ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT

For

TRUSTPOWER LIMITED

Prepared by: Steve Woods and Rebecca Elliot

Date audit commenced: 1 February 2021

Date audit report completed: 6 May 2021

Audit report due date: 30 April 2021

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EXECUTIVE SUMMARY

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

Trustpower has made good progress in resolving non-compliant issues raised in the last audit. Registry management and switching have continued to have high levels of compliance. The management of distributed unmetered load has made steady improvement during the audit period. The biggest issue in this area is the getting the customers to amend and improve their processes.

Review of the switch saves area highlighted that the initial conversation is confirming that the customer did intend to switch away, however in one of ten calls sampled the agent attempted to save the customer by comparing pricing and was successful. There is an alleged breach currently under investigation for the same activity.

The meter reading and reconciliation functions have shown improvements during the audit period and very few issues were identified. Some improvements are required to the AMI event monitoring area but generally the controls in place are sufficiently strong to ensure issues are identified and resolved prior to the audit. Distributed unmetered load discrepancies are the main issues, which have already been identified by Trustpower and considerable work is being undertaken to make improvements.

The audit found 31 non-compliances and makes four recommendations. This is an improvement from the 38 non-compliances in the previous audit. The future risk rating has improved from 80 to 50.

The next audit frequency indicator recommends that the next audit be conducted in six months. I have considered this in conjunction with Trustpower's responses, which indicate that process improvements have or will be made to resolve the issues, apart from a technical non-compliance relating to the HHR aggregates submission. I recommend the next audit be conducted in 18 months.

The matters raised are shown in the tables below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	15.2	Some inaccurate information is recorded on the registry and/or in GTV.	Moderate	Low	2	Identified
Electrical Connection of Point of Connection	2.11	10.33A	68 reconnected ICPs were not certified within five business days of becoming active. One metered newly connected ICP was not certified within five business days of becoming active of the 15 ICPs sampled.	Moderate	Low	2	Identified
Changes to registry information	3.3	10 Schedule 11.1	2,964 ICPs did not have trader information updated on the registry within five business days of the event date. 245 ICPs were not updated to inactive status on the registry within five business days of the event date. 446 ICPs were not updated to active status on the registry within five business days of the event date.	Moderate	Low	2	Identified
Trader responsibility for an ICP	3.4	11.18	24 ICPs with the incorrect MEP nominated in the first instance. MEP not notified for one of the ten decommissioned ICPs checked.	Strong	Low	1	Identified
Provision of information to the registry manager	3.5	9 Schedule 11.1	ICP 0001113373WM8B8 unmetered load details not populated when electrically connected. 642 late updates to active status for new connections. Six new ICPs have incorrect active status dates of the sample checked. 157 late ANZSIC codes not updated within 20 days of commencing trading.	Strong	Low	1	Identified
ANZSIC codes	3.6	9 (1(k) of Schedule 11.1	One ICP with a T99 series ANZSIC code.	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			Nine category 2 ICPs with a residential ANZSIC code applied. 24 ICPs of the 150 ICPs sampled with an incorrect ANZSIC code applied				
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	19 ICPs had incorrect daily unmetered kWh recorded on the registry and were corrected during the audit. The unmetered load details for ICP 0001113373WM8B8 were not recorded until 9/03/21. ICP 0000175658WT7E2 incorrectly recorded as a 12-hour supply when it should be 24-hour supply.	Moderate	Low	2	Identified
Management of "active" status	3.8	17 Schedule 11.1	Six new ICPs had incorrect active status dates of the sample checked. ICP 1000510999PCD42 had active status recorded from 13/08/19 but should have had active status recorded from 24/07/19. ICP 0000519838BU421 identified in the 2020 audit not corrected during the audit period.	Strong	Low	1	Cleared
Management of "inactive" status	3.9	19 Schedule 11.1	ICP 0000511333WEE0E incorrectly recorded as electrically disconnected due to the being meter disconnected and reconnected on the same date of 9/03/20.	Strong	Low	1	Cleared
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	18 ICPs with proposed event dates greater than ten business days of the NT receipt date.	Strong	Low	1	Identified
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	CS average daily consumption of zero was invalidly recorded for 0012132394ELAA1 (1/12/20)	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	One AN file had the incorrect response code applied. One AN file sent for ICP 0000912258TU8AA with an event date earlier than the gaining trader requested. 50 T2 breaches (CS file not issued within five business days of the NT file).	Strong	Low	1	Identified
Losing trader determines a different date - switch move	4.9	10(2) Schedule 11.3	One AN file sent with an event date earlier than the gaining trader requested.	Strong	Low	1	Identified
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	Six late RR files for switch moves. One RR accepted of the sample checked where the reads were not applied in GTV for the correct date.	Strong	Low	1	Identified
Gaining trader informs registry of switch request - gaining trader switch	4.12	14 of Schedule 11.3	All HH switch requests sent with the incorrect profile of GXP. One Category 2 AMI site requested as a HH switch.	Moderate	Low	2	Identified
Withdrawal of switch requests	4.15	17 and 18 Schedule 11.3	One incorrect NW code found of the sample checked. 69 NA breaches, where the NW arrival date was more than two calendar months after the CS actual transfer date. 14 SR breaches, where the NW was issued more than ten business days after the initial NW. Eight WR breaches, where the AN or CS arrival date (whichever is applicable, may be one or both) are delivered by the losing trader more than two business days after the arrival date of the AW rejecting the withdrawal and a subsequent NW is not provided before delivery of the AN or CS.	Strong	Low	1	Identified
Switch saving protection	4.17	11.15 AA-11.15 AC	Saves and win-back activity undertaken within 180 days of	Weak	Medium	6	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			the ICP being requested to switch.				
Unmetered threshold	5.2	10.14 (2)(b)	Unmetered load threshold exceeded for eight ICPs.	Strong	Low	1	Identified
Unmetered threshold exceeded	5.3	10.14 (5)	Eight ICPs with an unmetered load greater than 6,000kWh per annum not resolved within 20 business days of the exemption expiring.	Strong	Low	1	Identified
Distributed unmetered load	5.4	11 Schedule 15.3, Clause 15.37B	Errors found in 13 databases, one database still to be audited and three audits are overdue. For those completed the specific findings are detailed in the DUML database audit reports.	Moderate	High	6	Identified
Electricity conveyed & notification by embedded generators	6.1	10.13, Clause 10.24 and 15.13	ICP 0002211488TGB0D has wind generation and PV1 profile is recorded, instead of EG1. While meters were bridged, energy was not metered and quantified according to the code for 36 ICPs.	Strong	Low	1	Identified
Interrogate meters once	6.8	7(1) and (2) Schedule 15.2	Exceptional circumstances not proven for two of a sample of ten ICPs not read during the period of supply.	Strong	Low	1	Identified
Meter data used to derive volume information	9.3	3(5) of schedule 15.2	Raw meter data is rounded upon receipt and not when volume information is created.	Moderate	Low	2	Identified
Electronic meter readings and estimated readings	9.6	17 Schedule 15.2	Event information is not analysed and acted upon for all MEPs.	Moderate	Low	2	Identified
ICP days	11.2	15.6	Incorrect ICP days for four ICPs.	Strong	Low	1	Cleared
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information.	Strong	Low	1	Identified
Creation of submission information	12.2	19(1) Schedule 15.2	ICP 0000880323NVEBD was not submitted in March and	Strong	Low	1	Cleared

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			April 2020 for Day 4 but was in the Day 13 files for both months.				
Accuracy of submission information	12.7	15.12	One ICP from the previous audit with an accepted RR read that was not used, resulting in under submission of 450 kWh.	Strong	Low	1	Cleared
Permanence of meter readings for reconciliation	12.8	4 Schedule 15.2	Forward estimates were not replaced by revision 14 for March and April 2019.	Strong	Low	1	Cleared
Forward estimate process	12.12	6 Schedule 15.3	Some FE thresholds not met in some instances.	Strong	Low	1	Identified
Historical estimate reporting to RM	13.3	10 Schedule 15.3	Historic estimate thresholds were not met for some revisions.	Moderate	Low	2	Identified
Future Risk Rating						50	

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

RECOMMENDATIONS

Subject	Section	Description	Recommendation
Management of "active" status	3.8	Enter reconnection reads into GTV	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.
Management of "inactive" status	3.9	Enter disconnection reads into GTV	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.

Electricity conveyed & notification by embedded generators	6.1	Validation of NHH generation profiles PV1 and EG1	Validate the generation profiles applied against the distributor's generation fuel type. Only ICPs with a solar fuel type are expected to use PV1 profile, other generation fuel types are expected to use EG1 profile.
Electronic meter readings and estimated readings	9.6	Event management	Obtain event information description information from MEPs. Ensure all events, including tamper, are appropriately evaluated.

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

I checked exemptions on the Electricity Authority website.

Audit commentary

I checked exemptions on the Electricity Authority website.

Audit commentary

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. There is one current exemption relevant to the scope of this audit.

Exemption 250 – clause 10.14(2)(b)

Exemption 250 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. None of these ICPs are metered and Trustpower is still responsible for all except ICP 0007146036RN593, which is now decommissioned.

ICP	Comments
0007146031RN859	Exemption still valid
0007146032RN499	Exemption still valid
0007146034RN516	Exemption still valid
0007146035RN953	Exemption still valid
0007146036RN593	Decommissioned

1.2. Structure of Organisation

Trustpower provided a copy of their organisation structure.

1.3. Persons involved in this audit

Auditors:

Name	Company	Role
Steve Woods	Veritek Limited	Lead auditor
Rebecca Elliot	Veritek Limited	Supporting auditor

Personnel assisting in this audit were:

Name	Title
Anita Stokes	Bill Data Manager
Ben Rice	Reconciliation Analyst
Evan Dodds	Energy Provisioning Specialist
Glen Webley	Commercial Sales Manager
Howard Wood	Commercial Manager (Wholesale)
Jo Andrews	Team Leader – Provisioning
Taniya Coxhead	HHR data
Lisa Edge	Energy Solution Specialist
Marcia Cooley	Field Services Specialist
Matt James	Head of Enterprise and Wholesale
Rachel Falconer	Assurance & Quality Team Leader
Shay McNae	Location Compliance Team Leader
Shiniqua-Lee Hughes-Timoti	Revenue Assurance Specialist
Wendy Pyne	Assurance & Compliance Specialist

Agent personnel assisting with this audit:

Name	Role	Company
Josh Wairau	Grid Metering Specialist	EMS
Laura Ferrier	Senior Data Analyst	Vector Metering
Peter MacKenzie	Sales & Development Manager	ADRInsights
Steven Graham	Solution Delivery & Support Team	EDMI NZ Limited

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

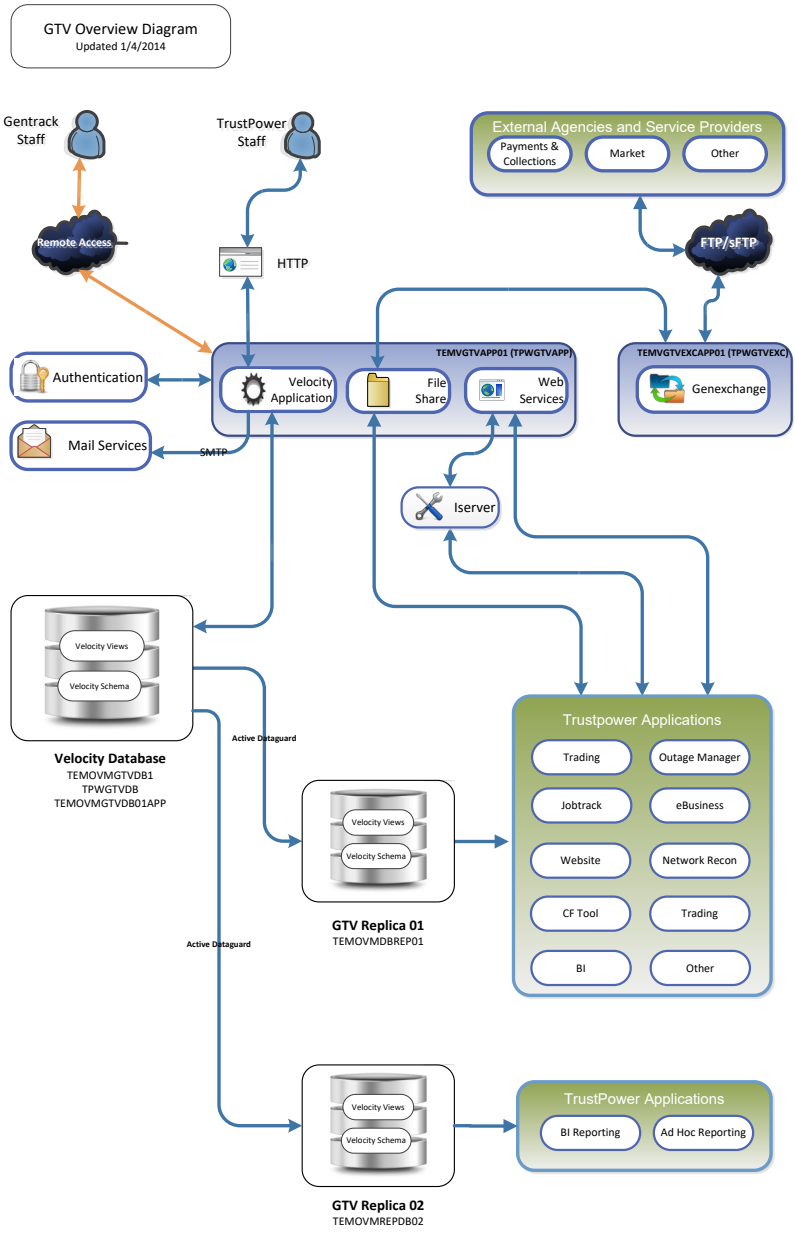
Use of agents was discussed with Trustpower.

Audit commentary

Trustpower uses a number of agents in relation to the functions covered by the scope of this audit. They are identified in **section 1.9.**

1.5. Hardware and Software

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



Access to systems is restricted using logins and passwords. There are many comprehensive back up processes in place. Trustpower provided a detailed breakdown of these.

1.6. Breaches or Breach Allegations

Trustpower had two alleged breach relevant to the scope of this audit during the audit period:

Breach no	Breach of	Description	Outcome
2004TRUS1	Clause 15.2	The reconciliation manager identified a discrepancy in the volume submitted for the NSP TGA0331 and TGA0111 for the consumption period January 2019 after a concern was raised by a participant about high UFE.	Closed
Not provided	Clause 11.15AA	On 29 May 2020 a non-participant alleged that Trustpower breached clause 11.15AA of the Code. It was alleged that on 27 May 2020 Trustpower made contact with a customer that was in the process of switching multiple ICPs to a gaining retailer in an attempt to retain the customer during the switch protected period.	Under investigation

The breach in relation to clause 11.15AA is still under investigation. This process is discussed in **section 4.17**.

1.7. ICP Data

The active ICPs from the list file are summarised by meter category in the table below. Most of the active ICPs with meter category 9 or blank are unmetered. The ICPs which did not have unmetered load indicated were checked and confirmed to be timing differences, all had metering details added or MEP nominations made and/or accepted prior to the audit. This is discussed further in **section 3.4**.

Metering Category	(2021)	(2020)	(2018)	(2017)	(2016)
1	260,226	262,066	260,624	256,587	238,159
2	2,041	2273	2,281	2,305	2,362
3	389	462	430	450	457
4	147	163	163	170	164
5	33	37	36	34	36
9	884	921	990	1,056	1,441
Blank	1,557	1,413	1,432	1,445	2,915

Status	Number of ICPs (2021)	Number of ICPs (2020)	Number of ICPs (2018)	Number of ICPs (2017)	Number of ICPs (2016)
Active (2,0)	265,277	267,335	265,956	262,047	245,534
Inactive – new connection in progress (1,12)	899	1,029	665	654	770
Inactive – electrically disconnected vacant property (1,4)	4,680	4,876	4,481	4,388	4,350
Inactive – electrically disconnected remotely by AMI meter (1,7)	281	59	212	7	7
Inactive – electrically disconnected at pole fuse (1,8)	69	77	31	20	2
Inactive – electrically disconnected due to meter disconnected (1,9)	57	50	30	7	0
Inactive – electrically disconnected at meter box fuse (1,10)	2	0	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	1	2	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	230	254	409	802	976
Inactive – reconciled elsewhere (1,5)	3	3	0	0	0
Decommissioned (3)	27,906	26,961	25,094	23,734	22,624

1.8. Authorisation Received

Trustpower provided an email authorisation to Veritek permitting the collection of data from other parties for matters directly related to the audit.

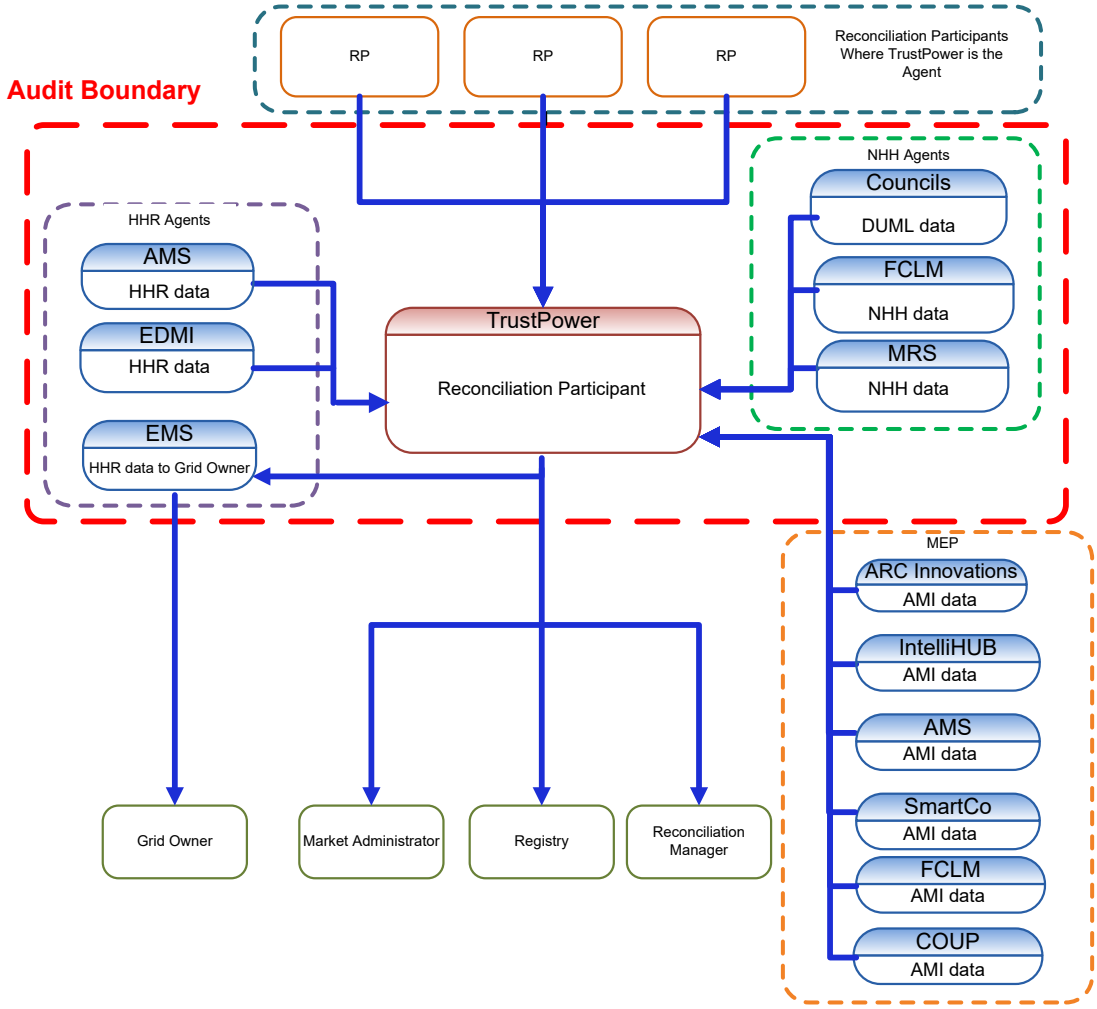
1.9. Scope of Audit

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of Trustpower, 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 Trustpower's offices in Tauranga on 23 to 24 March 2021.

