated using the generation trender which compares the submissions to check meter and TED meter data. Any anomalies over ±2% are checked with the generation engineer. For Atiamuri, up to 4 MW may be fed into the local network (0000001000MR7FD – SB ICP with DFP as the profile) and is not measured by the check meter system. This is considered when reviewing the differences between the primary and check meter data.

TRUS

HHR

TRUS receives AMI data from MEPs for meters with category one and two. All of the ICPs have NHH register readings recorded in GTV monthly for billing. These readings are validated using the NHH read validation process described in **section 9.5** which meets the requirements to check for missing data, invalid dates and times, unexpected zero values, and comparison against consumption history.

TRUS is developing a HHR billing process, and ICPs using this process will not have monthly register readings recorded in GTV and will not follow the NHH validation process. The new process will include validation for unexpected zero values, and comparison against consumption history. The existing HHR validations ensure that missing data and invalid dates and times will be identified.

All HHR data is currently validated for:

- matching to an open ICP meter register,
- missing data where an ICP is "active" and data is unavailable,
- a sum check where any differences less than ±1 kWh are bulk approved and larger exceptions are individually checked and corrected, and
- unexpected usage while the ICP has "inactive" status (HHR and NHH ICPs are validated together using the process described in **section 3.9**)

The MEPs and agents provide meter event details to the TRUS revenue assurance helpdesk for review and action. The full event logs are not independently reviewed due to the size of these reports. During previous audits, recommendations have been made for TRUS to seek the event information explanations for each event and then build a query to extract these events to ensure they are acted upon. The full event lists often contain a large number of tamper events, and these can be caused by vibration. However, I suggest the tamper event is evaluated in conjunction with the zero-consumption reporting to ensure a higher priority is given to ICPs where there is zero consumption and a tamper event. The recommendation has been repeated to maintain visibility of this issue.

Description	Recommendation	Audited party comment	Remedial action
AMI events	**TRUS** Obtain event information description information from MEPs and ensure that all event types are reviewed.	We will investigate what event information we currently receive and what revenue assurance activities result from this, and also look into any relevant event data we are not currently receiving or acting upon.	Investigating

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.6 With: Clause 17 Schedule 15.2 From: 01-Apr-23 To: 29-Apr-24	**MEEN** Some investigations into meter events which could affect accuracy were not actioned or had field services jobs cancelled prior to the ICPs migrating to TRUS. Some of these jobs were not restarted by TRUS on switch in. The EDMI agent audit recorded that a meter event for ICP 0004862980CNE78's battery alarms on 3 April 2023 was not sent to MEEN. I found that the event was not sent later, and because MEEN was unaware of it, no action was taken. **TRUS** Full event information is not analysed and acted upon for all MEPs. Potential impact: Medium Actual impact: Low Audit history: Twice Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are weak because most ICPs are supplied by TRUS, and they do not review and action all meter events provided. The impact of the lack of event log monitoring is low because any events requiring action identified by the MEPs and sent to Mercury are usually reviewed and actioned.

Actions taken to resolve the issue	Completion date	Remedial action status
MEEN: We will review the original list of jobs cancelled under MEEN to identify any that haven't had a new job raised in GTV under TRUS. TRUS: We will investigate what event information we currently receive and what revenue assurance activities result from this, and also look into any relevant event data we are not currently receiving or acting upon.	May 2024	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
MEEN: This only occurred due to the migration between SAP and GTV, we will take the learnings from this when completing the migration for the remaining MEEN ICPs and GBUG ICPs as required. TRUS: As above.	May 2024	

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

Mercury is not responsible for any generation stations where 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

Mercury is not responsible for any generation stations where 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)I- 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

Mercury is not responsible for any generation stations where 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

Mercury is not responsible for any generation stations where 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

Processes to create buying and selling notifications were reviewed. I checked whether any breach allegations had been made.

Audit commentary

There have not been any breach allegations in relation to this clause during the audit period.

MEEN

As part of its pre-submission checks, MEEN compares the aggregation factor combinations reported for the current and previous submissions to identify combinations requiring trading notifications. The trading notifications are issued as required.

If a combination requiring a trading notification was missed through this check, it would be identified when the file was run through the reconciliation manager's file checker prior to being uploaded.

TRUS

As part of its pre-submission checks, TRUS compares the aggregation factor combinations reported for the current and previous submissions for each profile requiring trading notifications to identify combinations requiring trading notifications. The trading notifications are issued as required.

If a combination requiring a trading notification was missed through this check, it would be identified when the file was run through the reconciliation manager's file checker prior to being uploaded.

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 NSPs with a small number of ICPs to confirm the AV110 ICP days calculation was correct and reviewing GR100 ICP days comparison variances. Alleged breaches were reviewed to determine whether any submissions were made late.

Audit commentary

There were no alleged breaches for late ICP days submissions.

MEEN

ICP days submissions are produced using SAS based on information from SAP and the registry. I checked HHR ICP days for 380 NSPs and NHH ICPs for 400 NSPs on the December 2023 submission which confirmed the process to calculate and aggregate the AV110 submission was correct.

The following table shows the ICP days difference between MEEN submissions and the RM return file (GR100) for all available revisions for 24 months. The discrepancies are small and consistently negative, indicating that retailer ICP days are consistently higher than the registry.

Month	Ri	R1	R3	R7	R14
Jan 2022	-0.06%	-0.07%	-0.09%	-0.10%	-0.08%
Feb 2022	-0.05%	-0.08%	-0.10%	-0.09%	-0.09%
Mar 2022	-0.08%	-0.10%	-0.11%	-0.09%	-0.10%
Apr 2022	-0.06%	-0.09%	-0.12%	-0.11%	-0.11%
May 2022	-0.06%	-0.10%	-0.11%	-0.11%	-0.11%
Jun 2022	-0.07%	-0.10%	-0.10%	-0.10%	-0.10%
Jul 2022	-0.06%	-0.09%	-0.10%	-	-
Aug 2022	-0.05%	-0.08%	-0.10%	-	-
Sep 2022	-0.05%	-0.09%	-0.10%	-0.10%	-
Oct 2022	-0.06%	-0.10%	-0.10%	-0.11%	-
Nov 2022	-0.06%	-0.09%	-0.11%	-0.10%	

Month	Ri	R1	R3	R7	R14
Dec 2022	-0.05%	-0.09%	-0.11%	-0.10%	
Jan 2023	-0.05%	-0.08%	-0.10%	-0.09%	
Feb 2023	-0.05%	-0.09%	-0.09%	-0.09%	
Mar 2023	-0.08%	-0.10%	-0.10%	-0.08%	
Apr 2023	-0.07%	-0.09%	-0.10%	-0.07%	
May 2023	-0.05%	-0.08%	-0.09%	-0.07%	
Jun 2023	-0.07%	-0.09%	-0.09%	-	
Jul 2023	-0.07%	-0.08%	-0.08%	-	
Aug 2023	-0.05%	-0.07%	-0.08%	-	
Sep 2023	-0.07%	-0.12%	-0.06%	-	
Oct 2023	-0.95%	-0.20%	-0.10%	-	
Nov 2023	-0.34%	-0.87%	-	-	
Dec 2023	-0.41%	-0.54%	-	-0.11%	

I checked a sample of five HHR differences and five NHH differences present at R7 or later and found that the differences were due to backdated switching activity and a DUML ICP with CTCT listed as the MEP where MEEN cannot update the submission type of NHH on the registry, causing an invalid ICP days mismatch.

I rechecked issues present in the previous audit and found they were resolved except for HHR submission occurring against the incorrect NSP HAY0331 from 19 October 2021 to 20 October 2021, because revision 14 has already been completed. This is recorded as non-compliance in **section 12.7**.

TRUS

AV110 submissions are created using GTV, and HHR and NHH ICP days are included in the same report. AV110 submissions are validated at an aggregate level against submitted and billed volumes since October 2021 for reasonableness prior to submission.

I checked 50 NSPs with a small number of NHH ICPs and 25 NSPs with a small number of HHR ICPs on the December 2023 submission which confirmed the process to calculate and aggregate the AV110 submission was correct.

The following table shows the ICP days difference between TRUS submissions and the RM return file (GR100) for all available revisions for 24 months. Positive numbers indicate that the TRUS ICPs days figures are lower than those contained on the registry. The discrepancies are very small and generally improve over time as expected.

Month	Ri	R1	R3	R7	R14
Jan 2022	0.02%	0.00%	0.01%	0.00%	0.00%
Feb 2022	0.01%	0.00%	0.01%	0.00%	0.00%
Mar 2022	0.01%	0.01%	0.00%	0.00%	0.00%
Apr 2022	0.02%	0.02%	0.00%	0.00%	0.00%
May 2022	0.02%	0.01%	0.00%	0.00%	0.02%
Jun 2022	0.02%	0.01%	0.00%	0.00%	0.02%
Jul 2022	0.02%	0.00%	0.00%	0.01%	0.00%
Aug 2022	0.01%	0.01%	0.00%	0.00%	-
Sep 2022	0.01%	0.00%	0.00%	0.00%	-
Oct 2022	0.01%	0.01%	0.00%	0.00%	-
Nov 2022	0.01%	0.00%	0.01%	0.00%	0.00%
Dec 2022	0.04%	0.01%	0.00%	0.02%	-
Jan 2023	0.01%	0.01%	0.00%	0.02%	-
Feb 2023	0.01%	0.00%	0.00%	0.00%	-
Mar 2023	0.00%	0.00%	-0.01%	-0.01%	-
Apr 2023	0.01%	0.01%	0.02%	0.00%	-
May 2023	0.07%	0.05%	0.02%	0.00%	-
Jun 2023	0.06%	0.03%	0.01%	0.00%	-
Jul 2023	0.04%	0.04%	0.01%	-	-

Month	Ri	R1	R3	R7	R14
Aug 2023	0.06%	0.04%	0.02%	-	-
Sep 2023	0.19%	0.11%	0.02%	-	-
Oct 2023	0.04%	0.02%	0.02%	-	-
Nov 2023	0.03%	0.03%	-	-	-
Dec 2023	0.04%	0.03%	-	-	-

I checked a sample of five NHH differences present at R7 or later, and five HHR differences present at October 2023 revision 3 and found they were caused by:

- backdated switches, withdrawals, submission type changes and status changes causing timing differences,
- a switch event reading being manually entered against an incorrect date, which was later corrected; training has been provided to prevent recurrence of this issue,
- an incorrect NSP being recorded in GTV, which was later corrected; discrepancy reporting has been enhanced to identify historic NSP mismatches between GTV and the registry which are then updated from the correct date, and
- reporting errors on the GR100 ICP days comparison report where I verified that the submission was consistent with registry information.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.2 With: Clause 15.6 From: 01-Jul-22 To: 31-Oct-23	**TRUS** A small number of ICP days errors were caused by incorrect NSPs or switch read dates. The errors have been corrected. 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 strong, and the impact is low. Corrections have been made and revised submission data washed up, and improved validation and training has been implemented to prevent recurrence.