Registry list, event detail, and audit compliance reports for 1 April 2020 to 28 January 2021, and a registry list snapshot for 28 January 2021 were reviewed.

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



The table below shows the tasks under clause 15.38 of part 15 for which Trustpower 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 FCLM - NHH AMS - HHR EMS - HHR EDMI - HHR	IntelliHUB– AMI as an MEP ARC Innovations – AMI as an MEP AMS – AMI as an MEP Smartco – AMI as an MEP FCLM – AMI as an MEP Counties Power- AMI as an MEP
(c)(iii) - Creation and management of volume information	AMS - HHR EMS - HHR EDMI - HHR Various Councils - DUML databases	
(d) (i)– Calculation of ICP days		
(d)(ii) - delivery of electricity supplied information under clause 15.7		
(d)(iii) - 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	EMS	

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

Trustpower 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 Trustpower personnel. They are considered contractors rather than agents and they operate under Trustpower's control.

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. The AMS, EMS and EDMI audits were completed more than seven months prior to this audit, and the

agents confirmed that there have been no changes to their processes which could have a negative impact on Trustpower's compliance. Comments are included in this report in relation to any issues found. The MRS agent audit was completed within seven months of this audit.

1.10. Summary of previous audit

Trustpower provided a copy of their previous audit report completed in April 2020 by Rebecca Elliot and Tara Gannon of Veritek Limited. The summary tables below show the statuses of the non-compliances and recommendations raised in the previous audit. Further comment is made in the relevant sections of this report.

Subject	Section	Clause	Non-compliance	Status
Relevant information	2.1	15.2	Some inaccurate information is recorded on the registry and/or in GTV. Correction calculated incorrectly resulting in under submission of 398 kWh for ICP 1002064518UN6BF. ICP status not corrected resulting in vacant consumption being pushed to the gaining trader for the incorrect period in some instances.	Still existing Cleared Cleared
Electrical Connection of Point of Connection	2.11	10.33A	101 reconnected ICPs were not certified within five business days of becoming active. 139 metered newly connected ICPs were not certified within five business days of becoming active. Four ICPs were not certified on becoming unbridged.	Still existing Still existing Still existing
Changes to registry information	3.3	10 Schedule 11.1	7,896 ICPs did not have trader information updated on the registry within five business days of the event date. 397 ICPs were not updated to inactive status on the registry within five business days of the event date. 481 ICPs were not updated to active status on the registry within five business days of the event date.	Still existing
Trader responsibility for an ICP	3.4	11.18	An incorrect MEP nomination for SMCO was raised for 0001090826TG113, and later replaced with a correct nomination for NGCM. The incorrect nomination remained in place on the registry from 20/12/19 until 21/01/20.	Still existing

Subject	Section	Clause	Non-compliance	Status
Provision of information to the registry manager	3.5	9 Schedule 11.1	487 late updates to active status for new connections. ICP 0000519838BU421 has active status recorded from 25/03/19 but should have active status recorded from 21/03/19. Seven new ICPs has incorrect active status dates, which were corrected during the audit.	Still existing
ANZSIC codes	3.6	9 (1(k) of Schedule 11.1	ICP 0007171910RN50C has a residential ANZSIC code (000000) but relates to a residential property operator supply and is expected to have ANZSIC code L671100. ICP 0000010776NT35F had ANZSIC code M69 (Professional Scientific and Technical Services) but is expected to have ANZSIC code D281100 (Water Supply). The code has not been updated because the ICP has since switched out.	Still existing
Changes to unmetered load	3.7	9(1)(f) of Schedule 11.1	Eight ICPs had incorrect daily unmetered kWh recorded on the registry and were corrected during the audit.	Still existing
Management of "active" status	3.8	17 Schedule 11.1	Eight new ICPs has incorrect active status dates, seven were corrected during the audit. The other ICP was identified when reviewing ICP Days (**section 11.2**) is expected to be corrected. ICP 0000519838BU421 which has active status recorded from 25/03/19 but should have active status recorded from 21/03/19. ICP 0003120630WF52D which has active status recorded from 4/10/19 but should have active status recorded from 31/10/19 on the registry. ICP 0002222260WF869 which has an active status recorded from 9/10/18 but was disconnected from 20/11/18-2/12/18 on the registry.	Still existing
Management of "inactive" status	3.9	19 Schedule 11.1	Inactive ICP not corrected to active for the period with vacant consumption.	Still existing
Inform registry of switch request for ICPs - standard switch	4.1	2 Schedule 11.3	Trustpower issues switch move NTs for contract customers which are transferring between retailers at their existing address to ensure that the correct switch event date is applied.	Still existing
Losing trader response to switch request and event dates - standard switch	4.2	3 and 4 Schedule 11.3	231 AN files had the AA or AD response code incorrectly applied.	Still existing

Subject	Section	Clause	Non-compliance	Status
Losing trader must provide final information - standard switch	4.3	5 Schedule 11.3	The CS files for 0000054440TEFF8 (21/10/19), 0000474134WE8D7 (06/06/19), 0000620699UN1FC (03/07/19) and 0000027439EAEC4 (18/07/19) contained last actual read dates and read types which did not reflect the reading on Trustpower's last day of responsibility. CS average daily consumption of zero was invalidly recorded for 0000001057UHAB8 (16/07/19), 0000517820KE6DF (15/08/19), 0000907499TUAC7 (20/09/19) Incorrect average daily consumption was recorded for 0000670639WE6D6 (20/02/19). Negative CS average daily consumption was invalidly recorded for 0000023424EADB2 (02/05/19). Six transfer CS files were issued late. All the late files were issued within four business days of their due date.	Cleared Still existing Cleared Cleared Cleared
Retailers must use same reading - standard switch	4.4	6(1) and 6A Schedule 11.3	There were nine genuinely late RR files for transfer switches. Six RRs were issued without being supported by two validated actual readings. Four ICPs did not have the agreed switch reading recorded in GTV and six ICPs did not have the agreed switch reading type recorded in GTV.	Cleared
Gaining trader informs registry of switch request - switch move	4.7	9 Schedule 11.3	Trustpower issues switch move NTs for contract customers which are transferring between retailers at their existing address to ensure that the correct switch event date is applied.	Cleared
Losing trader provides information - switch move	4.8	10(1) Schedule 11.3	Nine AN files had the AA or AD response code incorrectly applied. One late CS file.	Still existing
Losing trader must provide final information - switch move	4.10	11 Schedule 11.3	The CS files for 0000146325UN7C6 (07/09/19), 0001150370WMD0D (19/09/19), 0030126474PCB2A (15/11/19), 0000489012CE2E0 (08/11/19), 0000714936NVC6B (09/05/19) and 0000200599CTE33 (19/07/19) contained last actual read dates and read types which did not reflect the reading on Trustpower's last day of responsibility. CS average daily consumption of zero was invalidly recorded for 1002047549LC3CB (26/06/19).	Cleared Still existing

Subject	Section	Clause	Non-compliance	Status
Gaining trader changes to switch meter reading - switch move	4.11	12 Schedule 11.3	25 genuinely late RR files for switch moves. Three RRs were issued without being supported by two validated actual readings. One ICP did not have the agreed switch reading recorded in GTV and four ICPs did not have the agreed switch reading type recorded in GTV. One RR was issued in error with the same event reading as the original CS file.	Still existing Cleared Cleared Cleared
Withdrawal of switch requests	4.15	17 and 18 Schedule 11.3	32 late withdrawals on the event detail report. At least two genuine late withdrawals (NA breach type) on the switch breach history report.	Still existing
Metering information	4.16	21 Schedule 11.3	For ten CS files issued by Trustpower, switch event reads did not reflect the actual reading or best estimate of an actual reading on the event date and the read type was incorrectly recorded.	Still existing
Distributed unmetered load	5.4	11 Schedule 15.3, Clause 15.37B	Errors found in 12 databases, two databases still to be audited and three audits are overdue. For those completed the specific findings are detailed in the DUML database audit reports.	Still existing
Electricity conveyed & notification by embedded generators	6.1	10.13, Clause 10.24 and 15.13	ICP 0000960325TU251 has solar generation and EG1 profile is recorded, instead of PV1. ICP 0002211488TGB0D has wind generation and PV1 profile is recorded, instead of EG1. While meters were bridged, energy was not metered and quantified according to the code for 65 ICPs.	Still existing
Responsibility for metering at GIP	6.2	10.26 (7)	One correct NSP meter certification not provided. Three NSP meter recertifications not provided within ten business days of recertification.	Cleared
Derivation of meter readings	6.6	3(1), 3(2) and 5 Schedule 15.2	Customer reads validated against estimated reads in some instances.	Cleared
NHH meter reading application	6.7	6 Schedule 15.2	For ten CS files issued by Trustpower, switch event reads did not reflect the actual reading or best estimate of an actual reading on the event date. Meter readings not applied at the end of the day for NHH to HHR changes and decommissioning events.	Cleared

Subject	Section	Clause	Non-compliance	Status
Interrogate meters once	6.8	7(1) and (2) Schedule 15.2	Exceptional circumstances not proven for one ICP not read during the period of supply.	Still existing
NHH meters interrogated annually	6.9	8(1) and (2) Schedule 15.2	Exceptional circumstances not proven for one ICP not read annually.	Cleared
NHH meters 90% read rate	6.10	9(1) and (2) Schedule 15.2	Exceptional circumstances not proven for four NSPs not meeting the 90% read threshold. All NSPs had either one or two ICPs per NSP.	Cleared
Identification of readings	9.1	3(3) Schedule 15.2	Four transfer switch and six switch move CS files contained incorrect read types. Six transfer switch and four switch move ICPs which had RRs issued had incorrect switch event read types recorded in GTV. One customer read was incorrectly recorded as an actual read in GTV.	Cleared
Meter data used to derive volume information	9.3	3(5) of schedule 15.2	Raw meter data is rounded upon receipt and not when volume information is created.	Still existing
HHR aggregates information provision to the reconciliation manager	11.4	15.8	HHR aggregates file does not contain electricity supplied information.	Still existing
Creation of submission information	12.2	19(1) Schedule 15.2	Correction calculated incorrectly resulting in under submission of 398 kWh for ICP 1002064518UN6BF, which had a bridged meter. Vacant consumption not submitted for ICP 0000113952UN10F resulting in under submission of 184 kWh.	Still existing
Accuracy of submission information	12.7	15.12	One correction calculated incorrectly resulting in under submission of 398 kWh. One ICP with vacant consumption not submitted resulting in under submission of 184 kWh. One ICP with the incorrect NSP dedication flag recorded. Five out of ten ICPs with accepted RR reads did not have the agreed switch reading recorded in GTV resulting in incorrect submission for these ICPs.	Still existing
Permanence of meter readings for reconciliation	12.8	4 Schedule 15.2	Three forward estimates were not replaced by revision 14 for September 2018.	Still existing

Subject	Section	Clause	Non-compliance	Status
Reconciliation participants to prepare information	12.11	4 and 5 Schedule 15.3	Customer reads and photo reads are used to calculate historic estimates if they are validated against two previous reads regardless of whether they are estimates or actuals.	Cleared
Forward estimate process	12.12	6 Schedule 15.3	The accuracy threshold was not met for all months and revisions.	Still existing
Compulsory meter reading after profile change	12.13	10 Schedule 15.3	Meter reading not gained for the date of the profile change for five profile changes.	Cleared
Provision of submission information to the RM	13.1	8 Schedule 15.3	One ICP with the incorrect NSP dedication flag recorded.	Cleared
Historical estimate reporting to RM	13.3	10 Schedule 15.3	Historic estimate thresholds were not met for some revisions.	Still existing

Subject	Section	Description	Recommendation	Status
Relevant information	2.1	Identification of failed registry updates for status changes and validation of connection dates	Review acknowledgements indicating failed status updates to determine whether a correction is required. These errors most commonly occur on ICPs which have recently switched in, had a withdrawal processed, or had a status correction processed. Create discrepancy reporting to identify instances where the connection date recorded in GTV and on the registry are different.	Adopted
Relevant information	2.1	Status date correction process	Where a status event date is corrected to be a later date, ensure that the existing status record with the incorrect date is reversed on the registry, so that the change takes effect from the correct date.	Adopted
Management of "active" status	3.8	Enter reconnection reads into GTV	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.	Repeated
Management of "inactive" status	3.9	Follow up of account managed ICPs at "inactive new connection in progress" status for more than 24 months	Refer account managed ICPs at "inactive new connection in progress" status for more than 24 months to the account manager for follow up.	Adopted

Subject	Section	Description	Recommendation	Status
Management of "inactive" status	3.9	Enter disconnection reads into GTV	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.	Repeated
Electricity conveyed & notification by embedded generators	6.1	Validation of NHH generation profiles PV1 and EG1	Validate the generation profiles applied against the distributor's generation fuel type. Only ICPs with a solar fuel type are expected to use PV1 profile, other generation fuel types are expected to use EG1 profile.	Repeated

2. OPERATIONAL INFRASTRUCTURE

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

Code reference

Clause 10.6, 11.2, 15.2

Code related audit information

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

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

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

Audit observation

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

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

Audit commentary

Registry synchronisation

I observed the process to update status and trader information in the registry. Status and/or trader attributes are updated for a time slice in GTV, which specifies the date that the record applies from. The change is automatically sent from GTV to the registry.

Notifications files are imported into GTV, and action is taken as required.

Acknowledgement files are imported into GTV and reviewed for issues like rejected MEP nominations, invalid profiles, and invalid submission types using Trustpower's BI reporting. Not all registry acknowledgements are checked due to the volume of files received. The last audit noted that status updates were failing in some instances due to timing issues of event management in GTV and status discrepancies not being checked for a match rather than date accuracy. Trustpower have adopted the last audit's recommendation to compare the GTV connection date to other date fields, and the registry active status date. I did not find any evidence of incorrect active dates due to the issues identified in the last audit.

Registry validation

Trustpower's registry validation and management processes continue to be robust. The switching and metering teams are responsible for ensuring that data entered through their processes is accurate.

A Work-Flow Analyst is responsible for ensuring that the GTV life cycle accurately reflects what is recorded on the registry, and life cycle discrepancy reporting is used. Work queue items are actioned and monitored daily, and focus is on discrepancies in the current values rather than historic values.

A suite of daily data discrepancy reports is used to ensure information is accurate and consistent:

- all trader-maintained fields are checked against the registry,
- distributor maintained fields are held in GTV and checked against the registry, with a focus on fields used for reconciliation submission aggregation and pricing,

- ANZSIC codes are checked for consistency, missing codes, and T99 series codes,
- trader and distributor unmetered load fields on the registry and GTV are compared, and discrepancies are thoroughly investigated with assistance from the account manager and/or customer and the distributor, and
- ICPs with installation type B which do not have import/export metering and PV1 profile are investigated to confirm whether generation is present, and service orders to install import/export metering are raised as required.

Registry information analysis

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

Item No.	Issue	2021	2020	2018	2017	2016	2015	Comments
1	Status of "new connection in progress" with an initial electrical connection date populated. Status of "ready" with an initial electrical connection date populated	21 1	20 7	6	5	12	90	All were timing differences which had backdated status updates to active. Late status updates are discussed in **section 3.3.**
2	Active date variance with Initial Electrical connection date and/or meter certification date	117	-	-	-	-	-	Six genuine exceptions were identified. Refer to **section 3.5**.
2	Active with no MEP and UNM = N	19	120	4	13	6	4	All but one, were due to timing differences. Refer to **section 3.4**.
3	Incorrect submission flag	0	0	1	2	67	3	HHR new connection 0000054556NT918 had GXP profile applied until the metering was installed and was then corrected to HHR 14 days later.
4	Blank ANZSIC codes	0	0	0	0	1	56	Compliant.
5	ANZSIC "T999" not stated	0	0	4	1	22	47	Compliant.
6	ANZSIC "T994" don't know	1	1	0	0	4	10	This has been corrected. Refer to **section 3.6**.

Item No.	Issue	2021	2020	2018	2017	2016	2015	Comments
7	Category 9 or blank but Active with MEP and UML "N"	23	11	3	5	9	7	All but one, were due to timing differences, and the ICPs had meter details populated on the registry, or MEP nominations made and/or accepted prior to the audit. The unmetered load details for ICP 0001113373WM8B8 was not recorded until 9/03/21. Refer to **section 3.5**
8	ICPs with Distributor unmetered load populated but retailer unmetered load is blank	11	24	27	31	43	185	Ten of the ICPs have metered load and metering is installed. The unmetered load for ICP 0001113373WM8B8 was not recorded until 9/03/21. Refer to **section 3.5**.
9	ICPs with unmetered load flag Y but load is recorded as zero	2	5	4	2	4	4	In both cases the zero value is correct. Refer to **section 3.7**.
10	ICPs with incorrect shared unmetered load	0	0	0	0	8	6	No ICPs with incorrect shared unmetered load were identified.
11	ICPs with Distributed Generation indicated but no DG profile	4	8	18	24	0	0	17 ICPs had generation installed, and the profile has since been updated as part of BAU. One ICP has had generation removed and the Distributor's details are incorrect. Refer to **section 6.1**.

As discussed in **section 3.5**, ICP 1002074141LCE12 was electrically connected on 4 December 2019 but not certified until 4 August 2020. This is recorded as non-compliance below and in **section 2.11**.

Data discrepancies identified during the previous audit were re-checked:

- ICP 0000519838BU421 status date was corrected to 21 March 2019 during the audit,
- the ANZSIC code for ICP 0007171910RN50C has had been corrected, and
- ICP 0002211488TGB0D has wind generation and PV1 profile.

Changes to consumption information can occur if changes have been made to billing information. In these situations, Trustpower adopts a "reverse and rebill" process to correct billing and therefore consumption information. This process was examined and as long as the "reverse and rebill" process is used, consumption information for prior consumption periods is included in the revision process and provided to the reconciliation manager. In situations where consumption will not be billed to a consumer, GTV has a field for "adjustment consumption" (ADJ). The correct consumption is calculated and recorded on a

"Revenue Assurance Case Summary" worksheet, then entered into the ADJ field, where it automatically flows through to submission and revision files.

Trustpower have added an additional peer review of all corrections before they are released. All corrections were conducted accurately, and the consumption information was correctly recorded in the relevant revision files for of the examples checked.

If the period of the correction is longer than 14 months, an adjustment is made to the period to ensure all consumption is apportioned to the 14-month period.

Defective meters

Trustpower provided ten examples of stopped or faulty meters, which were identified by the billing team, reconciliation team, meter reader or customer, or on meter replacement.

All corrections were processed correctly. Where reads were available, they were used. Where consumption was missing, it was calculated either using consumption from the replaced meter or consumption on the meter prior to it becoming faulty. The volume was applied across the correct period in all instances, and this flowed through to submission files.

Multiplier corrections

No incorrect multipliers were identified during the audit period. Daily validation is in place to identify discrepancies and they are resolved immediately.

Bridged meter corrections

If a meter is bridged a job is logged to un-bridge the site. If a reconnection job is open after three days from being issued, it is followed up with the contractor to ensure closure of the job occurs within five business days. The ICP status is updated to active when the job is closed.

Discrepancy reporting is in place to monitor any status mismatches between GTV and the registry. These are managed on a daily basis.

Trustpower has a robust methodology to identify and resolve bridged meters. Reporting is in place for ICPs switched in with AMI meters and zero consumption, plus there is reporting for the word "bridged" in the reconnection reports.

Trustpower provided a list of 36 ICPs with AMI metering where bridging had occurred during the audit period. A sample of 10 were checked. Consumption during the bridged period is estimated using volumes recorded post the meter being un-bridged. This is applied across the bridged period and these corrections flow to the submission files. All were applied correctly.

Inactive ICPs with consumption

Inactive ICPs with consumption are identified through the NHH read validation process discussed in **section 9.5**.

Trustpower provided a list of ten ICPs with inactive consumption during the audit period. Consumption was submitted for all of the ten ICPs checked.

Unmetered load corrections

I checked a sample of five ICPs where the daily unmetered kWh changed on the registry. The value changes flowed through to Gentrack and into submission files.

Transposed meters

When a meter reading is found to be transposed, Trustpower swaps the readings between registers and the corrected readings are recorded as actuals.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11.2 & 15.2 From: 01-Apr-20 To: 28-Jan-21	Some inaccurate information is recorded on the registry and/or in GTV. 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, as most data is recorded accurately, and validation processes are in place. The impact on settlement is minor, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Best efforts are made to align information between GTV and the Registry via regular file transfer between the two systems and working queues that identify issues and errors within the transfers.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Exception Reporting continues to be used and enhanced to identify and resolve any discrepancies that occur between GTV and the Registry.	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 transmission method and security were examined for all data sources to Trustpower.

Audit commentary

NHH

NHH meter readings are transmitted by SFTP from FCLM and MRS.

AMI data and reads from agents are stored in a separate database with appropriate controls in place. Two days after a scheduled read is due a web process is run. This retrieves the relevant read from the database and these then enter GTV and are treated as any other manual reads.

HHR/ Generation

HHR data is provided by all agents in a secure format via MV90.

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

The audit trail was examined for all data gathering, validation and processing functions by a walk though of the processes.

Audit commentary

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. Compliance is confirmed.

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

Trustpower's contract terms and conditions were reviewed.

Audit commentary

This requirement was confirmed to be covered in Trustpower's customer contract terms and conditions.

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

Trustpower's contract terms and conditions were reviewed.

Audit commentary

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

Trustpower assists other parties to gain access to their customers' metering installations where requested. This process may involve investigation to determine why access has been refused and contacting the customer to arrange access to be provided.

Trustpower confirmed that there have been no instances where access could not be arranged for other parties during the audit period when their assistance was requested.

Audit outcome

Compliant

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

Code reference

Clause 10.35(1)&(2)

Code related audit information

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

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

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

Audit observation

Trustpower was requested to provide details of any installations with loss compensation.

Audit commentary

Trustpower 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

Trustpower's contract terms and conditions were reviewed.

Audit commentary

Trustpower's terms and conditions were checked, and I confirm appropriate clauses are recorded.

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 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

Trustpower's new connection application process varies by distributor. In most cases, the customer or the customer's agent requests a new connection from Trustpower, who then request a new ICP from the distributor. For some distributors, the customer or their agent requests the new connection directly from the distributor or their approved contractor, and the distributor advises Trustpower that a new ICP is to be created and seeks their approval.

Once the distributor has provided an ICP it is entered into GTV and assigned to the customer. An automated process retrieves the registry information for the new ICP using an event detail report and creates a system work action for the ICP to be claimed at 1,12 ("new connection in progress") status and an MEP nomination is sent at the same time.

GTV and Jobtrack are used to manage new connections. Field service orders are raised in GTV and transferred to Jobtrack, and job closure information is transferred from Jobtrack to GTV.

Jobtrack is a custom web-based system built by Trustpower which is used to dispatch field services jobs. Some contractors input field results directly into Jobtrack, and others provide paperwork via email which is manually entered into Jobtrack. Open jobs are tracked daily using the Jobtrack operational reporting and followed up if paperwork is not received. Once paperwork is received GTV is updated, and the status update is automatically transferred from GTV to the registry.

If an MEP provides meter certification or distributor updates meter certification details prior to Trustpower receiving connection paperwork, the daily new connections automation process will update the affected ICPs to "active" status based on the initial electrical connection date and meter certification date, in an effort to ensure that the registry is updated within five business days. Once connection paperwork is received, corrections to the "active" status date are carried out as required.

HHR new connections follow the same general application process as NHH new connections. Once the connection is ready, the TOU metering team liaise directly with the MEP to arrange meter installation. When determining the correct active date, Trustpower reviews the HHR volume information to determine when consumption started.

I checked 15 NHH ICPs and five HHR new connections. In all cases, Trustpower had accepted responsibility.

The AC020 report recorded 23 active ICPs with metering category 9, null, or zero which did not have the unmetered flag set to yes. 18 of these also had no MEP recorded. All but one, were timing differences, and the ICPs had meter details populated on the registry, or MEP nominations made and/or accepted prior to the audit. ICP 0001113373WM8B8 is an unmetered connection and the unmetered details were added to the ICP when electrically connected but then a new trader event sent at the same time removed this. These have now been added with the correct event date. This is recorded as non-compliance in **sections 2.1** and **3.4**.

The audit compliance report found two ICPs where the MEP had been nominated but no response had been received within 14 days of the nomination. One was invalidly recorded because the MEP accepted the nomination the day after it was issued. The other nominated MEP MNON and indicates an unmetered ICP. NO MEP nomination is required in this instance.

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

- *for a point of connection to the grid – the grid owner has approved the connection,*
- *for an NSP that is not a point of connection to the grid - the relevant distributor has approved the connection.*
- *for a point of connection that is an ICP, but is not as NSP:*
- *the reconciliation participant is recorded in the registry as the trader responsible for the ICP,*
- *if the ICP has metered load, 1 or more certified metering installations are in place,*
- *if the ICP has not previously been electrically connected, the relevant distributor has given written approval of the temporary electrical connection.*

Audit observation

The new connection process was examined in detail.

Audit commentary

Trustpower 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.

The majority of Trustpower's new connections are certified and electrically connected at the same time. Examination of the first active date accuracy identified four ICPs where the meter was certified earlier than the first active date. This was checked and found that the ICP had been temporarily livened to certify the metering. This is recorded as non-compliance in **sections 2.1**, **3.5** and **3.8**.

Audit outcome

Compliant

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

Code reference

Clause 10.33A(1)

Code related audit information

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

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

Audit observation

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

Audit commentary

MEP information for active ICPs

The new connection process is discussed in detail in **sections 2.9**. Trustpower nominate the MEP at the same time as taking the ICP to the "inactive - new connection in progress" status. All new connections have an MEP nominated, and robust reporting is in place to monitor the workflow and identify and address exceptions. Clause 10.33A states that only reconciliation participants can electrically connect, therefore Trustpower is required to authorise this activity, which is managed through the trader acceptance process and MEP service request process.

All ICPs recorded as "active" with metering installed have an MEP recorded.

The AC020 report recorded 23 active ICPs with metering category 9, null, or zero which did not have the unmetered flag set to yes. 18 of these also had no MEP recorded. All but one, were timing differences, and the ICPs had meter details populated on the registry, or MEP nominations made and/or accepted prior to the audit. ICP 0001113373WM8B8 is an unmetered connection and the unmetered details were added to the ICP when electrically connected but then a new trader event sent at the same time removed this. These have now been added with the correct event date. This is recorded as non-compliance in **sections 2.1** and **3.4**.

Meter certification for status changes to active

Active ICPs are required to have full metering certification recorded within five business days of the date they become "active".

Trustpower use a daily discrepancy report 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.

Review of the AC020 report found 68 late certifications for metered ICPs which moved from "inactive" to "active" status. A sample of 20 late certifications were checked:

- 14 ICPs appeared on the discrepancy report, and an email was sent to the MEP - two of these have since been certified,
- three ICPs were not reconnected by Trustpower, and the status change to "active" was a correction when consumption was identified during an inactive period,
- two ICPs did not appear on the daily discrepancy report and no action was taken; the reporting is being reviewed to ensure all instances are identified, and
- ICP 0007410280WMDC1 switched away shortly after being reconnected.

Review of the AC020 report found 29 late certifications for new connections of metered ICPs. No late certifications for HHR meters were identified. A sample of 15 late certifications for new connections were checked:

- seven ICPs had their meters certified on time, but the metering details were added on the registry after the AC020 report was run,
- three ICPs were unmetered builder temporary supplies, and the meter certification was not late,
- two ICPs had the incorrect first active date; these were identified and corrected as part of the BAU registry discrepancy processes,
- ICP 1002091887LCB26 had the incorrect meter certification date recorded on the registry; I sighted the meter certification and confirmed that the site was certified within five business days of becoming active,

- ICP 0000060002NT2B3's first meter certification by NGCM was never loaded to the registry; I sighted this and confirmed that the site was certified within five business days of becoming active, and
- ICP 1000590514PC47A was not certified within five business days and is recorded as non-compliance below.

As detailed in **section 3.5**, ICP 1002074141LCE12 was electrically connected on 4 December 2019 but not certified until 4 August 2020. This is recorded as non-compliance in **sections 2.1**, and **3.5**.

Meter recertification for bridged meters

Trustpower use a daily discrepancy report to identify ICPs which are unbridged without the meter being recertified. The report is reviewed, and the MEP is emailed using an email template.

Trustpower provided details of 36 bridged meters during the audit period. All of the meters were unbridged, and they were all certified within five business days of the date that they were unbridged.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.11 With: Clause 10.33A From: 01-Apr-20 To: 28-Feb-21	68 reconnected ICPs were not certified within five business days of becoming active. One metered newly connected ICP was not certified within five business days of becoming active of the 15 ICPs sampled. Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as moderate. Reporting is in place to identify metering certification issues, but some ICPs are not being identified as expected. The impact on settlement is recorded as minor because installations with expired or interim certification may be less accurate than certified metering installations.

Actions taken to resolve the issue	Completion date	Remedial action status
Current reporting identifies ICP's that were not re-certified within 5 business days of being reconnected. MEP's are then notified by TRUS. The re-certification of the metering in most instances is not being done so this continues to make us non-compliant.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

As the AMI Deployment rollout continues and completes over the next 12 months, we expect to see less reconnections being made on uncertified sites. We continue to monitor and engage our MEP's to ensure certification is performed within the expected timeframes for New Connections.	1 January 2022	

2.12. Arrangements for line function services (Clause 11.16)

Code reference

Clause 11.16

Code related audit information

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

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

Audit observation

The process to ensure an arrangement is in place before trading commences on a network was examined.

Audit commentary

A table within GTV prevents the loading of any installation data, prior to the establishment of arrangements for line services. Not all Use of Systems Agreements are signed, however the clause requires that an arrangement is in place and does not require a signed agreement.

Three new networks were added during the audit period. An arrangement is in place for these.

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

Trustpower has an arrangement in place with all MEPs that manage metering for their customer base. All new connections are taken to the "inactive new connection in progress" (1,12) status and an MEP is

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

Trustpower did not add any new MEPs during the audit period.

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.

The event detail report was reviewed to identify reconnections for switch ins where the switch was withdrawn, and the ICP was no longer supplied by the trader. If the ICP is not currently supplied by Trustpower, it is less likely that the switch was successfully completed at a later date. The ICPs were checked to determine compliance.

Audit commentary

All new customers are credit checked in the first instance. If they pass the credit check the reconnection is actioned. Trustpower expects to reconnect a customer within four hour and the NT is sent to the registry requesting the ICP. There are some occasions where a reconnection will be processed from a partial credit check. In these instances, the reconnection will proceed but the customer must provide ID and a bond within 48 hours. If they are subsequently declined, they are advised they have 48 hours to switch to another provider. The NT is expected to be sent the next day. If the customer doesn't provide the required information after 48 hours the switch is withdrawn, and a disconnection is booked. This process is managed by the vacant properties team.

Review of the event detail report identified 35 ICPs reconnected as part of the switching process, the switch was withdrawn and the ICP was no longer supplied by Trustpower. All of the affected ICPs remained with Trustpower on the reconnection date once the switching process was complete, and the reconnection was valid.

Audit outcome

Compliant

2.15. Electrical disconnection of ICPs (Clause 10.33B)

Code reference

Clause 10.33B

Code related audit information

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

Audit observation

The disconnection process was examined.

Traders are only able to update ICP status for event dates where they are responsible for the ICP on the registry. The event detail reports were reviewed to identify all ICPs which were disconnected during the audit period where an NT was received from another trader during the audit period. I checked a sample of these ICPs where the disconnection event date was after the NT receipt date and/or NT event date to determine compliance.

Audit commentary

The disconnection process in relation to reconnected ICPs that subsequently get disconnected is described in **section 2.14.** Other than these ICPs Trustpower will only disconnect ICPs where they are the trader recorded on the registry.

I checked a sample of 15 ICPs where the disconnection date was after the NT receipt date and/or NT event date and found that the switches were withdrawn, and disconnection occurred within Trustpower's period of supply and/or before an NT was received.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

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

- *notify the metering equipment provider.*

Audit observation

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

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

Audit commentary

Trustpower uses the MEP who in turn utilise a test house for the reconnection or disconnection of ICPs and typically they don't bridge meters.

A sample of ten stopped or faulty meters and 36 bridged meters were provided. The MEP was notified in all instances and the meter was replaced for faulty meters and unbridged and recertified for bridged meters. Corrections were appropriately processed in all instances and are discussed further in **section 8.1**.

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 bridging process and associated processes were examined.

Audit commentary

Trustpower has made no changes to their processes in relation to the bridging of meters. This is only done as a last resort. 36 bridged meters were provided. The MEP was notified in all instances and the meter was unbridged and recertified. Corrections were appropriately processed in all instances and are discussed further in **section 8.1**.

Audit outcome

Compliant

3. MAINTAINING REGISTRY INFORMATION

3.1. Obtaining ICP identifiers (Clause 11.3)

Code reference

Clause 11.3

Code related audit information

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

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

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

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

Audit observation

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

Audit commentary

This requirement is well understood and managed by Trustpower, and the new connections process is described in **section 2.9** above.

ICPs exist where Trustpower is the direct purchaser from an embedded generator and where Trustpower is the embedded generator selling directly to the clearing manager.

Audit outcome

Compliant

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

Code reference

Clause 11.7(2)

Code related audit information

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

Audit observation

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

Audit commentary

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

A robust suite of reports is in place to manage any discrepancies and workflow issues for both NHH and HHR new connections.

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 processes to manage status changes are discussed in detail in **sections 3.8** and **3.9** below. The processes to manage MEP nominations and trader updates were discussed.

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

Audit commentary

Status updates

Changes to status are updated within the GTV life cycle and automatically transferred to the registry. Jobtrack operational reporting is used daily to monitor ICPs where status changes are expected and follow up outstanding paperwork.

<u>Updates to active status</u>

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

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Active	2015	183	76%	10.5
	2016	700	80%	8.1
	2017	2,942	88%	5.4
	2018	1,405	84%	4
	2020	481	90.82%	2.93
	2021	446	87.78%	4.92

80 of the late updates were made more than 30 business days after the event date, and the latest update was made 467 business days after the event date. I checked an extreme case sample of the ten latest updates, and ten updates between 30 and 200 business days late.

- nine late updates were corrections to active status for ICPs with consumption during a period with inactive status due to revenue assurance work,
- seven late updates were due to corrections to active dates, the inactive events were reversed returning to the ICPs to active and a subsequent active update was sent to the registry as well (these updates were not required and as the ICP was already active and this is a training issue which Trustpower are addressing),
- two were due to backdated switch ins,
- one was due to late paperwork, and
- ICP 0000572727WT9BA was reconnected by the network but the notification from the network was missed (this is a Lake Ohau property that was affected by fire).

The late updates were accurately processed from the correct event date except for ICP 1000510999PCD42**.** The reconnected date should be 24 July 2019 but was recorded as 13 August 2019. This is recorded as non-compliance in **section 3.8**.

Updates to inactive status

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

Status	Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
Inactive	2015	39	90.74%	4.14
	2016	105	85.50%	17.39
	2017	241	92.57%	5.99
	2018	145	93.32%	3.72
	2020	913	92.68%	6.81
	2021	634	93.96%	7.36

There were 245 genuine late updates to inactive statuses. A sample of 43 late status updates were checked as described in the table below. Overall, I found that the late updates were predominantly caused by corrections, and late notifications.

1,4 Electrically disconnected vacant property	134 of the late updates were to 1,4 status. 29 of these updates were made between 30 and 590 business days after the event date. I checked an extreme case sample of the five latest updates, and five updates between 30 and 100 business days late. Four updates were backdated to correct statuses. Two of these were ICPs switching in for the incorrect date and Trustpower corrected the status to match the ICPs reconnection date. Three updaters were due to late notification from the field. Two updates were due to the meter being removed between the customer's final read and the request for the ICP to be decommissioned being received from the network. Trustpower are creating a report to identify such incidents. ICP 0005702038RN708 was updated late due to the paperwork not being processed correctly.
1,6 Electrically disconnected ready for Decommissioning	76 of the late updates were to 1,6 status. 26 of these updates were made between 30 and 4,286 business days after the event date. I checked an extreme case sample of the five latest updates, and five updates between 30 and 100 business days late. Nine were due to late notification from the network. One was due to late notification from the MEP to advise that the meter was being removed ready for decommissioning.
1,7 Electrically disconnected remotely by AMI meter	Five of the late updates were to 1,7 status. Three were due to late notification. ICP 0000016154WEF80 was due to being recorded against the incorrect service request. ICP 0031612547PCD08 was a failed reconnection but rather than reverse the reconnection status a subsequent inactive status update was sent.
1,8 Electrically disconnected at pole fuse	15 of the late updates were to 1,8 status. Eight of these updates were made between 30 and 538 business days after the event date. I checked all nine late updates over 30 business days and found all were due to late confirmation of the disconnection from the network. Most were safety disconnections.
1,9 Electrically disconnected due to meter disconnected	15 of the late updates were to "Electrically disconnected due to meter disconnected" status. Nine of these updates were made between 30 and 469 business days after the event date. I checked all nine late updates over 30 business days. Five were due to late notification. Four were corrections to the status: • two were due to the service request being closed out incorrectly, • the status update was due to the inactive status update being missed for ICP 0003608810WM7FE, and • ICP 0000511333WEE0E was incorrectly updated to this status as part of a correction, the event wasn't required to be sent and has since been reversed.
1,12 Inactive new connection in progress	389 of the 684 updates made more than five business days after the event date were to 1,12 (inactive new connection in progress) status. I checked all of these and found they were not genuinely late, because the update was processed prior to the ICP's initial electrical connection date.

There were no updates to 1,5, 1,10 or 1,11 status recorded on the event detail report. The late updates were accurately processed from the correct event date except for ICP 0000511333WEE0E detailed above**.** This is recorded as non-compliance in **section 3.9**.

Trader updates

Changes to trader information are updated within the GTV life cycle and automatically transferred to the registry. The timeliness of trader updates is set out on the table below.

Review period end	ICPs notified greater than 5 days	Percentage on time	Average Business Days between Status Event and Status Input Dates
2020	7,896	89.90%	3.64
2021	2,964	93.23%	4.25

870 of the late trader updates were made between 30 and 1,859 business days after the event date, and 22 updates were made over 1,000 business days after the event date. I checked the ten latest updates and found nine related to ANZSIC code corrections, and one related to a profile change.

A further 45 late trader updates were checked as described in the table below:

ANZSIC updates - changes	In addition to the nine of the ten latest updates above, I checked ten late ANZSIC code updates made between 30 and 1,000 business days after the event date and found that they all related to ANZSIC code corrections. Trustpower backdated the corrections to reflect the date of the ANZSIC code change, which meets the requirement to provide complete and accurate data but causes Trustpower to be non-compliant for backdating.
ANZSIC updates – new connections and switch ins	There were 157 late ANZSIC code updates for new connections and switch ins where the ANZSIC code was not populated within 20 business days of commencing trading. I checked the ten latest updates and found: • nine we due to backdated new connection that all related to the Chorus clean-up project, and • one was identified and corrected as part of the historic report that was being worked on to check ANZSIC code validity.
Trader unmetered load details changes	A sample of five late updates were checked and found to be corrections. The updates were processed after receiving confirmation of the correct unmetered load details. I found ICP 0000175658WT7E2 is a Chorus cabinet and has been recorded as a 12-hour supply but should be a 24-hour supply. This was updated based on the Distributor's details which are incorrect. This is recorded as non-compliance in **section 2.1**.
Unmetered daily kWh changes	A sample of five late updates were checked and found to be corrections. The updates were processed after receiving confirmation of the correct unmetered load details.
Profile updates	GTV processes profile changes automatically when meter changes occur, and backdated meter certification details changes can result in backdated profile changes. In addition to the profile update, which was one of the ten latest updates, I checked ten updates made over 100 business days after the event date. I found they were caused by corrections where the MEP has corrected register content codes, streetlight profile corrections. One system issue was identified. This occurs where the metering is removed and then reinstalled. GTV then defaults it to a GXP profile. Trustpower have already enhanced the reporting in place to identify these ICPs so they will be corrected as part of the BAU discrepancy reporting.