Actions taken to resolve the issue	Completion date	Remedial action status
The errors causing the ICP days variances have been corrected and will be reflected in revision submissions.	Completed	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Training has been provided and NSP discrepancy reporting has been enhanced.	Completed	

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 for each code to confirm the AV120 calculation was correct, and reviewing GR130 reports to evaluate differences between billed and submission data.

Alleged breaches were reviewed to determine whether any submissions were made late.

Audit commentary

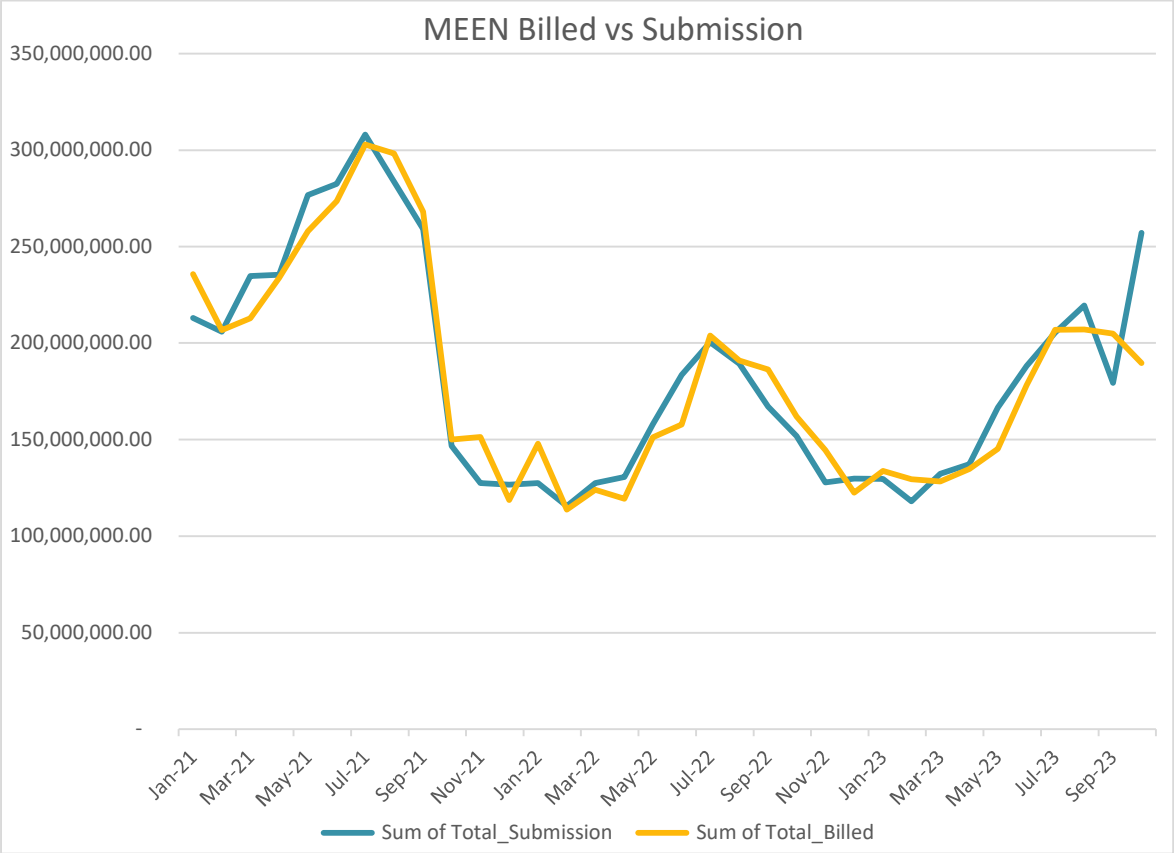
There were no alleged breaches for late electricity supplied submissions.

MEEN

The process for the calculation of as billed volumes was examined by checking five NSPs with a small number of ICPs against MEEN invoice information for December 2023. This confirmed the accuracy of the electricity supplied information.

The chart below shows a comparison between submissions and electricity supplied information. At an aggregate level, billed data is 2.2% higher than submitted data for the year ended October 2023 and 0.65% higher than submission for the two years ended October 2023. The main reason for the recent larger difference is ICPs migrating from MEEN to TRUS.

Comparison between Submitted Volumes and Electricity Supplied

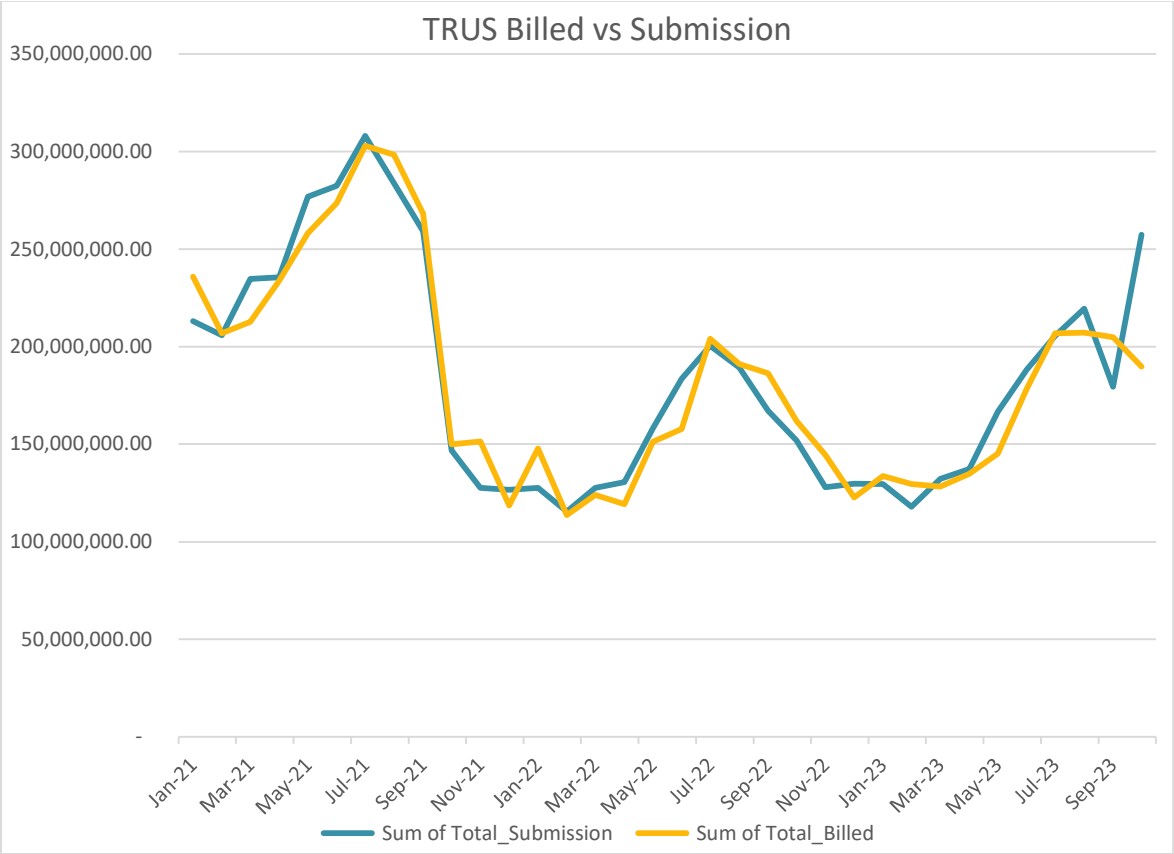


TRUS

AV120 submissions are produced from GTV and are validated by comparing the billed to submitted volumes over the past two years using charts, and reviewing ICP level data and checking usually high or low billed amounts.

The process for the calculation of as billed volumes was examined by checking five NSPs with a small number of ICPs against TRUS invoice information for November 2023. This confirmed the accuracy of the electricity supplied information.

The chart below shows a comparison between submissions and electricity supplied information. At an aggregate level, billed data is 2.0% lower than submitted data for the year ended October 2023 and 1.5% lower than submission for the two years ended October 2023. The main reason for the recent larger difference is ICPs migrating from MEEN to TRUS.



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 a sample of submissions and tracing a sample of data from the source files received from the MEP or agent to the submission files.

The GR090 ICP missing files were examined for all revisions for June 2021 to October 2022. An extreme case sample of the 30 ICPs missing for the most months were reviewed.

Alleged breaches were reviewed to determine whether any submissions were made late.

Audit commentary

There were no alleged breaches for late HHR volumes or aggregates submissions.

MEEN

HHR submissions are produced in GTV. MEEN validates the submission data prior to providing it to the reconciliation manager using its submission checker tool. MEEN also compares the volumes and aggregates submissions to confirm that they are consistent.

I confirmed that the process for the calculation and aggregation of HHR data is correct, by:

- tracing a sample of data for 15 HHR settled ICPs from the raw meter data files provided by the MEPs and agents to GTV and the HHR aggregates submissions for September 2023 and confirmed that the data was recorded accurately, and
- by matching HHR aggregates information with the HHR volumes data for ten submissions; there were very small rounding differences for I flow submissions and differences of up to ±360 kWh kWh for X flow submissions, and when I compared the July 2023 revision 1 submissions at NSP level I found maximum differences of ±60 kWh - it is believed that the reasons for the differences are rounding and timing, because the files are sometimes generated at different times.

Mercury reviews the GR090 ICP missing files prior to the seven and 14-month revisions, to identify any issues that require correction. The GR090 ICP missing files were examined for all revisions for September 2022 to November 2023. An extreme case sample of the 30 ICPs missing for the most months were reviewed, and found they related to:

- backdated submission type changes, status updates and switches,
- "inactive" ICPs included in the HHR submissions,
- late updates to HHR settlement units for new connections and DUML ICPs,
- removal of HHR settlement units in SAP for ICPs 0000939530TUC61 on 31 March 2023 and 0206870043LC8E9 for 19 March 2023 without creating a new NHH settlement unit resulting in the ICPs being omitted from submissions, and
- late updates to NSPs.

ICP 0309892023LCFC2 has been "inactive" since 4 November 2022 but was confirmed to have non-zero consumption in May, July and September 2023 indicating that the registry ICP status is incorrect. This is recorded as non-compliance in **sections 2.1** and **3.9**. Compliance is recorded in this section because submission volumes were correctly reported.

Energy services advised that the commercial operations team sometimes instructs them not to set up EG registers for distributed generation ICPs because no volumes are expected, and there is no monitoring in place to identify where these meters begin to record volumes. This resulted in 12 ICPs[36] with generation and I flow metering not having I flow submission data provided. I recommend in **section 6.1** that all ICPs with settled EG registers should be set up completely in SAP to allow readings to be loaded and submission to occur.

I rechecked issues present in the previous audit and found they were resolved.