Submission type updates	A sample of five late updates were checked and found to be caused by backdated metering events that prevent Trustpower from updating their profile.

The late updates were accurately processed from the correct event date.

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 Trustpower 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. I checked the 20 late MEP nominations made between 30 and 104 business days after the event date and found:

- ten were due to IHUB being nominated in the first instance and then a MTRX meter was installed (Trustpower are working with IHUB to improve the notification process in these situations),
- four nominations were backdated at the request of the MEP,
- two nominations were backdated due to the incorrect MEP being nominated in the first instance due to human error; one related to a TOU installation and the other related to a meter change initiated as part of a revenue assurance case (training will be provided in both instances),
- two were due to corrections needed to correct a nomination date (ICP 0000060407NT3FD) and where TRUM was nominated in the first instance but a SMCO meter was installed (ICP 0000035644NT3CB),
- one was due to a backdated switch (ICP 0000544763NRCA6), and
- one was due to installation issues which took some time to resolve and resulted in a different MEP installing a meter that fitted (ICP 0000045404HRDF2).

In all cases the correct dates were applied. The 12 ICPs where the incorrect MEP was nominated in the first instance is recorded as non-compliance in **section 3.4**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.3 With: Clause 10 Schedule 11.1 From: 01-Apr-20 To: 28-Jan-21	2,964 ICPs did not have trader information updated on the registry within five business days of the event date. 245 ICPs were not updated to inactive status on the registry within five business days of the event date. 446 ICPs were not updated to active status on the registry within five business days of the event date. 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 recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact on settlement and participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**
Trustpower continues to look for opportunities to refine our reporting and processes to improve our performance in updating registry information within 5 business days. We continue to work with our MEP's to ensure timely updates of information where changes are required to existing data.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		**Completion date**	
Trustpower has made process changes to ensure incorrect active status updates are being made during corrections of inactive statuses. Reporting will also be created to look for sites where the meter removal date and decommissioned status date differ to avoid late backdated inactive statuses being entered. Trustpower also continues to engage with third parties (MEPs) to reduce the number of late MEP nominations. Trustpower reporting has been corrected to pick up all double disconnection statuses in a row, historically was only looking at 1,4 statuses. A review of our Safety Disconnection Process will be done to see if gaps can be closed in late network notifications. Last year a historic report established for ANZSIC discrepancies was brought up to date. Now results are current we anticipate a reduction in backdated corrections being made.		15 December 2021	

3.4. Trader responsibility for an ICP (Clause 11.18)

Code reference

Clause 11.18

Code related audit information

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

A trader ceases to be responsible for an ICP if:

- *another trader is recorded in the registry as accepting responsibility for the ICP (clause 11.18(2)(a)); or*
- *the ICP is decommissioned in accordance with clause 20 of Schedule 11.1 (clause 11.18(2)(b)).*
- *if an ICP is to be decommissioned, the trader who is responsible for the ICP must (clause 11.18(3)):*

- *arrange for a final interrogation to take place prior to or upon meter removal (clause 11.18(3)(a)); and*
- *advise the MEP responsible for the metering installation of the decommissioning (clause 11.18(3)(b)).*

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

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

Audit observation

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

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

Audit commentary

Retailers Responsibility to Nominate and Record MEP in the Registry

The new connection process is discussed in detail in **section 2.9** above. Trustpower nominate the MEP at the same time as taking the ICP to the "inactive - new connection in progress" status. All new connections have an MEP nominated. This is semi-automated to select the MEP based on area as TRUM is no longer the default MEP for new connections. In addition to this, training documentation has also been created for users to reference.

The AC020 report recorded 23 active ICPs with metering category 9, null, or zero which did not have the unmetered flag set to yes. 18 of these also had no MEP recorded. All were timing differences, and the ICPs had meter details populated on the registry, or MEP nominations made and/or accepted prior to the audit.

The AC020 report identified two new connections which did not have an MEP nomination accepted within 14 business days of being connected. One was invalidly recorded on the AC020 because the MEP nomination was accepted within one business day of being issued. ICP 0001113373WM8B8 is an unmetered connection and the unmetered details were added to the ICP when electrically connected on 28 October 2020 but then a new trader event sent at the same time removed this. These have now been added with the correct event date. This does not affect reconciliation as GTV reconciles unmetered load from a different field. This is recorded as non-compliance in **section 2.1** and **3.5**.

12 of the 44,034 MEP nominations identified on the event detail report were rejections. All were rejected because an incorrect MEP was nominated and were reissued and accepted by another MEP. I reviewed these and found that:

- in four instances the incorrect MEP of TPCO was being issued if no MEP was selected by the operator (Trustpower have corrected the coding for this so TPCO is no longer available),
- there was no reporting in place for rejected MEP nominations for new connections (reporting has been created to address this),
- the reporting for meter changes was notifying the team three days after a rejection had been received (this has been amended to be delivered immediately).

As detailed in **section 3.3**, 12 ICPs had the incorrect MEP nominated in the first instance. This is recorded as non-compliance below.

ICP Decommissioning

Trustpower continues with their obligations under this clause. ICPs that are vacant and either active or inactive are still maintained in GTV.

In all cases, an attempt is made to read the meter at the time of removal and if this is not possible then the last actual meter reading is used. This last actual reading is normally the one taken at the time of disconnection. Trustpower also advise the MEP responsible that a site is to be decommissioned with the exception of NGCM as Trustpower were being charged for the asset collection.

A sample of ten ICPs were examined, and I confirmed an attempt to read the meter was made at the time of removal. I found one instance of this of the sample checked for ICP 0000200200CT087 where the MEP was not notified. Trustpower have since changed this process so that NGCM is notified, and a report is being built that will look for any ICPs ready for decommissioning or decommissioned where an MEP has not been notified.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.4 With: Clause 11.18 From: 01-Apr-20 To: 28-Feb-21	24 ICPs with the incorrect MEP nominated in the first instance. MEP not notified for one of the ten decommissioned ICPs checked. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are strong, as the reporting and processes have been strengthened to address the non-compliances identified. This will mitigate risk to an acceptable level. The audit risk rating is assessed to be low as the correct MEP subsequently nominated and accepted in all cases.

Actions taken to resolve the issue	Completion date	Remedial action status
Due to the sale of our own MEP new processes and procedures were needed to be set up to align with alternate MEP's. All nominations to incorrect MEP's in the first instance have now been addressed and corrected. The MEP has now been notified of the ICP (0000200200CT087) that had been decommissioned, asking them to collect the assets if required.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

Team knowledge and training gaps have been addressed and documentation updated so that correct MEP nominations are made in the first instance. Automation is being enhanced so that manual selection in most instances is not required when processing a New Connection. New process created with IHUB so that if they are using a MTRX meter (due to Meterboard room issues) instead they are notifying TRUS early so a correction nomination can be made. Current Reporting will be enhanced to identify ICP's at Decommissioned or Ready for Decommissioning Statuses that do not already have a Service Order raised to alert the MEP for the collection of their assets.	15 December 2021	

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 5 business days of trading (clause 9(2)).

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

Audit observation

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

Audit commentary

New connection information timeliness

The new connection process is described in detail in **section 2.9**. MEP nomination occurs when the ICP is at "inactive - new connection in progress" status as part of the service request process. Late updates to "inactive - new connection in progress" status and late MEP nominations are discussed in **section 3.3**.

As discussed in **section 3.4**, The AC020 report identified two new connections which did not have an MEP nomination accepted within 14 business days of being connected. One was invalidly recorded on the AC020 because the MEP nomination was accepted within one business day of being issued. ICP 0001113373WM8B8 is an unmetered connection and the unmetered details were added to the ICP when electrically connected but then a new trader event sent at the same time removed this. These have now been added with the correct event date. This is recorded as non-compliance below and in **section 2.1**.

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

Review period end	ICPs notified greater than 5 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
2021	642	88.26%	6.81

140 of the late updates were made more than 30 business days after the event date, and the latest update was made 531 business days after the event date. I checked all 98 late updates made 60 or more business days after the event date. 71 were backdated new connections for unmetered load, and 67 of those were telecommunications cabinets.

I checked an extreme case sample of the five latest HHR status updates, the five latest NHH status updates, six status updates over 60 business days after the event date for unmetered telecommunications cabinets, and all three status updates over 60 business days after the event date for other types of unmetered load.

- The six updates for unmetered telecommunications were existing connections that are part of the Chorus clean-up project and were paperwork only new connections.
- The other three unmetered late updates related to streetlight ICPs which were created and backdated to ensure existing streetlight loads were reconciled.
- The five late HHR new connections were late due to:
    - two ICPs not being updated to ready by the network, and
    - late notification from the field or data started being received indicating the ICP had been electrically connected for three ICPs.
- The five late NHH new connections were late due to:
    - corrections to the start date for three ICPs,
    - late paperwork for one ICP,
    - the new connection work order was cancelled in error for ICP 0009076035WW4B2, it was then re-opened incorrectly, and the MEP removed the metering from the registry and the customer called to ask why they hadn't received a bill (the meter change report with a disconnected status has been updated to include the new connection status and this will identify any such incidents).

The late updates were accurately processed for the correct event date.

I rechecked the previous audit exception for 0000519838BU421 which had an active status recorded from 25 March 2019 and which has been corrected to 21 March 2019.

New connection information accuracy

GTV and Jobtrack are used to manage new connections. Field service orders are raised in GTV and transferred to Jobtrack, and job closure information is transferred from Jobtrack to GTV. Work orders remain open and are monitored until completion paperwork is received.

Jobtrack is used to dispatch field services jobs. Some contractors input field results directly into Jobtrack, and others provide paperwork which is manually entered into Jobtrack. Open jobs are tracked daily using the Jobtrack operational reporting and followed up if paperwork is not received. Once paperwork is received GTV is updated, and the status update is automatically transferred from GTV to the registry.

The daily new connections automation process identifies ICPs which have meter certification and/or an initial electrical connection date but have not been updated to active status. Bulk processes are used to update these ICPs to active status based on the initial electrical connection date and meter certification date, in an effort to ensure that the registry is updated within five business days. Once connection paperwork is received, corrections to the active status date are carried out as required.

HHR new connections follow the same general application process as new connections. Once the connection is ready, the TOU metering team liaise directly with the MEP to arrange meter installation. When determining the correct active date, Trustpower reviews the HHR volume information to determine when consumption started.

Daily discrepancy reporting is in place to detect status mismatch between GTV and the registry for both NHH and HHR 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 business days, and within 20 business days; staff follow up the late metering paperwork with the MEP,
- **CO date mismatch** shows differences between GTV's connection date and the initial electrical connection date, which are investigated and resolved (Trustpower have adopted the last audit's recommendation that this is also checked against the registry date).

The AC020 report identified 22 ICPs with an initial electrical connection date populated which had not been made active. All were timing differences, and the status was updated to active prior to the audit.

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 1,122 ICPs with date discrepancies, and 1,005 were confirmed not to be genuine at the time of the audit:

- 828 ICPs had a meter certification date which matched the active status date, but the initial electrical connection date was not populated by the distributor,
- 151 ICPs were unmetered, and the active status date matched the initial electrical connection date, and
- 26 ICPs were metered but the MEP had not updated certification details on the registry, and the initial electrical connection date and active date matched.

The 117 ICPs genuine discrepancies were checked. A summary of findings for the 117 discrepancies is below:

Exception type	Quantity	Commentary
No initial electrical connection date, unmetered	74	Sample five ICPs were confirmed to be electrically connected, and Trustpower's status dates were correct. All were part of the Chorus clean-up project.
No initial electrical connection date, active date ≠ meter cert date	5	All exceptions were checked and Trustpower was confirmed to have the correct active date in all instances
Initial electrical connection date ≠ active date, meter cert = active date	7	The five largest differences were checked. Two genuine exceptions were identified, both were corrected during the audit.
Active date ≠ initial electrical connection date and meter certification date	0	
Initial electrical connection date = active date, meter cert ≠ active date	22	The five largest differences were checked. Four genuine exceptions were identified, all had meter certifications earlier than the first active date. These had been temporarily electrically connected to certify the meters and then were re-livened later. Trustpower have revised their process and will make the ICP active from the meter certification date if the meter has been certified by being electrically connected and not certified using a load bank. This is recorded as non-compliance below and in **sections 2.1** and **3.8**.
Initial electrical connection date ≠ active date, unmetered	1	Trustpower was confirmed to the have the correct active date. The Distributor has since corrected their date.
No initial electrical connection date or meter certification date	8	Trustpower was confirmed to the have the correct active date and these were due to timing. ICP 1002074141LCE12 was electrically connected on 4 December 2019 but not certified until 4 August 2020. This is recorded as non-compliance in **sections 2.1** and **2.11**.

I checked the four remaining HHR new connections where the meter certification matched Trustpower's active date but there was no initial electrical connection date populated and confirmed that Trustpower's active date is correct.

As detailed in **section 3.4**, ICP 0001113373WM8B8 is an unmetered connection and the unmetered details were added to the ICP when electrically connected on 28 October 2020 but then a new trader event sent at the same time removed this. These have now been added with the correct event date. This does not affect reconciliation as GTV reconciles unmetered load from a different field. This is recorded as non-compliance in below and in **section 2.1**.

MEP nomination

Trustpower nominate the MEP at the same time as taking the ICP to the "inactive - new connection in progress" status. All new connections have an MEP nominated.

ANZSIC code population

There were 157 late ANZSIC code updates for new connections and switch ins where the ANZSIC code was not populated within 20 business days of commencing trading. I checked the ten latest updates and found:

- nine were due to backdated new connections that all related to the Chorus clean-up project, and
- one was identified and corrected as part of the historic report that was being worked to check ANZSIC code validity.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.5 With: Clause 9 of schedule 11.1 From: 01-Apr-20 To: 28-Feb-21	ICP 0001113373WM8B8 unmetered load details not populated when electrically connected. 642 late updates to active status for new connections. Six new ICPs had incorrect active status dates of the sample checked. 157 late ANZSIC codes not updated within 20 days of commencing trading. 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 recorded as strong as there is robust reporting and processes in place. The impact on settlement and participants is minor based on the number of genuine exceptions identified, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
The non-compliances for the New Connections process have been analysed and accepted. Corrections have been made where appropriate. With the sale of our own MEP we have made considerable changes within our New Connections process to incorporate working with new MEP's. This has taken some time to iron out.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

An existing report giving visibility across all valid trader fields for unmetered ICP's has been enhanced and picks up all anomalies for correction. Weekly Reporting provides visibility across different MEP's and we continue to work actively with any MEP's that are not delivering us information to update the Registry within required timeframes. An existing report that compares active statuses for New Connections (IED date, Registry date, GTV date, Certification Date) has been enhanced and additional training has been given and process documentation updated so that accuracy can be delivered. An ANZSIC discrepancy report which picked up backdated discrepancies is now up to date so backdated corrections should no longer be necessary.	15 December 2021	

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

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 between GTV and the registry are identified and resolved as part of the registry discrepancy reporting process.

The validity of ANZSIC codes was checked using the AC020 report, and I found:

- one ICP with a T99 series ANZSIC code, which has been corrected,
- no ICPs with meter category three and residential ANZSIC codes,
- 14 ICPs with meter category two and residential ANZSIC codes; these were checked and found:
  - five ICPs were correct, and
  - nine have been corrected from the customer's move in date.

I checked a diverse sample of 150 active ICPs across the 25 most frequently applied ANZSIC codes which were assigned to 0.09% or more of the active ICPs:

- 123 ICPs were confirmed to have the correct ANZSIC code applied,
- 24 ICPs had the incorrect ANZSIC code; these have been corrected, and
- three have since switched away from Trustpower.

Trustpower are investigating additional reporting to assist in identifying potential incorrect ANZSIC codes.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.6 With: 9 (1(k) Schedule 11.1 From: 01-Apr-20 To: 28-Jan-21	One ICP with a T99 series ANZSIC code. Nine category 2 ICPs with a residential ANZSIC code applied. 24 ICPs of the 150 ICPs sampled with an incorrect ANZSIC code applied. Potential impact: None Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as moderate and will mitigate risk most of the time but there is room for improvement. The audit risk rating is low this has no direct impact on submission accuracy.

Actions taken to resolve the issue	Completion date	Remedial action status
All ICP's on this list have since been corrected. Some of the sites found here have appeared on our reporting. We think they were missed due to the volume on the reports and the number of different reports in different places.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We created a new report to look into Category 2 meters with residential ANZSIC codes which we didn't have before, and after finding some issues with our logic/code for ANZSIC, we will work through with our analytics team to improve those reports. We have also moved our reporting to Power BI which provides better filtering, easier access and a better way to displaying the data.	15 July 2021.	

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 processes to manage unmetered load were examined.

The audit compliance reports were examined to identify any ICPs where:

- unmetered load is identified by the distributor, but none is recorded by Trustpower, and
- Trustpower's unmetered load figure does not match with the Distributor's figure where it was 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

All unmetered load new connections or capacity changes require an application to Trustpower that is reviewed and authorised to ensure accuracy.

Trustpower has strong controls in place for the management of unmetered load. Daily discrepancy reports identify differences between the trader and distributor unmetered load fields in both GTV and the registry. Discrepancies are thoroughly investigated with assistance from the account manager and/or customer, and the distributor.

Trustpower supplies 2,648 active ICPs with the unmetered flag set to "yes". 98 ICPs are indicated to have shared unmetered load, and 62 ICPs have distributed unmetered load indicated. The remainder have standard unmetered load.

Distributor and trader unmetered load details were compared using the AC020 report. The table below lists the discrepancies found.

Issue	2021 ICPs	2020 ICPs	2018 ICPs	2017 ICPs	2016 ICPs	Comments
Daily kWh difference more than 0.1 kWh per day	42	30	118	762	1,344	18 ICPs had the correct daily unmetered kWh recorded. 19 ICPs with the incorrect daily unmetered kWh recorded. These were corrected during the audit. Five are DUML ICPs and the unmetered load is calculated from the DUML database.
Daily kWh difference more than 1.0 kWh per day	27	19	37	189	122	16 ICPs had the correct daily unmetered kWh recorded. Six ICPs with the incorrect daily unmetered kWh recorded. These were corrected during the audit. Five are DUML ICPs and the unmetered load is calculated from the DUML database.
Distributor's unmetered field is populated but the retailer field is not populated	11	24	27	31	43	Ten of the 11 ICPs have metered load and metering is installed. As detailed in **section 3.5**, the unmetered load details for ICP 0001113373WM8B8 was not recorded until 9 March 2021.
Unmetered flag = Y but daily unmetered kWh = 0	2	5	4	2	4	In both cases (ICPs 0000842905WPDC2 and 0000602090WP7E0), the customer wishes for the ICP to remain active as the customer does not want to disconnect as the transformer will be removed. This has been agreed with the network.

As detailed in **section 3.3**, that the unmetered load for ICP 0000175658WT7E2 is recorded incorrectly by both the Trustpower and the Distributor. This is a chorus cabinet with a 24-hour supply not 12 hours as recorded on the registry. This is recorded as non-compliance below.