TRUS

[36] No I flow volumes are expected for ICPs 0000052074WE6C4, 0000038898WE375, 0000166840CKBC7, 1000530812PC615, 1000015863BP8C3, 0006611199ML99C and 0301412022LCBBA. I flow volumes are expected for ICPs 0000019116TR259, 1001142826LCE6A, 1002167046LC4B1, 1002175744UNA83 and 0329748033LCC12.

From 1 October 2023, some HHR settled MEEN ICPs began to migrate to TRUS. TRUS has provided HHR submission data from GTV for these ICPs for reconciliation periods from October 2023 onwards.

Total NHH and HHR submission volumes are validated against total submissions for each revision from October 2021 onwards. The latest submission volume and latest billed volume are also compared for each month from October 2021 onwards. If anomalies are identified, it is possible to drill down to lower levels to identify the cause. TRUS also compares the volumes and aggregates submissions to confirm that they are consistent.

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

- tracing a sample of data for eight HHR settled ICPs from the raw meter data files provided by the MEPs and agents to GTV and the HHR aggregates submissions for December 2023 and confirmed that the data was recorded accurately, and
- I matched the HHR volumes and aggregates for December 2023 revision 1 and confirmed that only small rounding differences were present at NSP level.

The GR090 ICP Missing files were examined for all revisions for March to October 2023. I checked an extreme case sample of the 20 ICPs missing from the most revisions and found they related to:

- backdated submission type changes and switches, and
- incorrectly processed NSP changes for three ICPs[37] which moved between WIR0331 and TAK0331 in October 2023; they have since been corrected and discrepancy reporting has been enhanced to identify historic NSP mismatches between GTV and the registry which are then updated from the correct date.

Late switching files and updates to the registry are discussed in **sections 3** and **4**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.4 With: Clause 15.8 From: 01-Oct-23 To: 31-Oct-23	**TRUS** Three ICPs did not have the correct NSP recorded in GTV for the whole of October 2023 resulting in submission against an incorrect NSP. The error was corrected and revised submission data was provided. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong, and the impact is low. Corrections have been made and revised submission data washed up, and improved validation and training has been implemented to prevent recurrence.

[37] 0303415045LC092, 1001269222LCFF3 and 1002111688LC9BA.

Actions taken to resolve the issue	Completion date	Remedial action status
The incorrect NSPs have been corrected and accurate data has been provided in revision submissions.	Completed	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
NSP discrepancy reporting has been enhanced to identify and correct mismatches in a timely manner.	Completed	

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

Daylight savings processes for MEPs and agents were reviewed as part of their audits, and daylight savings processes for generation occur automatically.

Audit commentary

Compliance with this clause has been demonstrated by Mercury's agents as part of their agent audits. The correct number of trading periods were recorded for the sample of submissions which were checked for periods where daylight savings adjustments occurred. Daylight savings processes for generation occur automatically.

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

The process to create submissions was reviewed.

A sample of submission data was checked, and correction processes were checked in **sections 2.1, 8.1** and **8.2**.

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

Audit commentary

MEEN

No breaches had been recorded this audit period for late or inaccurate submission information.

NHH submissions

MEEN prepares NHH submissions using SAP. A sample of NHH ICPs were checked and I found volumes were correctly calculated and reported against the expected profiles including:

- ten ICPs with injection/export registers,
- five ICPs with "vacant" consumption, and
- five ICPs with standard unmetered load.

"Inactive" consumption is apportioned to the days with "active" status within the read-to-read period, if any. NHH volumes are reviewed prior to submission, these checks are discussed in **section 12.3**.

HHR

MEEN prepares HHR submissions using SAP. The process for generating submissions was reviewed and found to be compliant in **section 11.4**, but in some cases may produce inaccurate results where underlying data including settlement units are incorrect.

Generation

Mercury creates AV130 submissions for grid connected generation from SAP using meter reading data provided by Bluecurrent. I traced a sample of data from the files received from Bluecurrent to the AV130 for February 2024 and confirmed that the data was recorded accurately. Revision submissions are not completed unless data changes.

Delivery of submission data for all ICPs that MEEN is responsible for

Submission accuracy issues are discussed in detail in **section 12.7**. There were some instances were submissions made by MEEN were incomplete:

- **ICPs missing from submissions** - because of incorrect settlement units, statuses or status event dates or backdated status or trader updates, some ICPs and volumes were excluded from submission,
- **under reported consumption due to a missing multiplier for** ICP 0000018156UNB84 on 3 May 2023, and
- **unreported generation consumption** was identified for 15 ICPs with confirmed generation but no I flow metering installed or loaded in SAP, and which were not recorded on the gifting register.

I re-checked the previous audit submission issues which did not recur this audit and are not already discussed above. I found that ICP 1099569118CN9D3's meter has been stopped since 2019 but the correction was only conducted for the current customer, which was a five-month period back from 21 March 2022; there is at least 3,600 kWh not accounted for.

TRUS

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

HHR submissions

TRUS prepares HHR submissions using GTV. The process for generating submissions was reviewed and found to be compliant in **section 11.4**, but in some cases may produce inaccurate results where underlying data including settlement units are incorrect.

NHH submissions

TRUS prepares NHH submissions using GTV. A sample of NHH ICPs were checked and I found volumes were correctly calculated and reported against the expected profiles including:

- ten ICPs with injection/export registers,
- five ICPs with "vacant" consumption, and
- ten ICPs with unmetered load including standard and shared unmetered load.

"Inactive" consumption is apportioned to the days with "active" status within the read-to-read period, if any. NHH volumes are reviewed prior to submission, these checks are discussed in **section 12.3**.

Delivery of submission data for all ICPs that TRUS is responsible for

Submission accuracy issues are discussed in detail in **section 12.7**. There were some instances were submissions made by TRUS were incomplete:

- **ICPs missing from submissions** - because of incorrect settlement units, statuses or status event dates or backdated status or trader updates, some ICPs and volumes were excluded from submission,
- **unreported vacant consumption for ICPs** 0781871145LCEF4 and 0001423099UNB7B where readings were temporarily recorded in the "unbilled" validation bucket until they were approved and moved to the ICP,
- **under reported consumption during periods where meters were bridged** where corrections were not processed, resulting in incorrect historic estimate, and
- **unreported generation consumption** was identified for some ICPs with confirmed generation but no I flow metering, and which were not recorded on the gifting register.

I re-checked the previous audit submission issues which did not recur this audit and are not already discussed above.

- ICP 0000542701TUA4C has not been corrected resulting in under submission of 58.9 kWh; revision 14 has now passed,
- bridged meter corrections have not been processed for 0435675230LC66D, 0043223686PCC51 and 0000196942UN3A7 because no historical consumption was available to calculate an accurate correction, or the ICP had switched out,
- "inactive" consumption corrections have not been processed for 1002069373LC1A9 which has "inactive" consumption for the day before the switch loss on 20 October 2022 and 0000865145NV098 which is still recorded as "inactive" from 20 August 2022 but should be "inactive" from 20 September 2022; revision 14 has now passed, and
- the previous audit found ICP 0000574440NRF1C was electrically connected on 15 July 2022, but the contractor installed an NGCM meter instead of a MTRX meter, NGCM refused to load the meter to the registry as this was not hung under their test house and as metering is loaded to Gentrack from the registry and the meter was never loaded to the registry, the first "active" date was for the MTRX meter on 19 August 2022 - the volume for the period from 15 July 2022 to 18 August 2022 has not been reconciled and this ICP is still under investigation.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.2 With: Clause 15.4 From: 01-Apr-23 To: 29-Apr-24	**MEEN** and **TRUS** Some submission information was not complete and accurate. Potential impact: Medium Actual impact: Unknown Audit history: Twice Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are moderate overall, the system processes to generate submission data are generally accurate, and the issues are mainly caused by data accuracy issues for individual ICPs or isolated scenarios. Mercury is working to investigate issues and improve controls, including improving processes to identify and correct data accuracy errors so that revised submission data can be provided. The impact is medium overall based on the volume differences identified and that some corrections have not yet been completed.

Actions taken to resolve the issue	Completion date	Remedial action status
We have been investigating and working through the issues that are the root cause of the submission inaccuracies, where possible correcting within the 14 month revision cycle so that the volumes will be washed up in our revision submissions.	June 2024	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will continue to focus on improving our processes, specific preventative actions as noted throughout the report, which will impact our submission accuracy positively.	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**. Submission validation processes are discussed in **section 12.2**.

The process for aggregating the AV080 was examined by checking five NSPs with a small number of ICPs. The GR170 to AV080 files for nine months were compared, to confirm zeroing occurs.

Audit commentary

MEEN

Prior to submission, data is checked using MEEN's submission checker and NZRM/ALLA file editor tools.

Mercury's ICP days, NHH volumes, HHR volumes, HHR aggregates, reconciliation manager balancing area data and as billed data are imported into the submission checker. The submission checker is used to create graphs and tables to compare the data, including review of historic consumption patterns, differences between revisions, and consistency checks between the reports. Historic estimate percentages, and ICPs with consumption over 70,000 kWh are checked.

The results are reviewed by the energy analysts and approved in writing by the Pricing Operations and Energy Services Manager. In some cases, volumes may be queried with other teams or customers prior to approval.

NHH submission

MEEN prepares NHH submissions using SAP, and the registry synchronisation and validation processes described in **section 2.1** ensure that aggregation factors are correct. The process for the calculation of NHH volumes was examined by checking five NSPs with a small number of ICPs. NHH volume calculation and aggregation factors were confirmed to be correct.

SAP automatically creates a zero line where a trading notification is open, but no aggregation line is present. GR170 and AV080 files for nine revisions were compared. All NSPs in the GR170 were included in the AV080 confirming that zeroing is occurring as required.

HHR submission

AV090 and AV140 aggregation was checked and found to be compliant in **section 11.4**.

Generation submission

Mercury creates AV130 submissions for grid connected generation from SAP using meter reading data provided by Bluecurrent. I traced a sample of data from the files received from Bluecurrent to the AV130 for February 2024 and confirmed that the data was recorded accurately. Revision submissions are not completed unless data changes.

Generation submissions are validated using the generation trender which compares the submissions to check meter and TED meter data. Any anomalies over ±2% are checked with the generation engineer. For Atiamuri, up to 4 MW may be fed into the local network (0000001000MR7FD – SB ICP with DFP as the profile) and is not measured by the check meter system. This is considered when reviewing the differences between the primary and check meter data.

TRUS

NHH submission

TRUS prepares NHH submissions using GTV, and the registry synchronisation and validation processes described in **section 2.1** ensure that aggregation factors are correct. The process for the calculation of NHH volumes was examined by checking five NSPs with a small number of ICPs. NHH volume calculation and aggregation factors were confirmed to be correct.

Submission information is validated before being provided to the reconciliation manager. Checks begin several days before submissions are due so that any issues can be identified, investigated and resolved before the submissions are re-run and re-checked before being uploaded.