Unmetered BTS

I checked the registry list to identify active unmetered BTS ICPs. Three active, unmetered BTS ICPs were identified. Two of these were confirmed to be valid unmetered BTS supplies. Trustpower is checking with the network for ICP 0007161032RN934 as this has been an unmetered BTS supply since 2014 and switched into Trustpower in 2017.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.7 With: Clause 9(1)(f) of Schedule 11.1 From: 01-Apr-20 To: 28-Jan-21	19 ICPs had incorrect daily unmetered kWh recorded on the registry and were corrected during the audit. The unmetered load details for ICP 0001113373WM8B8 were not recorded until 9/03/21. ICP 0000175658WT7E2 incorrectly recorded as a 12-hour supply when it should be 24-hour supply. 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 as the number of discrepancies whilst still small indicates that there is an opportunity for improvement. The impact on settlement and participants is minor, as the discrepancies are small.

Actions taken to resolve the issue	Completion date	Remedial action status
We continue to address discrepancies and errors to maintain accurate retailer unmetered information on the Registry. (ICP 0000175658WT7E2 has been updated to 24-hour supply) - Cleared	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
An existing report giving visibility across all valid trader fields for unmetered ICP's has been enhanced and picks up all anomalies for correction. During the previous year we had a higher than usual number of unmetered ICP's created due to a Chorus Project which has now been completed. This should mean that we see fewer unmetered ICP's being processed.	Complete	

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 reconnection process was examined using the AC020 and event detail reports.

- The timeliness and accuracy of data for new connections is assessed in **section 3.5**.
- The timeliness of data for reconnections is assessed in **section 3.3**, and a sample of 20 updates were checked for accuracy.

For new connections which had been electrically connected during the audit period, the initial electrical connection date, earliest active date, and meter certification date were compared to determine the accuracy of the connection dates.

Audit commentary

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. When an ICP is loaded in GTV the user must specify whether the load is metered or unmetered.

New connections

As described in **section 3.5**, new ICPs are updated to active status once Trustpower confirms the ICP is connected. This is normally when connection paperwork is received or HHR volumes begin to be recorded. In some cases, the distributor or MEP may update their connection information on the registry before connection paperwork is received. The daily new connections automation process identifies ICPs which have meter certification and/or an initial electrical connection date but have not been updated to active status. Bulk processes are used to update these ICPs to active status based on the initial electrical connection date and meter certification date, in an effort to ensure that the registry is updated within five business days. Once connection paperwork is received, corrections to the active status date are carried out as required.

The AC020 report identified 22 ICPs with an initial electrical connection date populated which had not been made active. All were timing differences, and the status was updated to active prior to the audit.

As described in detail in **section 3.5**, the 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 1,122 ICPs with date discrepancies, and 1,005 were confirmed not to be genuine at the time of the audit. The 117 ICPs with genuine discrepancies were checked and are detailed in **section 3.5**. This identified six ICPs with incorrect first active dates. This is recorded as non-compliance below.

The last audit identified that not all date discrepancies were being identified. Trustpower have adopted the last audit's recommendation that the first GTV active date is also checked against the registry date.

I rechecked the previous audit exception for 0000519838BU421. The status date had not been corrected but was corrected during the audit. This is recorded as non-compliance below and in **section 2.1**.

Reconnections

GTV and Jobtrack are used to manage disconnections and reconnections. Field service orders are raised in GTV and transferred to Jobtrack, and job closure information is transferred from Jobtrack to GTV.

Jobtrack is used to dispatch field services jobs. Some contractors input field results directly into Jobtrack, and others provide paperwork which is manually entered into Jobtrack. Open jobs are tracked daily using the Jobtrack operational reporting and followed up if paperwork is not received. Daily discrepancy reporting is in place to detect status mismatch between GTV and the registry.

Wherever possible reconnections are conducted remotely. If remote reconnection cannot occur, a field services contractor is dispatched.

A sample of 20 reconnections were checked, and I confirmed that the status and date had been applied for all except for ICP 1000510999PCD42**.** The reconnected date should be 24 July 2019 but was recorded as 13 August 2019. This is recorded as non-compliance in below.

As detailed in the last audit, I found that when reconnections are processed, reads are only usually entered if reconnection coincides with a meter change. This is unlikely to change until the Jobtrack system is replaced but I repeat the recommendation that disconnection and reconnection reads should be recorded to ensure that consumption is reported against the correct consumption period.

Description	Recommendation	Audited party comment	Remedial action
Enter reconnection reads into GTV	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.	We agree that utilising reconnection contractor reads would be advantageous. When Jobtrack came up for review this year (Jobtrack = current software where jobs are managed) this was one area that was put forward as a consideration to address. The upgrade/replacement of this tool has now been put on hold pending the outcome of Trustpower's current Strategic Review.	Identified

Timeliness of status updates to active

Some late status changes to active are recorded as non-compliance in **sections 3.3** and **3.5**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.8 With: Clause 17 of schedule 11 From: 01-Apr-20 To: 28-Feb-21	Six new ICPs had incorrect active status dates of the sample checked. ICP 1000510999PCD42 had active status recorded from 13/08/19 but should have had active status recorded from 24/07/19. ICP 0000519838BU421 identified in the 2020 audit not corrected during the audit period. 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 recorded as strong as there is robust reporting and processes in place. The impact on settlement and participants is minor based on the number of genuine exceptions identified, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
All ICP's with incorrect active status dates identified in the audit have now been corrected in both GTV and the Registry.	Complete	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
An existing report that compares active statuses for New Connections (IED date, Registry date, GTV date, Certification Date) has been enhanced and additional training has been given and process documentation updated so that accuracy can be delivered.	Complete	

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

Code reference

Clause 19 Schedule 11.1

Code related audit information

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

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

Audit observation

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

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

Audit commentary

Inactive - new connection in progress

As recorded in **section 1.7** there were 899 ICPs at this status in the list file. Trustpower 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.

There are 73 ICPs which have been at "inactive - new connection in progress" for more than 24 months. I checked an extreme case sample of the 15 oldest ICPs. I found that ten hadn't been followed up in the last year. Trustpower paused this process during the COVID 19 pandemic, and these are in the process of being reviewed. The remaining five had either been confirmed as required or decommissioned set up in error.

As discussed in **section 3.8**, The AC020 report identified 22 ICPs with an initial electrical connection date populated which had not been made active. All were timing differences, and the status was updated to active prior to the audit.

Inactive Status (excluding new connection in progress)

ICPs are only changed to an inactive status once Trustpower has received confirmation that the ICP is disconnected. Usually requests for disconnection are initiated by Trustpower and completed by an approved contractor, but sometimes the distributor or MEP will disconnect ICPs for safety, or the distributor will disconnect for credit where they bill the customer for line charges directly. Contractors are periodically audited to ensure the appropriate policies and procedures are being complied with.

When an ICP becomes vacant, Trustpower contacts the occupier requesting that they register for electricity supply. If no registration is received, the ICP will be disconnected seven to 14 days later.

After 20 days with no readings, disconnected AMI ICPs are moved to a manual meter reading route.

GTV and Jobtrack are used to manage disconnections and reconnections. Field service orders are raised in GTV and transferred to Jobtrack, and job closure information is transferred from Jobtrack to GTV.

Jobtrack is used to dispatch field services jobs. Some contractors input field results directly into Jobtrack, and others provide paperwork which is manually entered into Jobtrack. Open jobs are tracked daily using the Jobtrack operational reporting and followed up if paperwork is not received. Daily discrepancy reporting is in place to detect status mismatch between GTV and the registry.

As reported in the last audit, there is no automated process to enter disconnection reads into GTV. Reads for credit disconnections are usually manually entered into GTV from the disconnection paperwork. As noted in **section 3.8**, this is unlikely to occur until Jobtrack is replaced but I have repeated the recommendation to maintain visibility.

Description	Recommendation	Audited party comment	Remedial action
Enter disconnection reads into GTV	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.	We agree that utilising disconnection contractor reads would be advantageous. When Jobtrack came up for review this year (Jobtrack = current software where jobs are managed) this was one area that was put forward as a consideration to address. The upgrade/replacement of this tool has now been put on hold pending the outcome of Trustpower's current Strategic Review.	Identified

I reviewed a sample of 43 updates to inactive status, including at least five (or all) late status updates for each status reason code used during the audit period. The late updates were accurately processed from the correct event date except for ICP 0000511333WEE0E**.** This event was not required to be sent to the registry and has since been reversed. This is recorded as non-compliance below.

Ten examples of inactive ICPs with consumption were checked in **section 8.1**. All were found to have been correctly processed.

The AC020 report recorded five ICPs with 1,7 (Electrically disconnected due to meter disconnected) status where the AMI flag is set to no. All had the AMI flag set to yes at the time the disconnection event was processed.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.9 With: Clause 19 Schedule 11.1 From: 09-Mar-20 To: 09-Mar-20	ICP 0000511333WEE0E incorrectly recorded as electrically disconnected due to the being meter disconnected and reconnected on the same date of 9/03/20. Potential impact: None Actual impact: None Audit history: Three times previously Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as strong as the processes in place are robust and will mitigate risk to an acceptable level. The impact is none as this event was sent to the registry when it wasn't required so there is no impact on reconciliation hence the lowest rating of low has been selected.

Actions taken to resolve the issue	Completion date	Remedial action status
The incorrectly recorded status of (1,9) for ICP 0000511333WEE0E has since been reversed from both GTV and the Registry and is now correct and accurate.	Complete	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Existing Trustpower reporting has been corrected to pick up all double disconnection statuses in a row. Historically it was only looking at the 1,4 which means that ICP 0000511333WEE0E had been overlooked.	Complete	

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

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

Audit commentary

Trustpower take all new connections to the “inactive - new connection in progress” status. Daily discrepancy reporting is in place to identify ICPs where Trustpower is recorded as the proposed trader and the ICP is not loaded in GTV.

Any requests from distributors on ICPs which have been at “new” or “ready” status for more than two years are investigated and responded to when they are received.

Ready status

ICPs at “ready” status are monitored using discrepancy reporting, and review dates are set for each ICP based on information provided by the customer or their electrician. Notes on action taken are recorded in the discrepancy report and in the GTV memos.

Six ICPs have been at “ready” status for more than two years. I found five had either been decommissioned, or the distributor had been advised that they could be decommissioned, and the service request was cancelled. Trustpower are the proposed trader for ICP 0001187170WF770 which has been ready since 2008. They advised that they should not be the proposed trader for this ICP.

New status

ICPs at “new” status are not actively monitored. If the distributor enters any information indicating that a new ICP has been connected, such as an initial electrical connection date, the ICP will appear in the connection date discrepancy reporting and be investigated.

17 ICPs have been at “new” status for more than 24 months. I checked the ten oldest ICPs at “new” status and found all ten have been decommissioned.

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 one or more profile codes associated with that ICP.

Audit observation

The switch gain process was examined to determine when Trustpower deem all conditions to be met. A typical sample of five ICPs were checked to confirm that these were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

Trustpower's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. Trustpower confirmed that they do not hold electricity only customer switches for the five-business day cooling off period, and instead withdraw the switch if the customer changes their mind. Switches for bundled customers (which purchase telecommunications as well as energy) are held for the five-business day cooling off period. Both approaches are confirmed to be a compliant practice as advised by the Electricity Authority via email on May 22nd, 2013.

Switch type is selected based on information provided by the customer on application. The customer is asked whether they are moving to a new address or remaining at the same address and transferring between retailers as part of the application process.

Commercial and industrial contracted customers usually switch between retailers on the first day after their contract term ends to avoid paying contract termination fees for switching early, or standard pricing where they remain with a retailer after their contract ends. Contract customers such as district and city councils may switch large numbers of ICPs between retailers at one time.

In some cases where a certain switch event date is required, Trustpower requests a switch move instead of a transfer switch with the agreement of the losing trader. While it is possible to request a standard switch with a proposed switch event date, the losing trader may elect to use a different date. For switch moves, the losing trader should comply with the requested date, increasing the likelihood that the ICPs will switch on the correct date. This practice is still used; and led to an alleged breach during the previous audit period, which was not pursued, and no warning was issued. I found no evidence of this occurring during the audit period therefore I have recorded compliance.

Review of the event detail report found 10,753 transfer NTs were issued. The highest metering category was checked for the 10,135 ICPs with transfer NTs which were also included on the registry list snapshot report. None of the ICPs checked had a metering category of three or higher.

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

Audit outcome

Compliant

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

Code reference

Clauses 3 and 4 Schedule 11.3

Code related audit information

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

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

When establishing an event date for clause 4, the losing trader may disregard every event date established by the losing trader for an ICP for which when the losing trader received notice from the registry manager under clause 22(a) the losing trader had been responsible for less than 2 months.

Audit observation

The event detail report was reviewed to:

- identify AN files issued by Trustpower during the audit period,
- assess compliance with the requirement to meet the setting of event dates requirement, and
- a sample of two (or all) ANs per response code were reviewed to determine whether the codes had been correctly applied.

The switch breach history report was examined for the audit period, and reports used in the switching process were reviewed.

Audit commentary

AN content

AN files are automatically generated by GTV.

During the previous audit I found some AN files with incorrectly applied AA and AD response codes. To determine whether the issue was still present, I checked all 862 transfer ANs where metering information was recorded on the registry list snapshot and found one genuine exception where the AA response code was applied, and the latest record indicated the ICP was unmetered.

I also reviewed a sample of at least two or all AN files per response code and found that the correct response codes were applied.

The event detail report was reviewed for 1,294 transfer switches to assess compliance with the setting of event dates requirements.

- 1,003 ANs (77.5%) had proposed event dates within five business days of NT receipt.
- 1,276 ANs (98.6%) had proposed event dates within ten business days of NT receipt.
- 18 ANs had proposed event dates more than ten business days of NT receipt, and in all cases the proposed event date matched the date requested by the gaining trader in the NT file. This is recorded as non-compliance.

AN timeliness

Trustpower monitors the timeliness of switches using:

- the Electricity Switch Loss Approve Errors (HOLDS) report, which shows any ICPs which require intervention or review before GTV can issue the AN file, such as switch move NTs received for occupied premises, and ICPs with no reads during the period of supply (the held ICPs are worked through daily, and prioritised by the AN due date), and
- the switch breach history report is monitored three to four times per day to ensure that ANs are issued by their due date.

Switch timeliness and event date setting is also monitored using Trustpower's switching compliance report, which is reviewed monthly.

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

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.2 With: Clauses 3 and 4 Schedule 11.3 From: 03-Jan-19 To: 30-Oct-19	18 ICPs with proposed event dates greater than ten business days of the NT receipt date. 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 rated as strong as AN code assignment is automated based on hierarchy and the AN proposed dates process is robust. The impact is assessed as low as the AN dates matched those requested by the gaining trader.

Actions taken to resolve the issue	Completion date	Remedial action status
Reporting was already in place to identify the proposed event dates in the AN file (automated) being greater than 10 business days of the NT receipt date (after the AN had been sent) and in all instances, prior to the switch being completed a NWDF was sent to the gaining trader, asking for a new switch request to be sent closer to the intended event date.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

A JIRA ticket has been raised with our Delivery Team so that the automation within GTV can be changed. If a NT is received for a TR switch and the requested event date > 10 business days into the future then the requested event date will be ignored and instead TRUS will set the switch event date based on the standard parameters set up in GTV. This proposed event date will instead be sent within the AN response file. Once this ticket has been completed there will be no further non-compliances for this.	15 December 2021	

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 5 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 Trustpower during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of records. The content checked included:

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

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

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

Audit commentary

CS timeliness

Trustpower monitors the timeliness of switches using:

- the Electricity Switch report, which shows any CS files which are due to be issued, and
- the switch breach history report is monitored three to four times per day to ensure that AN and CS files are issued by their due date.

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

CS content

Average daily kWh is based on the consumption between the last two validated actual or permanent estimate readings recorded in GTV. When an ICP switches out without at least two actual readings the average daily kWh from the incoming CS is applied. Zero day bills are no longer automatically produced, the previous invoice is reversed and replaced with a final invoice.

Analysis of the average daily kWh on the event detail report identified:

Average daily kWh	Count of transfer CS files	Comment
Negative	0	Compliant.
Zero	12	A typical sample of five files were checked. Four were correct, and one was incorrect due to the meter being removed and reinstalled multiple times on the ICP.
More than 200 kWh	2	Both were checked and confirmed to be correct.

No inconsistencies between last actual read dates and switch event read types were identified for transfer switches. No transfer CS file was sent with a CSPREMISES line only.

I checked a sample of eight transfer CS files to determine whether the content was accurate and found the content was correct for all files checked. This is confirmation that the fixes Trustpower put in place detailed in the last audit have worked.

The switch breach history report recorded six E2 breaches for transfer switches, where the CS actual transfer date is more than ten business days of receipt of the NT. None of the breaches were genuine, in all cases the CS was sent within ten business days of NT receipt.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.3 With: Clause 5 Schedule 11.3 From: 01-Dec-20 To: 01-Dec-20	CS average daily consumption of zero was invalidly recorded for 0012132394ELAA1 (1/12/20). Potential impact: Low Actual impact: Low Audit history: Three times previously Controls: Strong Breach risk rating: 1		
Audit risk rating	**Rationale for audit risk rating**		
Low	The controls are recorded as strong, as there are robust checks in place to mitigate risk. The impact on settlement and participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**

A thorough investigation has been completed on this ICP and the cause was found to be a human error/training issue. A reading had been populated manually into GTV as an actual read using an inaccurate date. This was then used by GTV to calculate the zero ADL value (correct logic) which turned out to be zero as the read entered was the same as the previous read but just a few days apart. GTV looks at the last read to read cycle for calculation. The switch for this ICP has since been withdrawn for metering issues and has now switched again correctly with an accurate ADL value	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
The training issue has been identified and addressed and procedure documents updated. We will continue to monitor zero ADL values within our outgoing CS files for any other issues. This process is now totally automated and fully tested so controls continue to be strong	Ongoing	

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

Code reference

Clause 6(1) and 6A Schedule 11.3

Code related audit information

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

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

If the gaining trader disputes a switch meter reading because the switch event meter reading provided by the losing trader differs by 200 kWh or more, the gaining trader must, within 4 calendar months of the registry manager giving the gaining trader written notice of having received information about the switch completion, provide to the losing trader a changed switch event meter reading supported by 2 validated meter readings.

- *the losing trader can choose not to accept the reading, however, must advise the gaining trader no later than 5 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 reviewed 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 Trustpower's systems 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 Trustpower's systems.

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

Audit commentary

RR

RR requests are generally initiated via email between the two parties and once agreement has been reached, an RR file is sent to complete the process. RR requests are required to be supported by two validated actual readings. The issue identified in the last audit where customer reads, or customer photo reads were used as validated reads as part of the RR process is no longer occurring. Training was provided so that RRs are only issued based on two actual validated reads.

Once an acknowledgement file is received from the other trader, the switching team advises the billing team of the outcome, and the billing team manually updates GTV and corrects the customer's billing.

Trustpower issued 73 RR files for transfer switches. 54 were accepted and 19 were rejected. A sample of five rejected files and five accepted files were checked and all were compliant. I did not find any evidence of the issue found in the last audit where the RR reads did not match those recorded in GTV.

The switch breach history report recorded three RR breaches for RR files issued more than four months after switch completion. All were reviewed and found to be delayed either by the COVID 19 pandemic or while investigation was conducted to determine the correct switch event read.

AC

All RR requests are evaluated and validated against the ICP information. If the request meets validation requirements it is accepted.

Trustpower issued one AC file for a transfer switch, which was validly rejected so that the switch could be withdrawn due to customer cancellation.

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

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 for reconciliation.

Audit outcome

Compliant

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

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

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

- *the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 6(2)(b);*
- *the gaining trader within 5 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

Review of the event detail report found one RR for a transfer switch was issued to Trustpower within five business days of switch completion, by a trader using a half hour profile. The RR was validly rejected because the CS reading was actual, and an NW CX was initiated by Trustpower and accepted by the other trader.

Trustpower did not issue any RR requests under clause 6(2) and (3) of Schedule 11.3, no transfer switches were issued with a profile indicating a HHR submission type. All RRs for transfer switches issued within five business days of switch completion were accepted by the other trader.

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

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

Audit commentary

Trustpower 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 Trustpower deem all conditions to be met. A typical sample of ten ICPs were checked to confirm that these were notified to the registry within two business days, and that the correct switch type was selected.

Audit commentary

Trustpower's processes are compliant with the requirements of Section 36M of the Fair Trading Act 1986. Trustpower confirmed that they do not hold electricity only customer switches for the five-business day cooling off period, and instead withdraw the switch if the customer changes their mind. Switches for bundled customers (which purchase telecommunications as well as energy) are held for the five-business day cooling off period. Both approaches are confirmed to be a compliant practice as advised by the Electricity Authority via email on May 22nd, 2013.

Switch type is selected based on information provided by the customer on application. The customer is asked whether they are moving to a new address or remaining at the same address and transferring between retailers as part of the application process.

Commercial and industrial contracted customers usually switch between retailers on the first day after their contract term ends to avoid paying contract termination fees for switching early, or standard pricing where they remain with a retailer after their contract ends. Contract customers such as district and city councils may switch large numbers of ICPs between retailers at one time.

In some cases where a certain switch event date is required, Trustpower requests a switch move instead of a transfer switch with the agreement of the losing trader. While it is possible to request a standard switch with a proposed switch event date, the losing trader may elect to use a different date. For switch moves, the losing trader should comply with the requested date, increasing the likelihood that the ICPs will switch on the correct date. This practice is still used and led to an alleged breach during the previous audit period, which was not pursued, and no warning was issued. I found no evidence of this occurring during the audit period therefore I have recorded compliance.

Review of the event detail report found 18,934 switch move NTs were issued. The highest metering category was checked for the 16,807 ICPs with switch move NTs which were also included on the registry list snapshot report. None of the ICPs checked had a metering category of three or higher at the time the NT was issued.

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

Audit outcome

Compliant

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

Code reference

Clause 10(1) Schedule 11.3

Code related audit information

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

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

Audit observation

The event detail report was reviewed to:

- identify AN files issued by Trustpower during the audit period,
- assess compliance with the requirement to meet the setting of event dates requirement, and
- a sample of two (or all) ANs per response code were reviewed to determine whether the codes had been correctly applied.

The switch breach history report was examined for the audit period, and reports used in the switching process were reviewed.

Audit commentary

AN content

AN files are automatically generated by GTV.

During the previous audit I found some AN files with incorrectly applied AA and AD response codes. To determine whether the issue was still present, I checked all 277 switch move ANs where metering information was recorded on the registry list snapshot. I found the AA and AD codes applied were consistent with the metering information recorded on the registry at the time the AN was issued.

I also reviewed a sample of at least two or all AN files per response code and found that the correct response codes were applied in all but one instance. This switch file was created manually for ICP 1000519760PC9AF and the incorrect code was selected. This is recorded as non-compliance below.

The event detail report was reviewed for 467 switch move ANs to assess compliance with the setting of event dates requirements:

- 466 ANs had proposed event dates within ten business days of NT receipt,
- one NT had an event date more than ten days after NT receipt, and the AN proposed event date matched the date requested by the gaining trader, and

The switch breach history report was reviewed to identify non-compliant event dates and found:

- 50 ET breaches for switch moves, where the AN expected date was earlier than the NT requested date or more than ten business days after the NT receipt date. I checked all 20 alleged breaches

over ten business days and found 19 were not genuine because the AN proposed event dates were not before the NT proposed event date, and the proposed event dates were not more than ten business days after the NT receipt date. There was one genuine breach for ICP 0000912258TU8AA. This was created manually and was sent with the incorrect event date due to human error. A ticket has been logged with GTV so that manual AN's cannot be selected for a date earlier than the NT requested date. The switch was completed for the correct date. This is recorded as non-compliance below.

- 41 E2 breaches where the NT proposed transfer date and CS actual transfer date do not match, and the CS actual transfer date is earlier than the NT proposed event date, or more than ten business days after receipt of the NT. I checked the 20 ICPs with the largest numbers of days overdue (3-20 days) and found none were genuine breaches.

File timeliness

Trustpower monitors the timeliness of switches using:

- the Electricity Switch Loss Approve Errors (HOLDS) report, which shows any ICPs which require intervention or review before GTV can issue the AN file, such as switch move NTs received for occupied premises, and ICPs with no reads during the period of supply; the held ICPs are worked through daily, and prioritised by the AN due date,
- the Electricity Switch report, which shows any CS files which are due to be issued, and
- the switch breach history report is monitored three to four times per day to ensure that AN and CS files are issued by their due date.

Switch timeliness and event date setting is also monitored using Trustpower's switching compliance report, which is reviewed monthly.

The switch breach history report recorded:

- no late switch move AN files,
- two CS breaches for CS arrival dates more than five business days after the CS actual transfer date where no NW had been provided, however neither were genuine, both the breaches were recorded where an initial NW was issued on time, and a CS or further NWs were issued later, and
- 50 T2 breaches for CS arrival dates more than five business days after NT receipt, where no NW has been provided and the NT proposed event date matches the AN transfer date - I checked the latest 20 and found all were due to the CS file not being issued until an actual read to be billed was gained (Trustpower have revised this process and updated the process documentation to prevent this happening in the future).

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.8 With: Clause 10(1) Schedule 11.3 From: 01-Apr-20 To: 28-Jan-21	One AN file had the incorrect response code applied. One AN file sent for ICP 0000912258TU8AA with an event date earlier than the gaining trader requested. 50 T2 breaches (CS file not issued within five business days of the NT file). 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 rated as strong as the AN process is robust and has been updated to ensure that CS files are released within the required timeframe. The impact is assessed as low as the CS files sent were up to seven days late so impact on reconciliation will be minor.

Actions taken to resolve the issue	Completion date	Remedial action status
Following investigations as to why a MU (unmetered) AN code was auto selected for ICP 1000519760PC9AF, I have determined that the correct AN code was selected for the event date that GENE requested ICP from (01/01/2020) which was a date prior to when the current metering had been installed. The request date (01/01/2020) was a mistake and should have been 01/10/2020 so GENE sent a NWDF and when new NT request came through, accurate AN code was sent via GTV automation. ICP 0000912258TU8AA although an inaccurate proposed event date was sent within the AN file an accurate event date was used within the switch itself and the resulting CS file. We continue to monitor CS time breaches (CS file sent outside 5 business day rule) via daily and monthly reports.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

Monitoring and training continue, with regards to the correct AN code being used if being manually selected. Most of AN code selection is automated eliminating the risk of incorrect codes being sent. A JIRA ticket has been raised with our Delivery Team so that GTV will not allow a user in the future to select an AN proposed event date earlier than what the gaining trader has proposed for move in switches, eliminating the risk of this human error being made in the future. A training issue has been addressed with the team who were intentionally waiting for an AMI read to come in (reads take >2 days to be delivered from MEPs) so although were warned of the CS timing breach were choosing to wait for the read. This misunderstanding has been addressed and instead the team will use an estimated final read in these scenarios to avoid the breach in timeliness.	15 December 2021	

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 Trustpower during the audit period, and assess compliance with the requirement to meet the setting of event dates and switch completion requirements.

Audit commentary

The event detail report was reviewed for 467 switch move ANs to assess compliance with the setting of event dates requirements:

- 466 ANs had proposed event dates within ten business days of NT receipt,
- one NT had an event date more than ten days after NT receipt, and the AN proposed event date matched the date requested by the gaining trader, and
- no AN proposed event dates were before the gaining trader's proposed event date.

The switch breach history report was reviewed to identify non-compliant event dates and found:

- 50 ET breaches for switch moves, where the AN expected date was earlier than the NT requested date or more than ten business days after the NT receipt date. I checked all 20 alleged breaches over ten business days and found 19 were not genuine because the AN proposed event dates were not before the NT proposed event date, and the proposed event dates were not more than ten business days after the NT receipt date. There was one genuine breach for ICP 0000912258TU8AA. This was created manually and was sent with the incorrect event date due

to human error. A ticket has been logged with GTV so that manual AN's cannot be selected for a date earlier than the NT requested date. The switch was completed for the correct date. This is recorded as non-compliance below.

- 41 E2 breaches where the NT proposed transfer date and CS actual transfer date do not match, and the CS actual transfer date is earlier than the NT proposed event date, or more than ten business days after receipt of the NT. I checked the 20 ICPs with the largest numbers of days overdue (3-20 days) and found none were genuine breaches.

Switches were completed as required by this clause.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.9 With: Clause 10(2) Schedule 11.3 From: 02-Dec-20 To: 29-Dec-20	One AN file sent with an event date earlier than the gaining trader requested. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong as processes and reporting in place will mitigate risk. The impact is assessed as low as this was a one-off human error and the switch was completed for the requested date.

Actions taken to resolve the issue	Completion date	Remedial action status
ICP 0000912258TU8AA - although an inaccurate proposed event date was sent within the AN file an accurate event date was used within the switch itself and the resulting CS file.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
A JIRA ticket has been raised with our Delivery Team so that GTV will not allow a user in the future to select an AN proposed event date earlier than what the gaining trader has proposed for move in switches, eliminating the risk of this human error being made in the future	15 December 2021	

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 Trustpower 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

Average daily kWh is based on the consumption between the last two validated actual or permanent estimate readings recorded in GTV. When an ICP switches out without at least two actual readings the average daily kWh from the incoming CS is applied. Zero day bills are no longer automatically produced, the previous invoice is reversed and replaced with a final invoice.

Analysis of the average daily kWh on the event detail report identified:

Average daily kWh	Count of switch move CS files	Comment
Negative	0	Compliant.
Zero	29	A typical sample of five files were checked. All were correct,.
More than 200 kWh	0	Compliant.

No inconsistencies between last actual read dates and switch event read types were identified for switch moves. Three switch move CS files were sent with a CSPREMISES line only. These were all unmetered supplies so there is no metering information to be sent. Compliance is confirmed.

I checked a sample of eight switch move CS files and found the content was correct for all files checked. This is confirmation that the fixes Trustpower put in place detailed in the last audit have worked.

Audit outcome

Compliant

4.11.

4.12. 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 disputes procedure in clause 15.29 (with all necessary amendments) (clause 12(3)(a)); or*
- *if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader. (clause 12(3)(b)).*

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

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

Audit observation

The event detail report was reviewed 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 Trustpower's systems 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 Trustpower's systems.

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

Audit commentary

RR

RR requests are generally initiated via email between the two parties and once agreement has been reached, an RR file is sent to complete the process. The issue identified in the last audit where customer reads, or customer photo reads were used as validated reads as part of the RR process is no longer occurring. Training was provided so that RRs are only issued based on two actual validated reads.

Once an acknowledgement file is received from the other trader, the switching team advises the billing team of the outcome, and the billing team manually updates GTV and corrects the customer's billing.

Trustpower issued 488 RR files for switch moves. 367 were accepted and 121 were rejected. A sample of seven rejected files and seven accepted files were checked and all were correct.

I rechecked the following discrepancies found in the last audit:

Issue	ICPs affected	2021 findings
Incorrect agreed switch read value recorded in GTV. *Reads are not always corrected in the consumption history following receipt of the AC files. In some cases, only billing for the customer is corrected.*	0000661313WE556 (01/12/19) the CS read 45272 is recorded in GTV instead of the accepted RR read 45290. The difference is -18 kWh.	This has been resolved.
Incorrect agreed switch read type recorded in GTV. *Read types are not consistently updated when switch event reads are corrected following receipt of the AC files.*	0000038853HR4A5 (16/08/19) A should be E. 0001112048WM337 (13/09/19) A should be E. 0191241784LCF28 (06/12/19) A should be E. 1002055266UNFF7 (19/07/19) A should be E.	These have not been updated as they have no impact on reconciliation as they are start reads and will be treated as a permanent estimate.

The switch breach history report recorded 12 RR breaches for RR files issued more than four months after switch completion. All six genuine breaches were reviewed and found to be delayed either by the COVID 19 pandemic or while investigation was conducted to determine the correct switch event read.

AC

All RR requests are evaluated and validated against the ICP information. If the request meets validation requirements it is accepted.

Trustpower issued one AC file for a switch move, which accepted the other trader's RR. I confirmed this reading in GTV.

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

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 of Schedule 11.3 From: 01-Apr-20 To: 28-Jan-21	Six late RR files for switch moves. 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 rated as strong, as the processes in place mitigate risk are robust. The potential impact is low as the number of ICPs affected is small.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**
We will continue to send late RRs only if it deems more important for our customer. GTV does display a warning box if you are about to send a RR that is over 4 months old.		Complete	Identified
Preventative actions taken to ensure no further issues will occur		**Completion date**	
We have built a new report that shows ICPs that have had a RR accepted where the date or read has not yet been updated in GTV. This is being monitored daily.		Complete	

4.13. 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 a non-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 Trustpower deem all conditions to be met. All HH NTs on the event detail report were examined, and a typical sample of five ICPs were checked to confirm that the switches were notified to the registry within three business days, and that the correct switch type was selected.

Audit commentary

HH switches are managed by the HH billing team. Account managers provide signed contracts, and then the ICPs are loaded into GTV with a start date. The NT files are automatically generated on the start date, or the date they are loaded if this is after the start date.

38 HH NT files were issued during the period. 24 of the ICPs had a metering category of three or higher, and 13 had a HHR non-AMI metering installation with a metering category of one or two. ICP 0697790108LC6AF was requested incorrectly as HH switch and was withdrawn and requested as switch move.

All 38 HH NTs were issued with GXP profile. This is the GTV default profile. There is reporting in place to identify these and correct them. Trustpower have raised a ticket with GTV to get this corrected. This is recorded as non-compliance.

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

Review of the event detail report found 18,934 switch move NTs were issued. The highest metering category was checked for the 10,135 ICPs with transfer NTs and 16,807 ICPs with switch move NTs which were also included on the registry list snapshot report. None of the ICPs checked had a metering category of three or higher at the time the NT was issued.

The switch breach recorded three PT breaches for an NT proposed transfer date more than 90 days before the NT arrival date, or an NT proposed transfer date before the arrival date of the NT and in a different month from the arrival month of the NT and different from the AN expected transfer date. Two of the breaches were not genuine because the AN expected transfer dates and NT proposed transfer date matched. ICP 0697790108LC6AF was requested for 1 November 2020 on 1 December 2020 but the AN file received was for a different date of 29 September 2020. This was examined and as detailed above found that the ICP was requested in error as a half hour switch and was withdrawn and requested as switch move.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.12 With: Clause 14 of Schedule 11.3 From: 01-Apr-20 To: 28-Jan-21	All HH switch requests sent with the incorrect profile of GXP. One Category 2 AMI site requested as a HH switch. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate as there is reporting in place to identify and get these corrected.. The potential impact is low as the number of ICPs affected is minor.

Actions taken to resolve the issue	Completion date	Remedial action status
HH switch requests (NTs) are sent to the Registry initially with the incorrect profile of GXP. This is an automated process inside GTV. However, there are strong controls in place that identifies these scenarios and the GXP profile is reversed and replaced both inside GTV and the Registry promptly so that it is corrected. ICP 0697790108LC6AF was initially requested as a HH switch in error, but subsequently the switch was withdrawn and re-requested correctly as a Switch Move In.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
A JIRA ticket has been raised with our Delivery Team so that GTV will use the correct profile (HHR) when sending NT switch requests to the Registry for a HH Switch. Further training and process updates have been addressed within the Time of Use Team to ensure they are selecting the correct Switch Type when processing a registration (HH vs MI switch types). This error occurred only once so stronger controls not required. A JIRA ticket has been raised with our Delivery Team so that when a sign up is being completed for a HH or Category 2 and above ICP an alert is raised within the GTV wizard to ask the user to double check whether a HH switch or a Switch Move In Switch Type should be used.	15 December 2021	

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

Code reference

Clause 15 Schedule 11.3

Code related audit information

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

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

Audit observation

The event detail report was examined to identify all HH NT files issued by other traders and AN files issued by Trustpower.

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

Audit commentary

The timeliness of HH switches is monitored daily using Trustpower's TOU gain breach report which records any ICPs which are due to breach or have already breached the switching timeframes. The registry switch breach history report is also monitored three to four times per day to ensure that AN and CS files are issued by their due date.

HH AN files are automatically created by GTV, and AN response codes and event dates are automatically applied.

No HH NT files were issued by other traders and no HH AN files were issued by Trustpower. No late AN files were recorded on the switch breach history report.

Audit outcome

Compliant

4.15. 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 3 business days, after receiving the valid switch response code, by advising the registry manager of the event date.

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

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

Audit observation

The HH switching process was examined.

All HH NT and CS files issued by Trustpower were identified on the event detail report, and CS content was examined. The switch breach history report was reviewed.

Audit commentary

The timeliness of HH switches is monitored daily using Trustpower's TOU gain breach report which records any ICPs which are due to breach or have already breached the switching timeframes. The registry switch breach history report is also monitored three to four times per day to ensure that AN and CS files are issued by their due date.

All HH NT files had a corresponding CS or NW file. No late HH CS files were identified on the switch breach history report.

The content of all 33 HH CS files identified on the event detail report was reviewed and found to be compliant.

Audit outcome

Compliant

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

Code reference

Clauses 17 and 18 Schedule 11.3

Code related audit information

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

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

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

Audit observation

The event detail report was reviewed to:

- identify all switch withdrawal requests issued by Trustpower, and check a sample for accuracy,

- identify all switch withdrawal acknowledgements issued by Trustpower, 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

NW

Various Trustpower departments identify the need for a switch to be withdrawn, through review of ICP or customer provided information. All withdrawal requests are issued by the switching team by creating a NW service order, which includes the NW advisory code. Once the AW response is received from the other retailer, a bulk process is used to close the withdrawal work queue for the affected ICPs and update GTV.

I reviewed the content of a sample of 14 NWs and confirmed that the files were validly issued, and the correct withdrawal reason codes were applied except for ICP 0000474695UNFCE. The wrong switch code was selected but the wrong property code should have been sent. This withdrawal was rejected and accepted when the subsequent wrong property was sent. This is recorded as non-compliance.

The switch breach history report recorded:

- 69 NA breaches, where the NW arrival date was more than two calendar months after the CS actual transfer date; I checked all 16 over 80 days overdue and found that all were delayed due to either late notification from the customer or the investigation required to confirm a withdrawal was required, and
- 14 SR breaches, where the NW was issued more than ten business days after the initial NW; I checked all 12 which were more than one business day overdue and found they were late due the time required to investigate and confirm the withdrawal.

AW

Withdrawal requests received from other retailers are directed to work queues for action, and responses are considered on a case-by-case basis.

86 (6.0%) of the 1,442 AWs issued by Trustpower were rejections. I reviewed a sample of 14 rejections by Trustpower (at least two 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 eight WR breaches where the AN or CS arrival date (whichever is applicable, may be one or both) are delivered by the losing trader more than two business days after the arrival date of the AW rejecting the withdrawal and a subsequent NW is not provided before delivery of the AN or CS.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.15 With: Clause 17&18 of schedule 11.3 From: 01-Apr-20 To: 28-Jan-21	One incorrect NW code found of the sample checked. 69 NA breaches, where the NW arrival date was more than two calendar months after the CS actual transfer date. 14 SR breaches, where the NW was issued more than ten business days after the initial NW. Eight WR breaches, where the AN or CS arrival date (whichever is applicable, may be one or both) are delivered by the losing trader more than two business days after the arrival date of the AW rejecting the withdrawal and a subsequent NW is not provided before delivery of the AN or CS. Potential impact: Low Actual impact: Low Audit history: Three times previously Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as strong as they mitigate risk to an acceptable level. The impact on settlement and participants is minor; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
For ICP 0000474695UNFCE where the incorrect NW code was sent we accepted the AW and sent another NW with the correct code. We will continue to send late NW files when it is vitally important to make corrections that otherwise would impact our customer.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
The training issue with regards to an incorrect NW code being manually selected has been identified and was a one of human error. The switching team have re-addressed this as a team. A new working report has been requested to monitor the timeframes around NW files and to ensure that no new NW's are sent if it has been > 10 business days since the initial NW was sent. A further working report has been requested to monitor the timeframes for AN/CS files being sent within 2 business days of an AW being rejected.	15 December 2021	

4.17. Metering information (Clause 21 Schedule 11.3)

Code reference

Clause 21 Schedule 11.3

Code related audit information

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

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

Audit observation

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

Audit commentary

The reads applied in switching files were examined. The meter readings used in the switching process are validated meter readings or permanent estimates.