Total NHH and HHR submission volumes are validated against total submissions for each revision from October 2021 onwards. GXP level differences over ±15% for revisions and ±10% for initial submissions, ICP level differences over ±5000 kWh for initial submissions and ±1000 kWh for revisions, ICPs with negative consumption of more than 500 kWh or consumption over 20,000 kWh are reviewed.

Zeroing is managed as part of the pre submission checks. TRUS uses a spreadsheet to compare aggregation factor combinations for the latest revision for each month and investigates any aggregation factor combinations reported in the previous month's latest revision but missing from the current month, or new combinations. Zero rows are added as necessary and review of nine months of GR170 and AV080 files confirmed that zeroing is occurring as required.

The latest submission volume and latest billed volume are also compared for each month from October 2021 onwards. If anomalies are identified, it is possible to drill down to lower levels to identify the cause.

GR170 and AV080 files for nine revisions were compared. All NSPs in the GR170 were included in the AV080 confirming that zeroing is occurring as required for AV080 submissions.

HHR submission

TRUS prepares HHR submissions using GTV**.** AV090 and AV140 aggregation was checked and found to be compliant in **section 11.4**.

As discussed above, total NHH and HHR submission volumes are validated against total submissions for each revision from October 2021 onwards. The latest submission volume and latest billed volume are also compared for each month from October 2021 onwards. If anomalies are identified, it is possible to drill down to lower levels to identify the cause.

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

Mercury is not a local or embedded network owner; 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

MEEN

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

TRUS

TRUS is not responsible for any NSPs and does not submit NSP volumes submissions.

Audit commentary

MEEN

Mercury Energy is not an embedded network owner however the configuration of the transmission system at Atiamuri Power station enables some volumes to be calculated by differencing between generation GIPs and Transmission GXPs. Up to 4 MW may be fed into the local network without being explicitly metered. To enable this volume to be measured and accounted for by the Reconciliation Manager Mercury have created a virtual embedded network with a single 'SB' ICP to allow the Reconciliation Manager to calculate the volume of energy supply the local network (0000001000MR7FD – SB ICP with DFP as the profile).

No alleged breaches were recorded for late provision of submission information.

TRUS

TRUS is not responsible for any NSPs and does not submit NSP volumes submissions.

Audit outcome

Compliant

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

MEEN

The process to create AV130 (NSP volume information) was reviewed. Alleged breaches during the audit period were reviewed to determine whether any reconciliation submissions were late.

TRUS

Trust power is not responsible for any grid connected generation.

Audit commentary

MEEN

Mercury creates AV130 submissions for grid connected generation from SAP using meter reading data provided by Bluecurrent. I traced a sample of data from the files received from Bluecurrent to the AV130 for February 2024 and confirmed that the data was recorded accurately.

Revision submissions are not completed unless data changes, and there were no alleged breaches for late provision of submission information.

TRUS

Trust power is not responsible for any grid connected generation.

Audit outcome

Compliant

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**, **8.1** and **8.2**.

Audit commentary

MEEN

Some submission data was found to be inaccurate and was not corrected at the next available opportunity for submission.

Issue	Estimated submission impact[38]
Invalid settlement units HHR settlement units were removed in SAP for ICPs 0000939530TUC61 on 31 March 2023 and 0206870043LC8E9 for 19 March 2023 without creating a new NHH settlement unit resulting in the ICPs being omitted from submissions.	Low
Incorrect status dates SAP apportions all consumption in a read-to-read period to the "active" days of the read-to-read period. If status dates are incorrect or reads and status dates do not align volumes may not be allocated to the correct days. Most ICPs with incorrect status dates were corrected as soon as they were detected during the audit and revised submission data will be washed up. • 12 new connections had incorrect "active" status dates, and one was corrected during the audit, • two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded; they both had their status dates corrected during the audit, • two ICPs connected by MEEN were not updated to "active" status before they switched out, • seven ICPs had invalid reconnections processed by SAP, • one out of a sample of 30 "inactive" status updates had an incorrect status update which was later reversed, and • ICP 0309892023LCFC2 has been "inactive" since 4 November 2022 but was confirmed to have non-zero HHR consumption reported in May, July and September 2023 indicating that the registry ICP status is incorrect.	Low
Backdated status and trader updates Where a status or trader update affecting submission is backdated more than 14 months, a manual correction needs to be processed to capture the consumption within the 14-month submission window. MEEN does not have a process to complete these backdated corrections and the energy services team is not usually made aware of ICPs requiring these corrections. I identified the following corrections which were expected to be processed but were not: • backdated unmetered load changes for ICPs 0006831044RN736 (event date 6 March 2017 backdated 1,617 business days), 1001296275LC6CD (event date 19 May 2017 backdated 1,617 business days), 0000502062DED0F (event date 17 July 2022 backdated 313 business days), 0904114678LC7E9 (event date 1 March 2022 backdated 304 business days) and 0000502063DE14A (event date 18 August 2022 backdated 290 business days); consumption which occurred more than 14 months before the processing date was omitted from submission data, and • backdated reconnections for ICPs 0002011840CNC22 (24 May 2017 backdated 1,446 business days), 0422296457LCFD8 (10 December 2018 backdated 1,055 business days), 0000241567UNB34 (23 October 2019 backdated 1,024 business days), and 0454039761LCFD4 (25 October 2019 backdated 1,019 business days); consumption or corrections which occurred more than 14 months before the processing date was omitted from submission data.	Low-medium

[38] Minor (less than ±500 kWh), low (less than ±10,000 kWh), medium (less than ±50,000 kWh) or high (more than ±100,000 kWh).

Issue	Estimated submission impact[38]
Unreported generation consumption ICPs 2000000001MQA97 and 0007198361RN7C3 have service orders raised for I flow metering to be installed, and ICP 0306617560LCA47 is to have a job raised. 12 ICPs[39] with generation and I flow metering did not have I flow submission data provided because their I flow meters were not set up in SAP.	Low
Incorrect multiplier for one day for ICP 0000018156UNB84 ICP 0000018156UNB84 needed its multiplier corrected from 1 to 100 from 3 May 2023, but the change was processed incorrectly. One is recorded for 3 May 2023 and 100 is recorded from 4 May 2023. The change was processed by a new team member who did not follow the correct process.	Low
Incorrect profiles assigned for FCLM seven register meters with I flow Review of AV080 submissions found that PTM profile was sometimes applied for I flow volumes for LINE-HTU0331, LINE-TKU0331 and TASM-MCH0111 in the June to August 2024 revision 14, January to March 2023 revision seven and June and July 2023 revision three. The issue occurred because the SAS logic did not correctly manage the configuration of FCLM seven register meters to correctly handle the I flow register. The issue was identified and corrected in August 2023 and revised submission data has been washed up.	Low
Metering precision for the Maraetai generation station Precision of grid generation volumes for Maraetai generation station is insufficient as volumes are reported in increments of 10 kWh.	Low
Rounding of AMI readings in SAP AMI meter readings are rounded to zero decimal places in SAP but are expected to remain unrounded for use in submission calculations.	Low
Submission of DUML as HHR without an exemption or approved profile DUML load is submitted using HHR profile, without an exemption in place.	None
Incorrect unmetered load changes I checked a sample of four changes to unmetered load details. One was handled correctly, and three ICPs had incorrect submission information in the month of the change: • 0000033569CPD1D expected submission for June 2023 was (11 days x 0.24) + (20 days x 0.26) = 7.58, but 7.8 was submitted (0.26 x 30 days). • 0000150372TR5FD expected submission for April 2023 was (20 days x 0.48) + (10 days x 0) = 9.6, but 14.4 was submitted (0.48 x 30 days). • 0001162165MLEE7 expected submission for June 2023 was (11 days x 0.259) + (20 days x 0.24) = 7.409, but 7.2 was submitted (0.24 x 30 days).	Low

[39] No I flow volumes are expected for ICPs 0000052074WE6C4, 0000038898WE375, 0000166840CKBC7, 1000530812PC615, 1000015863BP8C3, 0006611199ML99C and 0301412022LCBBA. I flow volumes are expected for ICPs 0000019116TR259, 1001142826LCE6A, 1002167046LC4B1, 1002175744UNA83 and 0329748033LCC12.

I re-checked the previous audit submission accuracy non-compliances which are not already covered in the table of inaccuracies above. The following issues were not resolved in time for revision 14 submissions:

- **incorrect NSP for two ICPs for 19 October 2021 to 20 October 2021**: HHR submission occurred against the incorrect NSP HAY0331 from 19 October 2021 to 20 October 2021 for ICPs 0000157116CKBC5 and 0000163532CKC37,
- **partial stopped meter correction for ICP 1099569118CN9D3:** ICP 1099569118CN9D3's meter has been stopped since 2019 but the correction was only conducted for the current customer, which was a five-month period back from 21 March 2022; there was at least 3,600 kWh not accounted for, and

I checked a sample of ARC HHR interval data which was provided by Bluecurrent and found it had three decimal places recorded.

TRUS

Some submission data was found to be inaccurate and was not corrected at the next available opportunity for submission.

Issue	Estimated submission impact[40]
Incorrect status dates GTV apportions all consumption in a read-to-read period to the "active" days of the read-to-read period. If status dates are incorrect or reads and status dates do not align volumes may not be allocated to the correct days. Most ICPs with incorrect status dates were corrected as soon as they were detected during the audit and revised submission data will be washed up. • nine new connections had incorrect "active" status dates and were corrected during the audit, • two ICPs appeared to have late meter certifications because the "active" status date was incorrectly recorded; they both had their status dates corrected during the audit, • one ICP had a reconnection incorrectly processed and was corrected during the audit, • four out of a sample of 38 "inactive" status updates had an incorrect event date and/or status reason applied; three have been corrected and ICP 0000206556UNF7C requires the network to reverse a decommissioning event before the incorrect date of 3 February 2022 can be replaced with an "active" status event, • ICP 0117471631LCA54 has no meter and should have had 1,9 "inactive - electrically disconnected due to meter disconnected" status applied since 25 July 2023 but remains "active", and • ICP 0000769092WAE1B had the 1,7 "electrically disconnected remotely by AMI meter" status reason code applied when there was no AMI meter; the disconnection event was processed in error and the registry has been corrected.	Low
Backdated status and trader updates Where a status or trader update affecting submission is backdated more than 14 months, a manual correction needs to be processed to capture the consumption within the 14-month submission window. TRUS has an adjustment process to add submission volumes within the 14-	Low

[40] Minor (less than ±500 kWh), low (less than ±10,000 kWh), medium (less than ±50,000 kWh) or high (more than ±100,000 kWh).