The issue raised in the last audit of switch reads being applied to either incorrect dates or read types was not found in this audit..

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

Audit outcome

Compliant

4.18. Switch saving 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 Match 2020. A sample were checked to determine compliance.

Audit commentary

Trustpower have an off-boarding team. If a switch has associated exit fees or the customer receives other services from Trustpower (e.g., gas, phone or broadband) a task will be created to make a courtesy call to the customer which is allowed under the code. No enticements are offered.

There is an alleged breach that is being investigated where it has been alleged that Trustpower breached clause 11.15AA of the Code. It was alleged that on 27 May 2020 Trustpower made contact with a customer that was in the process of switching multiple ICPs to a gaining retailer in an attempt to retain the customer during the switch protected period. The outcome of this investigation is pending.

There were 492 ICPs with a CX coded switch withdrawal within 180 days of the switch event date. A sample of ten these were examined (including all rejections), and found that in two instances the calls did not meet the requirements of this clause:

ICP	Event date	Comments
0011001251PC758	8/06/2020	The customer stated they were told they would save $50 by switching. The agent then stated" Wow - have you got their rates there? I'd quite like to do a comparison."
0004010431WM744	25/08/2020	The agent spoke to the husband but it was his wife who had organised the switch. The agent explained the exit fees for breaking the contract early. The customer states "so it might be best for us to wait until then?" Agent agrees. There is then some conversation around how the customer is bill. The customer then stated: "Is it best for me to get my wife to call you? The agent responded "If you're happy to see out the contract like you mentioned before we can stop the switch?" The customer said "I guess we should but $600 just comes and goes when it comes to power bills and their pricing was a hell of a lot cheaper so come November we'd probably still look at changing". The agent was leading the customer and the switch was subsequently withdrawn.

The issue of discussing the TECT cheque was raised in one call for ICP 0000921967TU04E. The customer wanted to switch. The agent stated, "Did they talk to you about the TECT cheque and that?" The customer wanted the switch to proceed, and the agent said they'd call them back next week when they had received all the information from the other trader. The customer called back the next week and requested that the switch be withdrawn. Discussing the TECT cheque that customers receive when they live in the TECT area may be non-compliant but further guidance is required before compliance can be determined. Therefore, I raise this as an issue to be investigated.

Issue	Description	Audited party comment
Switch saving protection	Clarification is sought as to whether the discussion of the TECT cheque as part of the administrative call made to customer's switching away is compliance with the code.	Trustpower believes that disclosure of the loss of the TECT distribution should be permitted (given that it is somewhat akin to termination fees). It is not a new offer, and we have received complaints from customers when it has not been disclosed. However, we recognise that this is a complex issue and welcome a discussion with the EA on this point.

The calls in general were sales orientated and were not being carried out as an administrative call. In addition to the examples detailed above I found:

- The customer wanted to switch (ICP 0000175186WT639). The agent advised them of the exit fee and that their broadband costs would increase if they left. Customer agreed to stay and then the agent upsold them into a contract. The customer did not request this.
- The customer stated she did not want to switch, and the switch was stopped (ICP 0003131505AL1C3). She was then offered a $450 credit if she signed up for 2 years and a further 5% discount to retain them. These offers were not initiated by the customer.
- For ICP 0000978982TU86F, the customer called into check when their reconnection was happening. Agent put the customer on hold and investigated. Found it had switched out and got switch withdrawn without checking with the customer. Power had been restored by the time the agent went back to the customer. Customer was surprised that it had been switched and was happy to stay. The agent should have confirmed with the customer that they did not want to switch before withdrawing the switch rather than assuming it was switched in error.

Whilst the three examples above are not technically non-compliant it is evidence of the sales nature or poor process management of these calls.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.17 With: Clause 11.15 AA-11.15 AC From: 01-Apr-20 To: 21-Jan-21	Saves and win-back activity undertaken within 180 days of the ICP being requested to switch. Potential impact: Medium Actual impact: Medium Audit history: None Controls: Weak Breach risk rating:6
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as weak as the process in place does not mitigate risk and there is room for improvement. The impact is assessed to be medium because it is likely that the number of issues found are an indication of the number of switches that have been withdrawn incorrectly.
Actions taken to resolve the issue	**Completion date** / **Remedial action status**

At the time that this code change was introduced, there was industry confusion regarding what could and couldn't be said. To help retailers, in July 2020, the EA produce some helpful Guidelines to ensure best practice. Subsequent to these Guidelines being publish (July/August 2020), further training was undertaken. ICP 00004010431WM74, this was an individual training issue and our review of a much larger sample of calls indicated that this does not appear to be common practice. The customer states "so it might be best for us to wait until then?" Agent agrees. Rather than saying – it's entirely up to you. The Agent thought they were just answering the customer's question and not trying to entice them to stay. This highlights that the highly complex nature of this rule, which can be open to subjectivity. We intend to carry out an end to end review of our processes and training to further strengthen our knowledge and practices.	30 May 2021	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
A complete change in approach has been taken to ensure our commissioned Agents were not taking a sales approach to these calls. In Feb/March 2021, the team managing this process are now all non-commissioned based paid and focused on the customer offboarding. Of the 429 CX withdrawals, a further check was done on 30 calls, to ascertain if there were any further failings or potential breaches in relation to (Clause 11.15AA to 11.15AB), Switch Save Protect. None were identified; however, it was noted that the use of the CX code potentially may be incorrect for 10% of the calls listened to. This was due to where a customer has advised they had no knowledge of a switch or no intent to switch but were seeking pricing only. My understanding of the Electricity Registry NW Advisory Codes would indicate, we should have used UA (unauthorised) in these instances not CX. We will review our switch withdrawal process to determine if there is an issue.	Complete	

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

Trustpower supplies 98 active ICPs with shared unmetered load. All had the unmetered flag populated correctly, and 97 were found to match the distributor's details within 0.1 kWh. ICP 0000540598TU2BD was recorded in the last audit. This ICP has a difference of 0.238 kWh and I reconfirmed that the trader unmetered load details were correct, and the distributor unmetered load details are incorrect.

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 processes to manage ICPs over the unmetered thresholds were discussed. The AC020 report was reviewed to identify all ICPs with unmetered load over 3,000 kWh per annum and assess compliance.

Audit commentary

There are 81 ICPs with standard unmetered load of between 3,000 and 6,000 kWh per annum. All were confirmed to have an approved load type.

There are 12 ICPs with standard unmetered load over 6,000 kWh per annum.

- Four of the ICPs are included in exemption 250 which allows DUML ICPs to be settled as standard unmetered load.
- Eight telecom cabinets have no current exemption. These were previously included in exemption 268 which expired on 30 April 2020. Trustpower have tried to get these metered but due to the difficulty of finding a meter that will fit inside the cabinets they intend to apply for an exemption for these cabinets.

The DUML exemptions are discussed further in **section 5.4**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 5.2 With: Clause 10.14 (2)(b) From: 01-May-20 To: 21-Jan-21	Unmetered load threshold exceeded for eight ICPs. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong, as unmetered thresholds are monitored and managed with robust controls. The impact is assessed to be low as these are historic ICPs and the load is known and is being reconciled correctly.

Actions taken to resolve the issue	Completion date	Remedial action status

The Auditor suggested applying for an exemption again for those ICP's. This is currently waiting on the outcome of a meeting with Chorus that is taking place in May 2021.	30 May 2021	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
The outcome of the meeting noted above will decide whether they will do the exemption application again or push for meters to be installed.	30 September 2021	

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

Code reference

Clause 10.14 (5)

Code related audit information

If the unmetered load limit is exceeded the retailer must:

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

Audit observation

The processes to manage ICPs over the unmetered thresholds were discussed. The registry lists and AC020 reports were reviewed to identify all ICPs with unmetered load over 6,000 kWh per annum and assess compliance.

Audit commentary

As mentioned in **section 5.2**, there are 12 ICPs with standard unmetered load over 6,000 kWh per annum.

- Four of the ICPs are included in exemption 250 which allows DUML ICPs to be settled as standard unmetered load.
- Eight telecom cabinets with no current exemption as detailed in **section 5.2**.

The DUML exemptions are discussed further in **section 5.4**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 5.3 With: Clause 10.14 (5) From: 01-May-20 To: 21-Jan-21	Eight ICPs with an unmetered load greater than 6,000kWh per annum not resolved within 20 business days of the exemption expiring. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong, as unmetered thresholds are monitored and managed with robust controls. The impact is assessed to be low as these are historic ICPs and the load is known and is being reconciled correctly.

Actions taken to resolve the issue	Completion date	Remedial action status
The Auditor suggested applying for an exemption again for those ICP's. This is currently waiting on the outcome of a meeting with Chorus that is taking place in May 2021.	30 May 2021	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
The outcome of the meeting noted above will decide whether they will do the exemption application again or push for meters to be installed.	30 September 2021	

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

Trustpower is responsible for 18 DUML databases. One of these have not been audited and three audits are overdue.

Audit commentary

The table below shows the findings from the last audits. The NZTA Otago DUML database has not been audited (highlighted in blue) since the DUML audit regime came into effect on 1 June 2017. Trustpower are working with Clutha DC to include these lights in the council database.

The NZ Steel lights noted in the last audit have all had individual ICPs created and the DUML ICP has been decommissioned.

There are three audits that are overdue, and all relate to NZTA lights in the Waikato area. NZTA are currently reviewing all of the unmetered load in the area and are looking to consolidate both the number of ICPs and the number of traders these lights are with. The two audit reports that are with Trustpower for review are now too outdated to be submitted. The information has been requested from NZTA for the audit but has not been provided as yet.

			Compliance Achieved (Yes/No)								
Database	Next audit due date	DUML Audit completed 16A.26 and 17.295F	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)
Kawakawa BA	1/12/2021	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Kingfisher Residents Association - Parawera	1/06/2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NZTA West Waikato South	1/12/2018	No	No	No	Yes	No	No	Yes	Yes	No	No
NZTA West Waikato North	1/12/2018	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No
NZTA Taupo	1/05/2019	No	No	No	Yes	No	Yes	Yes	Yes	No	No
WBOP DC	1/11/2023	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Western Bay NZTA	Under review	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
WBOP Parks & Reserves	30/05/2021	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Tauranga CC	27/11/2021	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No	No
Tauranga CC Parks & Reserves	23/05/2022	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
Tauranga NZTA	23/05/2022	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	No

Ocean Shores Village Ltd	30/05/2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Upper Hutt CC	1/10/2021	Yes	No	No	Yes	Yes	No	Yes	Yes	No	No
NZTA Central Otago- Aurora	Under review	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No	No
NZTA Central Otago--QLDC	Under review	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No	No
NZTA Central Otago-Otagonet	1/06/2018	No	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
NZTA Westland	10/11/2021	Yes	No	Yes	Yes	No	No	No	Yes	No	No
NZTA Nelson STHY 6	01/09/2021	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 5.4 With: Clause 11 Schedule 15.3 From: 01-Jun-18 To: 26-Mar-20	Errors found in 13 databases, one database still to be audited and three audits are overdue. For those completed the specific findings are detailed in the DUML database audit reports. Potential impact: High Actual impact: High Audit history: Multiple times Controls: Moderate Breach risk rating: 6
Audit risk rating	**Rationale for audit risk rating**
High	The effectiveness of the controls is recorded as moderate as Trustpower actively works with its DUML customers to provide complete and accurate information. The impact on settlement is major because the incorrect submission figures are major when considered across all databases.

Actions taken to resolve the issue	Completion date	Remedial action status
The vast majority of DUMLS that we have issues with are those related to NZTA. The EA is aware of the ongoing issues that all retailers are having with NZTA. We have committed a lot of resource to try and resolve these issues and welcome the EA's further intervention with NZTA to resolve this issue for all retailers. Speaking specifically to the audits that are overdue/incomplete. <u>NZTA West Waikato</u> The Principal Network Manager has engaged a consultant to produce the monthly load report for the Waikato area and a second contractor to help with data management through McKays (head contractor). Trustpower is working with NZTA to engage a contractor to complete a full field audit with the expectation that a compliant database will be established and that the improved data management practises will meet the future requirements. <u>NZTA Otago</u> NZTA lights in the Clutha District Council (CDC) have been included in the CDC RAMM database as confirmed in their recent audit (except for a small number of individual fittings). Trustpower is in the process of confirming those fitting details and establishing individual UML ICP's for each. With the NZTA lights removed, the existing ICP will now include only those lights in the Waitaki District Council (WDC) jurisdiction for which Trustpower understands WDC hold a compliant	Complete	Identified

database. Trustpower is in the process of scheduling an audit for that database.		
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Overall, Trustpower believe we have good governance in place, we know what audits are required, when and what the issues are, and we monitor this via a monthly governance meeting. We successfully manage a number of council, contractor and other 3rd party relationships – there have been material corrections made in a number of areas. We have strong internal capability in terms of understanding requirements, and effective DUML management process. While we have ongoing challenges with NZTA in particular – these are well known to the EA. As outlined above, plans are in place for corrections to continue to occur. Trustpower retails across 18 DUML databases with ~60 ICPS. The volume submitted to market for all DUML volume in March 2021 was ~700,000 kWh (between 8.5 GWh and 9 GWh annually). While we do not dispute that we continue to manage exceptions and errors under many of these databases, some database are in fact being managed well and have no of very minor errors (as reflected in a recent 24 month audit renewal period for Western BOP NZTA). Often errors are corrected quickly and do not affect submissions in an ongoing way. A view that the market submission impact arising from errors across all databases is major, is subjective. Errors often only amount to a few lights and minimal volume. Given this context, the low number and relatively low volume of overall submission in total (compared to the scale of our total energy purchase submission), Trustpower's view is that the impact is no more than low to moderate.	Ongoing	

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

The registry list file as of 28 January 2021, AC020 trader compliance report for 1 April 2020 to 28 January 2021, and meter event details reports were reviewed to determine compliance.

Processes for distributed generation were reviewed.

Audit commentary

Metering installations installed.

Trustpower's new connection process includes a check that metering is installed before electrical connection occurs, and that any unmetered load is quantified.

All active, metered ICPs have an MEP, and at least one meter channel. The AC020 report for 1 April 2020 to 28 January 2021 recorded 131 active ICPs with metering category 9, null, or zero which did not have unmetered load indicated. 120 of these also had no MEP recorded. All were timing differences, and the ICPs were decommissioned, made ready for decommissioning, or had meter details populated on the registry prior to the audit.

No load is determined by subtraction.

Distributed generation

Trustpower's daily discrepancy reports include ICPs with installation type B which do not have import/export metering and PV1 profile. ICPs are investigated to confirm whether generation is present, and service orders to install import/export metering are raised as required.

The discrepancy report includes references to jobs raised in Jobtrack for the ICP and notes from the last review. I saw evidence that exceptions were being reviewed and progressed.

In some cases, the customer wishes to gift their generation rather than have import/export metering installed. Where this occurs, a letter is provided to the Reconciliation Manager, and appended to the customer account.

Trustpower supplies 3,494 active ICPs with distributed generation recorded by the distributor. Review of the AC020 report confirmed that there were four ICPs with generation recorded by the distributor where Trustpower did not record a generation profile.

- Three ICPs had generation installed, and the profile has since been updated on the registry.
- The distributed generation has been removed from ICP 0000931050TUB94 and the Distributor's details are incorrect.

Where generation profiles were recorded, they were consistent with the generation fuel type. I rechecked the discrepancies found in the last audit and all had been corrected except for ICP 0002211488TGB0D. This is wind generation but is recorded with the PV1 profile. This is recorded as non-compliance below and in **section 2.1**.

The last audit recommended that Trustpower validates the profiles applied against the distributor's fuel type, but this has not been actioned as yet. I have repeated this recommendation to maintain visibility.

Recommendation	Description	Audited party comment	Remedial action
Validation of NHH generation profiles PV1 and EG1	Validate the generation profiles applied against the distributor's generation fuel type. Only ICPs with a solar fuel type are expected to use PV1 profile, other generation fuel types are expected to use EG1 profile.	An existing report has now been enhanced that picks up generation ICPs with a fuel type of wind to ensure that the correct profile (EG1) is populated. 3 ICP's were discovered and are now corrected.	Identified

Bridged meters

Trustpower provided a list of 36 ICPs that had bridged meters during the audit period. When a meter is bridged, Trustpower 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, Clause 10.24 From: 19-Jul-18 To: 28-Feb-21	ICP 0002211488TGB0D has wind generation and PV1 profile is recorded, instead of EG1. While meters were bridged, energy was not metered and quantified according to the code for 36 ICPs. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as strong with as there are robust processes in place. Submission information is estimated for the bridged period so the impact on submission accuracy is considered low.

Actions taken to resolve the issue	Completion date	Remedial action status
The profile for ICP 0002211488TGB0D has now been corrected to EG1. Our controls to find Bridged meters are sufficient, sites are identified, and energy is calculated and reconciled using estimates as accurately as possible using historical consumption is available, or consumption post bridged period if historical data is not available. We will continue to monitor our reports and reconcile energy as required for bridged meters.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
An existing report has now been enhanced that picks up generation ICPs with a fuel type of wind to ensure that the correct profile (EG1) is populated.	Complete	

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 on the Authority's website was checked to identify any GIPs that had been recertified during the audit period and proof of updates being carried out within ten business days of the recertification occurring was requested. Certification records were checked to confirm the correct dates were loaded.

Audit commentary

Trustpower is responsible for the grid connected metering installations shown in the table below:

Responsible party	Description	NSP	MEP	Reconciliation Type	Certification expiry date as recorded on the NSP table
TRUS	ARGYLE	ARG1101TRUSGG	TPNZ	GG	8/04/2021
TRUS	BERWICK	BWK1101TRUSGG	TPNZ	GG	2/04/2022
TRUS	COLERIDGE	COL0661TRUSGG	ACCM	GG	13/12/2022
TRUS	HAWERA	HWA1101TRUSGG	TPNZ	GG	7/12/2023
TRUS	MATAHINA	MAT1101TRUSGG	ACCM	GG	30/11/2023
TRUS	ROTORUA	ROT1101TRUSGG	TPNZ	GG	6/06/2021

All metering installations have a current certification. Some certification details were updated during the audit period:

Responsible party	Description	NSP	Old certification expiry date	New certification expiry date
TRUS	COLERIDGE	COL0661TRUSGG	1/11/2021	13/12/2022
TRUS	HAWERA	HWA1101TRUSGG	24/01/2021	7/12/2023
TRUS	MATAHINA	MAT1101TRUSGG	24/03/2020	30/11/2023

All meter certifications were checked and found to be accurately recorded. All updates to the RM were on time.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

The registry list file as of 28 January 2021 and AC020 trader compliance report for 1 April 2020 to 28 January 2021 were reviewed to determine compliance.

Audit commentary

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.

Audit outcome

Compliant

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

Code reference

Clause 10.43(2) and (3)

Code related audit information

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

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

Audit observation

Processes relating to defective metering were examined.

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.

A sample of ten stopped or faulty meters and 36 bridged meters were provided. The MEP was notified in all instances and the meter was replaced for faulty meters and unbridged for bridged meters. Corrections were appropriately processed in all instances and are discussed further in **section 8.1**.

EMS and EDMI confirmed that no defective meters have been identified since their last agent audit.