Issue	Estimated submission impact[40]
month window, but staff responsible for these adjustments are not always made aware that a correction is required. I identified the following corrections which were expected to be processed but were not: • backdated switch ins for ICPs 0001569560CN5DE (event date 1 June 2022 backdated 315 business days) and 0000050742WECF1 (event date 1 December 2021 backdated 282 business days), and • backdated reconnections for ICPs 0000650408TU00B (23 March 2020 backdated 842 business days), 0000865142TE185 (15 July 2021 backdated 462 business days), 0000011235HR5BD (1 August 2021 backdated 438 business days), 0007102536RND83 (27 September 2021 backdated 344 business days), 0000397389TPB27 (8 June 2022 backdated 321 business days), 0000043766HR444 (6 May 2022 backdated 290 business days), and 0000940742TU5A7 (1 March 2022 backdated 274 business days). Consumption which occurred more than 14 months before the processing date was omitted from submission data.	
Agreed switch reading manually entered against an incorrect date The agreed switch event read for 1002112432LC17E RR-200385 (6563) was recorded against 20 July 2023 (the new trader's first day of supply) instead of 19 July 2024 (TRUS last day of supply), resulting in under submission of 14 kWh. TRUS intends to correct the reading date.	Low
Invalid forward estimate for July 2023 revision 3 I checked all NSPs which had less than 80% historic estimate in the July 2023 revision 3, and found invalid forward estimate was reported when actual reads where available. The following NSPs were affected: • SMRT-TQW0011 (1,997 kWh), • TENC-KWG0011 (0000003009KPEE3 2,244 kWh), • TENC-BSC0011 (1,963 kWh), • TENC-ROM0011 (4,913 kWh), • TENC-ESC0011 (6,074 kWh), • TENC-TPS0011 (19,791 kWh), and • MPOW-SBK0661 (713,835 kWh). The issue was resolved automatically before revision 7 and is under investigation by TRUS.	Low because forward estimate was provided
Inaccurate ICP days A small number of ICP days errors were caused by incorrect NSPs or switch read dates. Corrections have been made and revised submission data washed up, and improved validation and training has been implemented to prevent recurrence.	Low
Incorrect NSPs in HHR submission Three ICPs did not have the correct NSP recorded in GTV for the whole of October 2023 resulting in submission against an incorrect NSP. Corrections have been made and revised submission data washed up, and improved validation and training has been implemented to prevent recurrence.	Low
Unreported generation consumption Nine ICPs with distributed generation do not have their I flows measured and submitted:	Low

Issue	Estimated submission impact[40]
• ICPs 0000158209UN0A8 and 0000933391TU07D had I flow meter installations turned down by the customer and have not yet been added to the gifting register, • ICPs 0000054691HRC1C and 0001132003WA6F3 have I flow meter installations in progress, and • five ICPs which switched from MEEN to TRUS[41] identified as requiring I flow metering during the previous audit still do not have generation metering installed and are not recorded on the reconciliation manager's gifting register. ICP 0000901755WW6EB had I flow volumes reported in submission information for periods prior to the generation profile being recorded on the registry. This ICP is still under investigation.	
Invalid profiles Four ICPs without HHR or AMI metering or a certified control device had T07 and/or T23 profiles assigned and were corrected during the audit.	Low
NHH boundary readings are not entered where ICPs are upgraded and downgraded I checked five upgrades[42], five downgrades[43] and found all had a reading on the day of the profile change or the day before, but for the upgrades there was no reading on the NHH register on the last day of submission as NHH, and for the downgrades there was no NHH register reading on the first day of submission as NHH. This means that all the changes were missing a NHH boundary reading. Historic estimate for NHH submissions requires boundary readings to be estimated at the start and end of NHH submission periods. If the boundary readings are not present, historic estimate cannot be calculated for the whole period. A recommendation to record boundary readings is made in **section 12.13.**	Low
Missed corrections for bridged meters Five ICPs which switched out before being un-bridged or before a correction was processed did not have consumption estimated during the bridged period. One ICP later had its switch withdrawn. The ICPs are listed in **section 2.17**. ICP 0007132718RN866 did not have a bridged meter correction processed because the new meter details were not received before the ICP switched out.	Low
Rounding of AMI readings in GTV AMI meter readings are rounded to zero decimal places in GTV but are expected to remain unrounded for use in submission calculations.	Low
Unreported vacant consumption Two vacant ICPs 0781871145LCEF4 and 0001423099UNB7B had AMI readings received, but these were temporarily recorded in the "unbilled" validation bucket until they were approved and moved to the ICP. This typically involves investigation and determining whether the ICP should be disconnected. Review of submission data showed that "vacant" consumption is reported once	Low

[41] 0005003215TU75A, 0879163805LC318, 0000048274WEA62, 0007130338RNA72 and 0000045433CP1F9.
[42] 4701004000CHDF0 21 November 2023, 8000000092SNFDE 23 November 2023, 8000000256SN33C 23 November 2023, 8000000280SNFF1 7 December 2023, 8000000309SNDEE 21 November 2023.
[43] 0000000025TR424 25 November 2023, 0000000062TRB4B 2 December 2023, 0000000122TR0EA 2 December 2023, 0000000257CP5B0 2 December 2023, 0000000676CP8A1 24 November 2023.

Issue	Estimated submission impact[40]
the "vacant" consumption exception is approved, but these two ICPs did not have any AMI readings loaded in the 12 months ending October 2023. Consumption in the unbilled validation bucket is not submitted until it is validated, and this usually occurs in time for revision submission to occur.	

I re-checked the previous audit submission accuracy non-compliances which are not already covered in the table of inaccuracies above. The following issues were not resolved in time for revision 14 submissions:

- **incorrect unmetered load submission for 0000542701TUA4C**: ICP 0000542701TUA4C has not been corrected resulting in under submission of 58.9 kWh,
- **bridged meter corrections were not processed for three ICPs:** corrections have not been processed for 0435675230LC66D, 0043223686PCC51 and 0000196942UN3A7 because no historical consumption was available to calculate an accurate correction, or the ICP had switched out,
- **inactive consumption corrections were not processed for two ICPs:** 1002069373LC1A9 which has "inactive" consumption for the day before the switch loss on 20 October 2022 has not been reported and no RR has been processed, and 0000865145NV098 is still recorded as "inactive" from 20 August 2022 but should be "inactive" from 20 September 2022, and
- **incorrect status for ICP 0000574440NRF1C from 15 July 2022 to 18 August 2022:** the previous audit found ICP 0000574440NRF1C was electrically connected on 15 July 2022, but the contractor installed an NGCM meter instead of a MTRX meter, NGCM refused to load the meter to the registry as this was not hung under their test house and as metering is loaded to Gentrack from the registry and the meter was never loaded to the registry, the first "active" date was for the MTRX meter on 19 August 2022 - the volume for the period from 15 July 2022 to 18 August 2022 has not been reconciled and this ICP is still under investigation.

The previous audit found that the September 2021 AV140 aggregates file was not corrected to match the AV090 HHR volumes when the volumes were corrected to adjust for daylight savings. This issue is not re-raised because revision 14 has passed, and there is no impact on the allocation results because the AV140 file is not used to calculate allocations.

TRUS confirmed that time of day profiles have been phased out, and the time synchronisation reports are manually reviewed.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.7 With: Clause 15.12 From: 01-Apr-23	**MEEN** Some submission data was inaccurate and was not corrected at the next available opportunity. Potential impact: Medium Actual impact: Unknown Audit history: Multiple times Controls: Moderate

To: 29-Apr-24	Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are moderate overall, the system processes to generate submission data are generally accurate, and the issues are mainly caused by data accuracy issues for individual ICPs or isolated scenarios. Mercury is working to investigate issues and improve controls, including improving processes to identify and correct data accuracy errors so that revised submission data can be provided. The impact is medium overall based on the volume differences identified and that some corrections have not yet been completed.

Actions taken to resolve the issue	**Completion date**	**Remedial action status**
We have been investigating and working through the issues that are the root cause of the submission inaccuracies, where possible correcting within the 14 month revision cycle so that the volumes will be washed up in our revision submissions.	June 2024	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We will continue to focus on improving our processes, specific preventative actions as noted throughout the report, which will impact our submission accuracy positively.	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

AV080 14-month revisions were reviewed to identify any forward estimate still existing. All NSPs with forward estimate remaining on any of the revisions were checked to determine the reasons for the forward estimate.

Audit commentary

MEEN

SAS has an automated permanent estimate process which runs each night. If there are no validated actual readings in the last six months, but there is a validated actual reading in the last 12 months, any estimated readings will be updated to permanent estimates. Only changing readings for ICPs where an actual reading is received in the last 12 months helps to ensure that reads are only changed where the reasonable endeavours requirement to gain readings is met.

Review of the 14-month revisions showed that some forward estimate remained:

Month	Forward estimate remaining at revision 14
Jan-2022	-
Feb-2022	364.37
Mar-2022	-
Apr-2022	-
May-2022	2,179.31
Jun-2022	-
Jul-2022	-
Aug-2022	-

I reviewed all NSPs with forward estimate remaining at revision 14 and found that the affected ICPs did not have permanent estimates entered because there were no actual reads within the past year, and MEEN could not confirm that the reasonable endeavours requirements were met. Forward estimate was present in revision 14 but not revision seven because the invoices were reversed, reads corrected and rebilled after revision seven due to over estimation. This process removed permanent estimate readings which had previously been entered.

TRUS

Review of the 14-month revisions for January 2022 to August 2022 showed no forward estimate remained.

TRUS runs a query to identify any ICPs with forward estimate remaining at revision 14. Each ICP is reviewed to determine whether any readings are available which can be loaded into GTV, otherwise the oldest estimated read causing forward estimate is changed to a permanent estimate. TRUS does not check whether they have met the reasonable endeavours requirement to obtain an actual reading before changing the read type to permanent estimate.

The previous audit recommended that TRUS review ICPs to determine whether the reasonable endeavours requirements were met before changing the read type, and also change a more recent read to a permanent estimate. Neither recommendation was adopted because:

- permanent estimates are entered as revision 14 occurs, and there is no opportunity for further action to be taken to meet the reasonable endeavours requirements, and because submission data is only washed up for the 14-month period, failure to enter a permanent estimate could result in submission data beyond this period changing when an actual reading is received, reducing submission accuracy, and
- TRUS was concerned that if they receive actual reads for a previously unread ICP, a late permanent estimate will result in the historic estimate calculated between the actual reading

and permanent estimate being spread over a shorter period than it should be, decreasing submission accuracy.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.8 With: Clause 4 Schedule 15.2 From: 01-Feb-22 To: 29-Apr-24	**MEEN** Some estimates were not replaced by revision 14. **TRUS** TRUS did not ensure that it used reasonable endeavours to attempt to obtain actual readings before changing estimates to permanent estimates. Potential impact: Medium Actual impact: Medium Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are strong. For MEEN here are processes to attain readings and enter permanent estimates, but not all ICPs have permanent estimates entered by revision 14. A small number of exceptions were identified. For TRUS, the non-compliance is technical. There are sound estimation processes, which will help to ensure accurate estimates, so the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
TRUS & MEEN: We believe the current processes we have in place allow for the most accurate submission in most cases. There will always be exception cases where actual reads aren't able to be obtained.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TRUS: There is work in progress to implement a more robust process for checking that Best Endeavours have been taken before changing estimates to permanent estimates for R14.	August 2024	

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

Code reference

Clause 2 Schedule 15.3

Code related audit information

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

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

Audit observation

Aggregation and content of reconciliation submissions was reviewed, and the registry lists were reviewed.

Audit observation

MEEN

Compliance with this clause was assessed:

- all "active" ICPs with meter category 3 or higher have HHR profile and submission type,
- unmetered load submissions were checked in **section 3.7** and **12.2,**
- profiles requiring certified load control devices are not used,
- no loss or compensation arrangements are required, and
- aggregation of the AV080, AV110, AV130, AV090 and AV140 submissions are covered in **sections 13.2, 11.2, 12.6** and **11.4** respectively.

The previous audit found two ICPs believed to have incorrect average daily kWh. ICP 0007301973NVCDF has been corrected and revised submission data will be washed up. ICP 0000540450TE6E7 has been corrected in SAP but the registry is to be updated to 3.24 kWh per day.

Other submission accuracy issues are discussed in **section 12.7**.

TRUS

Compliance with this clause was assessed:

- all "active" ICPs with meter category 3 or higher have HHR profile and submission type,
- unmetered load submissions were checked in **section 3.7** and **12.2,**
- all ICPs with profiles requiring certified control devices had their profiles validly assigned except four ICPs without HHR or AMI metering or a certified control device had T07 and/or T23 profiles assigned; they were corrected during the audit,
- no loss or compensation arrangements are required, and
- aggregation of the AV080, AV110, AV090 and AV140 submissions are covered in **sections 13.2, 11.2** and **11.4** respectively.

The previous audit found that ICPs 0005741246RN2BC and 0005732298RN43C had their unmetered load excluded from submission because the UML code was not recorded in the registry, and I confirmed that this has been corrected.

I rechecked unmetered load change errors found during the last audit. Two ICPs had corrections processed and ICP 0000542701TUA4C has not been corrected resulting in under submission of 58.9 kWh. Revision 14 has now passed.

Other submission accuracy issues are discussed in **section 12.7**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.9 With: Clause 2 Schedule 15.3 From: 01-Jan-22 To: 31-Mar-23	**TRUS** Four ICPs without HHR or AMI metering or a certified control device had T07 and/or T23 profiles assigned. They were corrected during the audit. 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 strong, and the impact is low. Discrepancy reports have been updated to include this scenario, and the profiles have been corrected. Revised submission data will be washed up with the correct profile.

Actions taken to resolve the issue	Completion date	Remedial action status
The four ICPs with incorrect profiles assigned have now been corrected and will be reflected in revision submissions.	Completed	Cleared

Preventative actions taken to ensure no further issues will occur	Completion date	
Discrepancy reporting has been updated to identify these errors to allow for timely corrections.	Completed	

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

A sample of AV080 submissions were reviewed to confirm that historic estimates are included and identified. Permanence of meter readings is reviewed in **section 12.8**. The methodology to create forward estimates is reviewed in **section 12.12**.

Audit commentary

MEEN

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

TRUS

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

Audit outcome

Compliant

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

Code reference

Clauses 4 and 5 Schedule 15.3

Code related audit information

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

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

a flat shape basis using the relevant number of days that are within the consumption period and within the period covered by kWh_{Px}.

Audit observation

Mercury provided examples of historic estimate calculations, which were reviewed. The check of calculations included confirming that readings and Seasonal Adjusted Daily Shape Values (SADSV) were applied correctly. The table below shows that some scenarios tested are non-compliant.

Audit commentary

MEEN

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

As discussed in **section 12.8**, SAS has an automated permanent estimate process which runs each night. If there are no validated actual readings in the last six months, but there is a validated actual reading in the last 12 months, any estimated readings will be updated to permanent estimates. Only changing readings for ICPs where an actual reading is received in the last 12 months helps to ensure that reads are only changed where the reasonable endeavours requirement to gain readings is met.

The table below shows that all scenarios are calculating as expected and correct SASV (are applied. The historic estimate process spreads consumption for the read-to-read period across the "active" days within that period.

Test	Scenario	Test expectation	Result
a	ICP becomes "active" part way through a month	Consumption is only calculated for the "active" portion of the month.	Compliant
b	ICP becomes "inactive" part way through a month.	Consumption is only calculated for the "active" portion of the month.	Compliant
c	ICP become "inactive" then "active" again within a month.	Consumption is only calculated for the "active" portion of the month.	Compliant
d	ICP switches in part way through a month on an estimated switch reading	Consumption is calculated to include the 1st day of responsibility.	Compliant
e	ICP switches out part way through a month on an estimated switch reading	Consumption is calculated to include the last day of responsibility.	Compliant
f	ICP switches out then back in within a month	Consumption is calculated for each day of responsibility.	Compliant
g	Continuous ICP with a read during the month	Consumption is calculated assuming the readings are valid until the end of the day.	Compliant
h	Continuous ICP without a read during the month	Consumption is calculated assuming the readings are valid until the end of the day.	Compliant
i	Rollover Reads	Consumption is calculated correctly in the instance of meter rollovers.	Compliant

Test	Scenario	Test expectation	Result
j	Unmetered load for a full month	Consumption is calculating based on daily unmetered kWh for full month.	Compliant
k	Unmetered load for a part month	Consumption is calculating based on daily unmetered kWh for "active" days of the month.	Compliant
l	Network/GXP/Connection (POC) alters partway through a month.	Consumption is separated and calculated for the separate portions of where it is to be reconciled to.	Compliant
m	ICP with a customer read during the month	Customer reads are not used to calculate historic estimate unless appropriately validated.	Compliant - the customer read was validated against two actual validated readings from another source
N	ICP with a photo read during the month	Photo reads are not used to calculate historic estimate.	No instances found
o	ICP has a meter with a multiplier greater than 1	The multiplier is applied correctly.	Compliant

TRUS

The process for managing SASV (seasonal adjusted shape values) was examined. The files are manually retrieved from the SFTP server and placed into an "in" folder so that GTV can upload the files. The interface file manager – file manager transaction history list is reviewed in GTV to confirm that the files have been loaded correctly.

The table below shows that all scenarios are calculating as expected and correct SASV are applied. The historic estimate process spreads consumption for the read-to-read period across the "active" days within that period.

Test	Scenario	Test expectation	Result
a	ICP becomes "active" part way through a month	Consumption is only calculated for the "active" portion of the month.	Compliant
b	ICP becomes "inactive" part way through a month.	Consumption is only calculated for the "active" portion of the month.	Compliant
c	ICP become "inactive" then "active" again within a month.	Consumption is only calculated for the "active" portion of the month.	Compliant
d	ICP switches in part way through a month on an estimated switch reading	Consumption is calculated to include the 1st day of responsibility.	Compliant
e	ICP switches out part way through a month on an estimated switch reading	Consumption is calculated to include the last day of responsibility.	Compliant
f	ICP switches out then back in within a month	Consumption is calculated for each day of responsibility.	Compliant

Test	Scenario	Test expectation	Result
g	Continuous ICP with a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Compliant
h	Continuous ICP without a read during the month	Consumption is calculated assuming the readings are valid until the end of the day	Compliant
i	Rollover Reads	Consumption is calculated correctly in the instance of meter rollovers.	Compliant
j	Unmetered load for a full month	Consumption is calculating based on daily unmetered kWh for full month.	Compliant
k	Unmetered load for a part month	Consumption is calculating based on daily unmetered kWh for "active" days of the month.	Compliant
l	Network/GXP/Connection (POC) alters partway through a month.	Consumption is separated and calculated for the separate portions of where it is to be reconciled to.	Compliant
m	ICP with a customer read during the month	Customer reads are not used to calculate historic estimate, unless they have been validated against a set of validated readings from another source	Compliant, all customer reads are considered estimates.
n	ICP with a photo read during the month	Photo reads are not used to calculate historic estimate, unless they have been validated against a set of validated readings from another source	Compliant, all photo reads are considered estimates.
o	ICP has a meter with a multiplier greater than 1	The multiplier is applied correctly	Compliant

Audit outcome

Compliant

12.12. Forward estimate process (Clause 6 Schedule 15.3)

Code reference

Clause 6 Schedule 15.3

Code related audit information

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

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

Audit observation

The process to create forward estimates was reviewed.

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

Audit commentary

MEEN

Mercury's forward estimates are based on either:

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

Mercury's forward estimate process also includes a factoring process, which involves the use of the average of the previous two-year's profile shape. This ensures that submission information is not understated or overstated during shoulder months. However, this factoring process is reliant on the seasonal adjustment daily shape values being consistent year on year and the mass transition of ICPs with AMI meters from NHH to HHR submission has meant these SADSV files are no longer consistent as the population of ICPs these files relate to is no longer the same.

The accuracy of the initial submission, in comparison to each subsequent revision is required to be within 15%. The table below shows the number of balancing areas where this target was not met.

Quantity of balancing areas with differences over 15%

Month	Over ±15%				Over ±15% and ±100,000 kWh				Total Balancing Areas
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14	
Jan-22	47	60	63	65	-	-	-	-	348
Feb-22	45	62	70	71	3	3	3	3	351
Mar-22	36	44	52	53	-	-	-	-	351
Apr-22	53	56	58	57	-	-	-	-	351
May-22	45	52	54	57	1	-	-	-	356
Jun-22	44	56	58	57	1	1	1	1	359
Jul-22	43	51	51	56	1	1	1	1	367
Aug-22	46	54	54		1	-	-		370
Sep-22	48	55	59		-	-	-		374
Oct-22	40	49	51		-	-	-		379
Nov-22	40	44	51		-	-	-		382
Dec-22	52	55	55		1	2	2		385

Month	Over ±15%				Over ±15% and ±100,000 kWh				Total Balancing Areas
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14	
Jan-23	45	47	51		-	-	-		385
Feb-23	42	41	43		1	-	-		387
Mar-23	36	50	55		-	-	1		386
Apr-23	48	54	62		-	-	-		387
May-23	48	49			-	-			387
Jun-23	46	43			-	-			387
Jul-23	50	60			-	1			389
Aug-23	65				-				389
Sep-23	69				1				389
Oct-23	50				1				386

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

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
Jan-22	-1.63%	-1.29%	-1.20%	-1.14%	1,556,204	1,227,542	1,138,266	1,079,574
Feb-22	-1.58%	-1.45%	-1.30%	-1.23%	1,404,929	1,281,819	1,146,315	1,085,573
Mar-22	-1.04%	-0.56%	-0.44%	-0.39%	961,514	511,260	406,511	356,065
Apr-22	-0.79%	-0.47%	-0.27%	-0.19%	719,993	429,736	246,602	170,075
May-22	0.09%	0.20%	0.57%	0.59%	-96,340	-218,984	-614,685	-639,642
Jun-22	-1.99%	-1.68%	-1.15%	-1.12%	2,460,612	2,064,732	1,408,797	1,374,503
Jul-22	-0.56%	-0.30%	0.08%	0.06%	750,841	403,844	-106,806	-77,764
Aug-22	0.54%	1.12%	1.39%	1.10%	-699,511	-1,437,071	-1,788,431	-1,417,567
Sep-22	0.52%	1.18%	1.48%		-590,479	-1,344,791	-1,682,898	
Oct-22	-0.58%	-0.53%	-0.29%		586,610	542,290	298,706	
Nov-22	0.57%	-0.18%	-0.03%		-506,110	157,759	28,545	
Dec-22	1.86%	1.06%	0.85%		-1,638,403	-938,977	-753,861	

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
Jan-23	0.34%	0.47%	0.47%		-8	-11	-11	
Feb-23	1.09%	0.33%	-0.31%		-890,906	-276,743	254,201	
Mar-23	-0.66%	-1.21%	-1.75%		643,170	1,181,016	1,715,832	
Apr-23	-1.35%	-2.29%	-2.73%		1,339,661	2,293,757	2,751,827	
May-23	-1.56%	4.15%			1,935,750	-4,857,503		
Jun-23	-1.42%	-2.06%			1,901,273	2,776,663		
Jul-23	-1.83%	-1.88%			2,658,720	2,740,126		
Aug-23	-4.42%				6,238,902			
Sep-23	1.81%				-1,980,596			
Oct-23	-9.41%				5,445,388			

I checked all differences over the thresholds after August 2022. The differences were caused by reads replacing estimates at NSPs with a high proportion of seasonal load, or changes in profile shapes.

TRUS

The TRUS forward estimate methodology is based on the following:

- consumption from the same period one year earlier, scaled up using the previous months volume and then adjusted by profile shape data,
- if a read was not conducted in the previous year, then the last read period will be used, and
- where no reading history is available then a daily average figure is used from the CS file for a switch in or manually entered for new connections.

Where profile shape data is not available then the average of the read-to-read period is used.

The accuracy of the initial submission, in comparison to each subsequent revision is required to be within 15%. The table below shows the number of balancing areas where this target was not met.

Quantity of balancing areas with differences over 15%

Month	Over ±15%				Over ±15% and ±100,000 kWh				Total Balancing Areas
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14	
Jan-22	11	20	21	22	-	2	2	2	199
Feb-22	16	25	28	28	3	2	2	2	200
Mar-22	4	18	17	18	-	-	-	-	200
Apr-22	9	14	16	18	-	-	-	-	202
May-22	13	19	22	23	-	-	-	-	204
Jun-22	7	14	13	16	-	1	1	1	204
Jul-22	11	12	16	18	-	-	-	-	208
Aug-22	14	24	27	27	-	-	-	-	217
Sep-22	16	21	23		-	-	-		222
Oct-22	14	18	21		-	-	-		221
Nov-22	8	21	21		-	-	-		227
Dec-22	17	23	25		-	-	-		231

Month	Over ±15%				Over ±15% and ±100,000 kWh				Total Balancing Areas
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14	
Jan-23	27	34	34		-	-	-		234
Feb-23	19	22	24		-	-	-		233
Mar-23	7	16	18		-	1	1		232
Apr-23	11	15	18		-	-	-		237
May-23	11	19			-	-			232
Jun-23	10	19			-	-			234
Jul-23	18	33			-	-			243
Aug-23	22				-				253
Sep-23	40				-				274
Oct-23	44				1				313

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

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
Jan-22	-0.54%	-0.70%	-0.83%	-0.85%	690,025	888,429	1,055,051	1,086,039
Feb-22	0.68%	0.63%	0.61%	0.60%	-789,640	-731,930	-701,462	-697,581
Mar-22	-0.20%	-0.66%	-0.61%	-0.61%	250,409	841,251	778,262	775,851
Apr-22	-0.16%	-0.63%	-0.64%	-0.65%	211,695	825,604	833,427	843,404
May-22	-0.08%	-1.36%	-1.43%	-1.49%	129,911	2,149,610	2,260,423	2,361,496
Jun-22	-2.56%	-3.49%	-3.56%	-3.59%	4,645,797	6,405,847	6,527,381	6,580,751
Jul-22	0.49%	-0.11%	-0.20%	-0.20%	-973,488	227,512	399,478	408,567
Aug-22	-0.70%	-0.74%	-0.77%	-0.83%	1,314,557	1,398,440	1,464,829	1,579,277
Sep-22	0.08%	0.41%	0.44%		-138,913	-687,821	-736,643	
Oct-22	-0.25%	0.14%	0.18%		383,642	-216,073	-268,736	
Nov-22	0.74%	0.62%	0.90%		-943,628	-792,317	-1,149,160	
Dec-22	0.07%	0.00%	0.06%		-96,564	2,281	-81,488	

Month	Variation				Volume impact			
	Revision 1	Revision 3	Revision 7	Revision 14	Revision 1	Revision 3	Revision 7	Revision 14
Jan-23	-0.22%	-0.31%	-0.29%		283,867	403,183	377,893	
Feb-23	-1.12%	-1.44%	-1.44%		1,318,869	1,698,541	1,699,810	
Mar-23	-1.25%	-1.91%	-1.95%		1,646,096	2,521,506	2,572,126	
Apr-23	-1.46%	-2.03%	-2.02%		1,991,905	2,785,886	2,778,225	
May-23	-0.86%	-2.10%			1,417,985	3,502,324		
Jun-23	-0.32%	-0.98%			596,323	1,860,741		
Jul-23	-2.09%	-2.66%			4,298,692	5,489,376		
Aug-23	-3.77%				8,272,301			
Sep-23	2.15%				-3,850,508			
Oct-23	6.23%				-13,983,833			

I checked all differences over the threshold since June 2022 and found they were caused by read renegotiations where incorrect switch event reads were applied, as well as reads replacing estimates at NSPs with a high proportion of seasonal load.

NHH settled AMI ICPs have a scheduled read loaded into GTV each month, which is used for billing and to calculate historic estimate. There are 20 read sequences which correspond to first 20 business days in each month. For existing TRUS NHH settled AMI ICPs on read sequences during the first 15 business days of the month an end of month reading is also imported for use in the billing and reconciliation process. ICPs read on business days 16-20 are excluded from this process because their scheduled reads are close to the end of the month. ICPs which have migrated from MEEN are currently excluded from the end of month import read process but are expected to be added by the end of June 2024.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.12 With: Clause 6 Schedule 15.3 From: 01-Jan-22 To: 31-Oct-23	**MEEN** The accuracy threshold was not met for all months and revisions. **TRUS** The accuracy threshold was not met for all months and revisions. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as strong, as they are sufficient to ensure data is within an acceptable accuracy. The audit risk rating is low as the Initial data is replaced with revised data and washed up.

Actions taken to resolve the issue	Completion date	Remedial action status
TRUS & MEEN: Our forward estimation processes are strong and allow for a good level of accuracy in most cases.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Currently for our TRUS NHH AMI settled ICPs, we have a process in place to import an EOM meter read (in addition to the scheduled monthly read) for our first 15 (out of 20) meter read sequences. The EOM reads feed into submission processes to be used for Historic Estimate calculation. The recently migrated ICPs from MEEN are not currently included in the EOM import process but this work is in progress,	June 2024	

expected to be in place within the next month. This will increase our historic estimates and improve submission accuracy. We are implementing an update to the end of month reads process from end of May, this will import all end of month reads for all consumers who are billed within the first 15 business days of the month - the update is to include all migrated sites in this process. This should greatly increase the accuracy of the estimation and will also reduce the portion of historic estimation.		

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

Code reference

Clause 7 Schedule 15.3

Code related audit information

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

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

Audit observation

The event detail report was reviewed to identify ICPs with profile changes. A sample of ICPs with profile changes were reviewed to confirm that there was an actual reading on the day of the profile change.

Audit commentary

MEEN

I reviewed a sample of 15 profile changes and confirmed the profiles were changed on actual readings.

I rechecked the previous audit issue raised because ICP 1000584371PCEA2 changed profile from RPS to HHR on 19 April 2022 on an estimated reading. Upon review I found this was an estimated closing reading which is automatically treated as a permanent estimate, and the profile change is compliant.

TRUS

Changes to metering information including settlement indicators are automatically loaded into GTV based on registry and/or work completion paperwork. Changes are sent to a validation bucket where information is missing, and the records are reviewed and updated. Generation profiles are automatically applied in GTV based on the meter details. If the settlement indicator on an I flow register is Y, a generation profile will be applied from that event date. I checked five additions of generation profiles and found all had a reading on the day of the profile change.

Because TRUS only supplies meter category one and two ICPs, HHR submission type is not mandatory for any ICPs upgrades and downgrades are normally independent of meter changes. Where an upgrade or downgrade does not coincide with a meter change, a trader submission type update is made in GTV and then transferred to the registry, and there is no change to the meter static data. The change is made effective at midnight, and submission data aligns with the registry profile change date.

I checked five upgrades[44], five downgrades[45] and found all had a reading on the day of the profile change or the day before, but for the upgrades there was no reading on the NHH register on the last day of submission as NHH, and for the downgrades there was no NHH register reading on the first day of submission as NHH. This means that all the changes were missing a NHH boundary reading. Historic estimate for NHH submissions requires boundary readings to be estimated at the start and end of NHH submission periods. If the boundary readings are not present, historic estimate cannot be calculated for the whole period.

The profile changes to add generation profiles all coincided with new meters being installed and boundary readings were present.

Recommendation	Description	Audited party comment	Remedial action
Apply boundary readings for NHH submission start and end dates	**TRUS** Historic estimate for NHH submissions requires boundary readings to be estimated at the start and end of NHH submission periods. If actual readings are not available, permanent estimate boundary readings should be applied.	We have raised a ticket with our IT teams to review the profiling processes to ensure boundary reads are always applied for profile changes.	Investigating

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.13 With: Clause 7 Schedule 15.3 From: 21-Nov-23 To: 07-Dec-23	**TRUS** The five upgrades checked did not have a NHH reading recorded on the last day with NHH submission. The five downgrades checked did not have NHH reading recorded on the first day with NHH submission. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are moderate as they are not sufficient to ensure that NHH boundary readings are entered where profile changes occur. The impact on submission is

[44] 4701004000CHDF0 21 November 2023, 8000000092SNFDE 23 November 2023, 8000000256SN33C 23 November 2023, 8000000280SNFF1 7 December 2023, 8000000309SNDEE 21 November 2023.
[45] 0000000025TR424 25 November 2023, 0000000062TRB4B 2 December 2023, 0000000122TR0EA 2 December 2023, 0000000257CP5B0 2 December 2023, 0000000676CP8A1 24 November 2023.

	expected to be low, as forward estimate will be calculated where boundary readings are not present.

Actions taken to resolve the issue	Completion date	Remedial action status
We will look at entering the boundary reads for revision submissions.	June 2024	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We have raised a ticket with our IT teams to review the profiling processes to ensure boundary reads are always applied for profile changes.	December 2024	

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 NHH volumes is discussed in **section 12.3**, aggregation of HHR volumes is discussed in **section 11.4** and NSP volumes are discussed in **section 12.6**.

Audit commentary

Submission information is provided to the reconciliation manager in the appropriate format and correctly aggregated.

Where underlying data is inaccurate, such as incorrect NSPs or profiles, the data provided may not be aggregated correctly. Compliance is recorded in this section because the aggregation process is correct, and non-compliance is **recorded in 12.7** where incorrect data has resulted in incorrect aggregation factors being applied.

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 5, the second digit is rounded up, and

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

Audit observation

I reviewed the rounding of data on the AV080, AV090, AV130 and AV140 and reports as part of the aggregation checks.

Audit commentary

Submission information for MEEN and TRUS 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)I).*

Audit observation

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

I reviewed a sample of AV080 and GR170 reports to determine whether historic estimate requirements were met.

Audit commentary

MEEN

The quantity of historical estimates is contained in the submission file and is not a separate report. The proportion of HE in the revision files was checked. The table below shows that compliance has not been achieved in all instances due to read attainment issues.

The quantity of historical estimates is contained in the submission file and is not a separate report. I checked the proportion of historic estimates using the GR170 report. The thresholds were not met for all NSPs for the revision 3 submissions, and two revision 14 submissions.

I checked all NSPs which had less than 80% historic estimate in the July 2023 revision 3, and found it was caused by being unable to obtain an actual reading during the period.

I reviewed all NSPs with forward estimate remaining at revision 14 and found that the affected ICPs did not have permanent estimates entered because there were no actual reads within the past year, and MEEN could not confirm that the reasonable endeavours requirements were met. Forward estimate was present in revision 14 but not revision seven because the invoices were reversed, reads corrected and rebilled after revision seven due to over estimation. This process removed permanent estimate readings which had previously been entered.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Jan-2022	390	443	443	443
Feb-2022	412	446	445	446
Mar-2022	413	446	446	446
Apr-2022	417	446	446	446
May-2022	433	450	449	450
Jun-2022	434	452	452	452
Jul-2022	439	460	460	460
Aug-2022	440	463	463	463
Sep-2022	445	467		467
Oct-2022	448	472		472

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Nov-2022	449	475		475
Dec-2022	453	478		478
Jan-2023	455	479		479
Feb-2023	456	480		480
Mar-2023	456	479		479
Apr-2023	459	481		481
May-2023	461			481
Jun-2023	465			481
Jul-2023	470			483

I checked the percentage of historic estimate for each revision using the GR170 report. The thresholds were not met for two revision 14 submissions.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Jan-2022	93.5898%	99.9823%	100.0000%
Feb-2022	94.2045%	99.9958%	99.9996%
Mar-2022	94.8489%	99.9936%	100.0000%
Apr-2022	95.5138%	99.9850%	100.0000%
May-2022	96.0354%	99.9799%	99.9980%
Jun-2022	96.4731%	99.9804%	100.0000%
Jul-2022	96.5365%	99.9833%	100.0000%
Aug-2022	96.2327%	99.9738%	100.0000%
Sep-2022	96.0935%	99.9742%	

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Oct-2022	95.5495%	99.9766%	
Nov-2022	95.2632%	99.9682%	
Dec-2022	95.4095%	99.9696%	
Jan-2023	96.0084%	99.9808%	
Feb-2023	96.1812%	99.9863%	
Mar-2023	96.5452%	99.9779%	
Apr-2023	96.5711%	99.9993%	
May-2023	96.7981%		
Jun-2023	96.8082%		
Jul-2023	97.9012%		

TRUS

The quantity of historical estimates is contained in the submission file and is not a separate report. The proportion of HE in the revision files was checked, and the table below shows that compliance has not been achieved in all instances.

The quantity of historical estimates is contained in the submission file and is not a separate report. I checked the proportion of historic estimates using the GR170 report. The thresholds were not met for all NSPs for the revision 3 and 7 submissions.

I checked all NSPs which had less than 90% historic estimate in the April 2023 revision 7 and all NSPs which had less than 80% historic estimate in the July 2023 revision 3, and found it was caused by:

- being unable to obtain an actual reading during the period due to access issues, or the meter reader providing a forced complete code,
- a meter fault preventing actual readings from being entered, which was resolved in time for later revisions,
- invalid forward estimate being provided in revision three when actual reads where available, which was resolved automatically before revision 7; this is under investigation by TRUS and is recorded as non-compliance in **section 12.7**.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Jan-2022	275	285	289	289
Feb-2022	278	286	290	290
Mar-2022	281	285	290	290
Apr-2022	284	288	293	293
May-2022	284	292	293	293
Jun-2022	286	290	293	293
Jul-2022	291	295	297	297
Aug-2022	300	302	306	306
Sep-2022	308	308		311
Oct-2022	304	305		310
Nov-2022	309	312		316
Dec-2022	311	316		320
Jan-2023	315	319		323
Feb-2023	316	319		322
Mar-2023	314	316		320
Apr-2023	321	324		327
May-2023	314			322
Jun-2023	318			324
Jul-2023	320			333

I checked the percentage of historic estimate for each revision using the GR170 report. The thresholds were met for all submissions checked.

Month	Revision 3 80% Target	Revision 7 90% Target	Revision 14 100% Target
Jan-2022	97.26%	99.68%	100.00%
Feb-2022	98.27%	99.71%	100.00%
Mar-2022	99.07%	99.73%	100.00%
Apr-2022	99.19%	99.73%	100.00%
May-2022	99.08%	99.72%	100.00%
Jun-2022	99.14%	99.74%	100.00%
Jul-2022	99.15%	99.75%	100.00%
Aug-2022	99.17%	99.72%	100.00%
Sep-2022	98.91%	99.75%	
Oct-2022	98.71%	99.75%	
Nov-2022	98.62%	99.75%	
Dec-2022	98.57%	99.73%	
Jan-2023	98.63%	99.74%	
Feb-2023	98.87%	99.75%	
Mar-2023	98.95%	99.75%	
Apr-2023	99.11%	99.77%	
May-2023	99.18%		
Jun-2023	99.21%		
Jul-2023	98.90%		

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 13.3 With: Clause 10 of Schedule 15.3 From: 01-Jan-22 To: 31-Jul-23	**MEEN** Historic estimate thresholds were not met for some revisions. **TRUS** Historic estimate thresholds were not met for some revisions. 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	Overall, the controls are assessed to be moderate because compliance is achieved in most instances, but some improvements can be made. The impact is assessed to be low as good estimation processes are in place where historic estimate cannot be obtained.

Actions taken to resolve the issue	Completion date	Remedial action status
TRUS & MEEN We believe our current processes are strong to ensure a high level of compliance here. There will always be exception cases where reads cannot be obtained for HE however we have good estimation methods in place. TRUS For the invalid FE examples recorded in section 12.7, these have already been resolved for R7 and the root cause is under investigation.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
TRUS We are investigating the root cause of the invalid FE examples to ensure that HE is used in all cases where actual reads are available for calculation. We will be working with our operations teams to highlight sites with no/low read attainment to ensure validated reads or permanent estimates are available for HE calculation. >80% historic estimates for R3 submissions - we have engaged Gentrack to look at the issue with their continuous estimation process and they have advised some possible solutions. We will be instructing them whether we would like a fix/enhancement to the process or a report, either of these options should	Ongoing	

mitigate the issue and greatly reduce the portion of historic estimation.		

14. GLOSSARY

AC breach	AC arrival date is more than five business days after receipt of replace switch reading (RR) where the switch re-read is rejected.
AN breach	AN arrival date is more than three business days after the NT arrival date, where the AN arrives immediately after the NT.
AW breach	AW arrival date is more than five business days after receipt of the NW.
CS breach for transfer switch	CS arrival date is more than three business days after receipt of the NT where the CS arrives immediately after the NT.
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.
NA breach	NW arrival date is more than two calendar months after the CS Actual Transfer Date.
NW breach	NW arrival date is more than three business days after receipt of the NT where the NW arrives immediately after the NT
RR breach	RR arrival date is more than four calendar months from the CS Actual Transfer Date.
SR breach	NW arrival date is more than 10 business days after the initial NW for the same trader requesting the withdrawal. The trader sending the corresponding AW (either accepting or rejecting the withdrawal) only receives a breach on the AW if it is sent more than 5 days after the latest NW as in the original rule.
T2 breach for switch move	CS arrival date is more than five business days after receipt of the NT AND, before delivery of the CS No NW notice has been provided, AND (no AN notice has been provided OR an notice is provided, and the NT Proposed Transfer Date matches the AN expected Transfer Date).
WR breach	An AN or CS arrival date (whichever is applicable, may be one or both) are delivered by the losing Trader more than two business days of the arrival date of the AW rejecting the withdrawal; AND a subsequent NW is not provided before delivery of the AN or CS.

CONCLUSION

The audit identified 46 non-compliances and 23 recommendations are made, and the audit risk rating has decreased from 99 in the previous audit to 85 this audit. This an excellent result given the migration was completed this audit period. The decrease is due to some previous non-compliances being cleared, a reduction in the number and impact of discrepancies, and that some controls have improved post migration resulting in better current control ratings when assessing non-compliance.

For MEEN I found that following the migration to TRUS, exceptions are able to be more closely managed due to a decrease in ICP numbers.

For TRUS, I found that the increase in ICP numbers due to the migration has resulted in an increase in exceptions (some of which were inherited from MEEN). TRUS is striving to resolve these, but in the meantime some processes to identify new exceptions such as stopped meters are being completed less frequently. I have recommended this be improved.

In general, both codes have made good progress with resolving exceptions post migration and are working to improve and streamline their processes to increase compliance.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The table below recommends that the next audit be completed in three months. I have considered this in conjunction with Mercury's responses which indicate that they plan to take action to prevent future non-compliance, and I recommend that the next audit is undertaken in a minimum of 13 months on 28 June 2025.

PARTICIPANT RESPONSE

Thank you to the auditors, Tara and Brett, for all of their hard work and support during the audit.

The Mercury/Trustpower integration and associated migration of MEEN ICPs to the TRUS code was a massive undertaking which put a strain on Mercury staff and several processes; we are very proud that despite this our overall compliance has not declined and has actually improved since the last audit.

There is still integration work to be done with the project to migrate our LCOM ICPs from SAP to a new platform to be completed before the end of 2024, however we can now put more focus on BAU improvements and are looking forward to seeing ongoing improvement in our compliance level.