Audit outcome

Compliant

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

Code reference

Clause 2 Schedule 15.2

Code related audit information

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

> *2(2) - The reconciliation participant must collect raw meter data used to determine volume information from the services interface or the metering installation or from the MEP.*
>
> *2(3) - The reconciliation participant must ensure the interrogation cycle is such that is does not exceed the maximum interrogation cycle in the registry.*
>
> *2(4) - The reconciliation participant must interrogate the meter at least once every maximum interrogation cycle.*
>
> *2(5) - When electronically interrogating the meter the participant must:*

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

2(6) – The interrogation systems must record:

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

Audit observation

The data collection and clock synchronisation processes were examined.

Trustpower, their agents and MEPs are responsible for the collection of HHR and AMI data. Collection of data and clock synchronisation were reviewed as part of their agent and MEP audits. A sample of clock synchronisation events received by Trustpower were reviewed.

Trustpower collects generation data, using MV90. I walked through the clock synchronisation process.

Audit commentary

All information used to determine volume information is collected from the services interface or the metering installation by Trustpower, one of their agents, or the MEP. A sample of data was checked as described in **section 2.3**.

Data collected by agents and MEPs.

Agents monitor clock synchronisation, and this is covered as part of their audits.

MEPs monitor clock synchronisation, and this is covered as part of their audits.

The agents and MEPs notify Trustpower when clock synchronisation events occur for HHR and AMI meters. Each of the MEPs advises Trustpower of clock synchronisation events, and no action is usually required. EDMI and EMS confirmed that no clock synchronisation events outside acceptable thresholds had occurred since their last agent audit.

Data collected by Powerco.

Data is provided by way of photos for some substations in the Powerco area by personnel engaged by these distributors where meter readers are not allowed to enter such facilities due to the health and safety requirements. I consider these parties have been engaged by Trustpower as agents and Trustpower has deemed them to be competent to conduct meter readings, therefore these readings are in effect conducted by a "certified reconciliation participant". Meter readings used to be supplied by Marlborough Lines, but these ICPs switched out in September 2020.

Data collected by Trustpower.

The collection of data carried out by Trustpower is carried out using MV90 for both generation and half hour sites read by Trustpower. MV90 has an auto time correction function. For any time-drifts greater than 60 seconds a job is raised with the MEP to investigate and resolve.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

All validated meter readings must be derived from meter readings.

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

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

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

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

Audit observation

The data collection process was examined.

Processes to provide meter condition information were reviewed as part of MRS' agent audits. Trustpower's processes to manage meter condition information were reviewed.

Processes for customer and photo reads were reviewed.

Audit commentary

Data validation

During interrogation, the meter register value is collected and entered into a hand-held device. This reading enters Trustpower's GTV system and is labelled "R" which denotes that it is a meter reading collected and validated by a meter reader.

All meter reading is undertaken by MRS or FCLM. MRS monitor meter condition, as required by schedule 15.2 and provide information on meter condition along with the daily reads, and monthly summary report containing missing seal and broken seal events.

FCLM has processes in place to identify and report on tampering, damage, broken and missing seals, phase failure and unsafe situations. The details are sent in the same file as the meter readings.

The meters read by Powerco are read by engineers and any issues found with the meter would be flagged to Trustpower to action with the relevant MEP. None have occurred during the audit period.

I checked a sample of 20 readings and confirmed that they are loaded into GTV as actual readings and are validated.

Customer and photo readings

The management of customer and photo readings was examined. All customer and photo reads are not being treated as estimates. They still pass though the billing validation process to ensure they are correct. I checked five customer reads and five photo reads and they were all correctly labelled.

Audit outcome

Compliant

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

Code reference

Clause 6 Schedule 15.2

Code related audit information

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

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

Audit observation

The process of the application of meter readings was examined.

Audit commentary

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 time stamping. Manual readings taken by MRSL and FCLM are applied correctly.

Application of reads was reviewed as part of the historic estimate checks in **section 12.11** and found to be compliant.

The content of CS and RR files was examined in **sections 4.3**, **4.4**, **4.10** and **4.11**. The last audit identified an issue where the incorrect read was being sent in the CS file in some instances. Trustpower made changes to the switch read selection process in March 2020 and this has resolved this issue.

I identified one exception where the RR read was applied for the wrong date due to human error. This is recorded as non-compliance in **section 4.11.**

I walked through the process for NHH to HHR and HHR to NHH meter changes, including viewing examples. The industry has adopted a process that achieves accuracy in relation to submission information and ICP days.

- For upgrades, the process is to "remove" the NHH meter from the registry and GTV 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.

Both a NHH and HHR meter cannot be "present" on the same day in the registry. This is raised as non-compliance because the NHH read is not applied to 24.00 on the day of the read.

This matter is also relevant to decommissioned ICPs, where the day after the physical decommissioning is used to ensure the status aligns with the meter reading effective time (end of day).

Audit outcome

Compliant

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

Code reference

Clause 7(1) and (2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

The process to manage missed reads was examined. Reporting on ICPs not read during the period of supply was examined, and all ICPs unread during the period of supply where that period was more than 90 days were 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".

Trustpower uses best endeavours to get at least one read during the period of supply even if the period of supply is short. The process was confirmed by a "walk through" of the following steps:

- a "queue" is created when a NT file is received, and a validated reading has not been obtained during the period of supply, and
- an attempt is then made to get a reading by booking a special reading or by calling the customer or landlord to get a customer reading.

If a reading cannot be obtained from the steps above, then the winning retailer is contacted to see if they have an actual start reading and this is used.

I reviewed Trustpower's meter reading processes. All manual meter readings are carried out by MRS and FCLM. The process to obtain reads is described in their agent reports which will be submitted with this audit. Skipped read messages are reviewed and actioned based on the issue identified. Trustpower makes contact with the customer to arrange an appointment or obtain keys etc. This is by phone in the first instance where at least two attempts are made. If this is unsuccessful then a letter is sent. Text is also used but the current service has a restriction in the number of characters available, so this is only used where possible.

The provided reporting in relation to those ICPs that did not get a read during period of supply identified 292 ICPs:

Period of supply	Count of ICPs
Within 30 Days	187
30 to 90 Days	61
91 to 365 Days	37
365 Days +	7
Grand Total	292

I checked 10 ICPs supplied for over 90 days to determine whether exceptional circumstances existed.

Exceptional circumstances were proven for eight of the ten ICPs. ICP 0000400111EN0F4 was not read due to resource issues in Gisborne. A meter reading card was left but no further attempts were made to get meter readings. ICP 0007520750WM0C6 is read by FCLM, who will not make arrangements to contact customers or make appointments at a specific time.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.8 With: Clause 7(1) and (2) Schedule 15.2 From: 01-Apr-20 To: 28-Jan-21	Exceptional circumstances not proven for two of a sample of ten ICPs not read during the period of supply. 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 recorded as strong, as Trustpower have robust processes in place including attempting to get reads as customers switch away. The audit risk rating is low as the number of ICPs not read during the period of supply is low.

Actions taken to resolve the issue	Completion date	Remedial action status
This is a rare occurrence and we do not currently have technology to resolve this issue short term but will implement a long-term preventative approach.	n/a	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

We will implement new technology to be able to gain access information and communicate with customer using email and text. New technology would be scalable and efficient ensuring we reach more customers.	September 2021	

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

Code reference

Clause 8(1) and (2) Schedule 15.2

Code related audit information

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

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

Audit observation

The meter reading process was examined. Monthly reports for June to November 2020 were provided and reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2.

A sample of 15 unread ICPs on the NSPs where less than 100% read attainment was achieved for November 2020 were reviewed to determine whether exceptional circumstances existed.

Audit commentary

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 12 months	NSPs <100% read	ICPs unread for 12 months	Overall percentage read
Jun-20	273	135	2,061	99.08%
Jul-20	275	133	1,893	99.16%
Aug-20	274	128	1,520	99.32%
Sep-20	274	120	1,194	99.47%
Oct-20	275	116	1,087	99.52%
Nov-20	275	115	981	99.56%

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

The meter reading attainment level has improved during the audit period.

The sample of 15 ICPs checked from the November 2020 report confirmed exceptional circumstances in all cases.

I reviewed meter reading reports for June to November 2020 and confirmed that they met the meter reading frequency report requirements and were submitted in the required timeframe.

Audit outcome

Compliant

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

Code reference

Clause 9(1) and (2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

The meter reading process was examined. Monthly reports for June to November 2020 were provided and reviewed to determine whether they met the requirements of clauses 8 and 9 of schedule 15.2.

A sample of 17 unread ICPs on the NSPs where less than 90% read attainment was achieved for November 2020 were reviewed to determine whether exceptional circumstances existed.

Audit commentary

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	Total ICPs unread for 4 months	Overall percentage read
Jun-20	281	23	6,852	97.27%
Jul-20	282	21	5,352	97.86%
Aug-20	281	17	3,450	98.61%
Sep-20	281	12	2,839	98.84%
Oct-20	284	11	2,606	98.94%
Nov-20	286	9	2,145	99.12%

A sample of 17 unread ICPs on the NSPs where less than 90% read attainment was achieved for November 2020 were reviewed to determine whether exceptional circumstances existed. In all instances these were NSPs with a small number of ICPs recorded, therefore one missed ICP will cause the threshold requirement not to be met. Exceptional circumstances were proven for all 17 ICPs.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.2

Code related audit information

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

> *10(a) - the means to establish the identity of the individual meter reader,*
>
> *10(b) - the ICP identifier of the ICP, and the meter and register identification,*
>
> *10(c) - the method being used for the interrogation and the device ID of equipment being used for interrogation of the meter.*
>
> *10(d) - the date and time of the meter interrogation.*

NHH data is collected by.

- MEPs
- MRS
- FCLM
- Powerco

The data interrogation log requirements were reviewed as part of the agent audits for MRS and FCLM, and the MEP audits.

NHH data interrogation was reviewed for MRS, FCLM and Powerco.

Audit commentary

Data collected by MEPs and agents.

Compliance with this clause has been demonstrated by MRS, FCLM and MEPs as part of their own audits.

I confirmed with MRS and FCLM that there were no changes to their processes or systems since their most recent audit that could have a negative impact on Trustpower's compliance.

The read process undertaken by Powerco for the substations read by them were examined and compliance was confirmed.

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 AMS, EMS, and EDMI. The data collection requirements were reviewed as part of their agent audits.

HHR data for generation sites and some HHR sites is collected by Trustpower using MV90. A walkthrough of the HHR data collection function was performed to confirm compliance.

Audit commentary

Data collected by agents.

Compliance with this clause has been demonstrated by the agents as part of their own audits.

Trustpower receives some HHR AMI data. This data is transmitted in a secure manner. Appropriate validation is conducted, and audit trails were demonstrated where changes were made.

Data collected by Trustpower.

Trustpower interrogates half hour interval meters at approximately 1,500 ICPs with their MV90 system. This includes all Generation meters. Remotely collected data is also provided by EDMI and AMS. No data is routinely collected manually.

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 AMS, EMS, and EDMI. The interrogation data requirements were reviewed as part of their agent audits.

A walkthrough of the HHR data collection function was performed to confirm compliance.

Audit commentary

Data collected by agents.

Compliance with this clause has been demonstrated by the agents as part of their own audits.

Data collected by Trustpower.

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

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

The events collected and reviewed in the events log by Trustpower are:

- phase failure,
- less than 80% of voltage class,
- pulse overflow,
- power outage,
- zero data,
- battery failure, and
- low battery.

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 AMS, EMS, and EDMI. The interrogation data requirements were reviewed as part of their agent audits.

A walkthrough of the HHR data collection function was performed to confirm compliance.

Audit commentary

Data collected by agents.

Compliance with this clause has been demonstrated by the agents as part of their own audits.

Data collected by Trustpower.

An interrogation log is generated by MV90 to record details of all interrogations. Appropriate action is taken where problems are apparent. The interrogation log contains the following information:

- the unique identifier of the meter or data logger,
- the time of commencement of interrogation,
- the date of interrogation,
- the operator identifier (machine id),
- the clock errors outside the range specified in clause 12,
- the method of interrogation, and
- the identifier of the reading device used for interrogation (where applicable).

In situations where agents provide data, the method of interrogation is not provided, however it is present in their systems.

Audit outcome

Compliant

7. STORING RAW METER DATA

7.1. Trading period duration (Clause 13 Schedule 15.2)

Code reference

Clause 13 Schedule 15.2

Code related audit information

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

Audit observation

HHR data is collected by AMS, EMS, and EDMI as agents. Trading period duration was reviewed as part of their agent audits.

Trustpower uses MV90 to retrieve HHR and generation data, and evidence of trading period duration checks was reviewed.

Audit commentary

Compliance with this clause has been demonstrated by Trustpower's agents as part of their agent audits.

MV90 has an auto time correction function. For any time-drifts greater than 60 seconds a job is raised with the MEP to investigate and resolve. Clock synchronisation is discussed further in **section 6.5**.

Audit outcome

Compliant

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

Code reference

Clause 18 Schedule 15.2

Code related audit information

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

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

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

Audit observation

Processes to archive and store raw meter data were reviewed. Raw meter data from at least 48 months prior was reviewed to ensure that it is retained. Trustpower's agents retain a copy of the raw meter data, and their compliance with the archiving and storage requirements were reviewed as part of their agent audits.

Trustpower's own audit trails were reviewed in **section 2.4**.

Audit commentary

Data collected by MEPs and agents

Compliance with this clause has been demonstrated by Trustpower's agents and MEPs as part of their agent and MEP audits.

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 meter data from January 2016, confirming that meter reading data is retained for at least 48 months.

AMI data is stored in a separate database with appropriate controls in place. The data is archived in accordance with clause 10.7 of part 10.

There are no paper reads any longer. All historic reads were scanned and archived.

Data collected by Trustpower.

The SevenX system data ceased to be used in May 2019. This has been archived in accordance with clause 10.7 of part 10. Unauthorised personnel cannot access this data.

All data collected in MV90 is archived as required by this clause. I sighted data prior to January 2016 to confirm this.

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

Examples of streetlight on/off time files were observed to confirm compliance.

Audit commentary

The relevant files are securely stored for an indefinite period.

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 during validation of non-half hour meter readings then firstly a check reading is performed. If an original meter reading cannot be confirmed by a check reading, then an estimated reading is used.

Transposed meters

When a meter reading is found to be transposed, Trustpower swaps the readings between registers and the corrected readings are recorded as actuals.

Audit outcome

Compliant

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

Code reference

Clause 19(2) Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

Processes for the correction of HHR meter readings were reviewed. Ten examples of HHR corrections were reviewed.

Audit commentary

Where errors are detected during validation of half-hour 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. Check metering is normally not available.

A "data edit worksheet" is produced as a record of this activity. No HHR corrections were identified as all estimations were replaced with actual data but the process was confirmed by checking the estimations as detailed in **section 9.4**.

With all meter changes, a comparison occurs in trading (billing data) to verify consistency.

All switched sites have a HHR load check with the previous data collector for the same half hour to ensure the site is set up correctly.

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

I requested details of all ICPs where error or loss compensation occurs.

Audit commentary

Trustpower confirms 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 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 and agents was reviewed as part of their own audits.

Audit commentary

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 Trustpower's systems in **section 2.3**.

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

Correct identification of estimated reads, and review of the estimation process was completed in **sections 8.1, 8.2** and **9.4**.

Audit commentary

All estimated readings, permanent estimates and actual readings are clearly identified as required by this clause.

The last report identified an issue with incorrect read types in CS files. Trustpower put a fix in place from 18 Match 2020 and this has resolved the issue.

Audit outcome

Compliant

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

Code reference

Clause 3(4) Schedule 15.2

Code related audit information

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

3(4)(a) - validated meter readings

3(4)(b) - estimated readings

3(4)(c) - permanent estimates.

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 3(5) Schedule 15.2

Code related audit information

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

Audit observation

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

NHH data is collected by MRS, FCLM and Powerco authorised staff.

HHR data is collected by AMS, EMS, EDMI, FCLM and Trustpower using MV90.

Generation data was checked during the audit.

Audit commentary

Manual meter readings do not record decimal places and are not rounded or truncated on import into GTV.

HHR data collected via MV90 is not truncated on import. AMI data is rounded to zero decimal places upon being uploaded to Gentrack. This is recorded as non-compliance.

Generation data was checked during the audit and rounding only occurs at the time of submission to two decimal places.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.3 With: Clause 3(5) of schedule 15.2 From: 01-Apr-20 To: 29-Mar-21	Raw meter data is rounded upon receipt and not when volume information is created. Potential impact: Low Actual impact: None Audit history: Once Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	I have considered the controls for HHR and NHH data. The controls for HHR data are strong but there are no controls to prevent rounding of NHH raw meter data, the system is designed to round as soon as the data arrives. Overall, the controls are rated as moderate. There is no impact because no metered consumption information is "missing", therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status

No action currently as technology change required long term	n/a	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Will resolve with integration of MDM data to GTV. Strategic priorities have pushed this piece of work out from May 21 to November 22.	30 November 2022	

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

Processes for the estimation of HHR meter readings were reviewed. Ten examples of HHR estimates were reviewed.

Audit commentary

When Trustpower is unable to interrogate any HHR metering installation prior to the deadline for providing submission information, then estimated data is provided. There is a requirement to use "reasonable endeavours" to ensure this data is accurate to within 10%.

Trustpower provided ten examples where estimates for missing data had occurred. Estimates are based on a "like day and time" basis, when considering the load pattern either side of the missing data, and this is considered to meet the "reasonable endeavours" requirement of this clause. Estimates of more than 500 kWh have a management sign off process as an additional check to ensure the estimation processes are robust.

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 no- half hour meter readings and estimated readings must include the following:

> *16(2)(a) - confirmation that the meter reading or estimated reading relates to the correct ICP, meter, and register,*

16(2)(b) - checks for invalid dates and times

16(2)(c) - confirmation that the meter reading or estimated reading lies within an acceptable range compared with the expected pattern, previous pattern, or trend,

16(2)(d) - confirmation that there is no obvious corruption of the data, including unexpected 0 values.

Audit observation

I reviewed and observed the NHH data validation process, including checking a sample of data validations.

Audit commentary

Meter reader validation

For meters manually interrogated by MRS or FCLM, a validation within their hand-held device identifies readings outside specified high/low parameters and prompts the reader to check the reading. This process is discussed further in the agent audit reports.

MRS and FCLM also check the condition of the meters, to identify issues that could affect meter accuracy or safety. If an issue is identified, the appropriate condition code is entered into the hand-held device and provided to Trustpower. This process is discussed further in **section 6.6**.

AMI validation

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**.

Read import and billing validation

The next two levels of validation occur in GTV, pre-billing and post billing. This validation includes the following checks:

- high consumption,
- no consumption - there is a discrepancy management tool used to identify registers with zero consumption for the last three actual reads, zero consumption on AMI meters following switch in (to detect possible meter bypass), and day/night consumption discrepancies,
- zero consumption on meters with a known high failure rate,
- no reading,
- consumption on vacant connected ICPs - this consumption is not billed until a disconnection occurs or a customer is moved in, but the consumption is included in submission files,
- consumption on disconnected ICPs - this list is dealt with daily; if a customer is not identified the consumption is billed to "Trustpower unbilled" so it is included in submission files,
- credit reads (reading lower than the previous reading or estimate),
- minimum and maximum number of days,
- ICPs not on a meter reading schedule,
- 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.

Each register that fails validation is manually checked. If it is decided that the reading may be incorrect then billing is delayed, and a check reading is performed. Readings are not edited as part of this process.

The matter of "bypassed" metering was evaluated to ensure validation processes are comprehensive enough to identify any meters that have been bypassed. The following checks are conducted which will identify any bridged meters:

- zero consumption on recently switched in ICPs,
- consumption on controlled tariff but zero on the 24-hour tariff, and
- continuous consumption for six months then zero consumption.

Whilst bridged meters are being identified and the consumption information estimated, it is still a matter of non-compliance with clauses 10.12 and 10.24 of part 10, as recorded in **section 6.1**. Compliance is confirmed for the validation processes.

Reconciliation submissions are also reviewed prior to submission, this process is discussed in **section 12.3**.

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

I checked the HHR and AMI data collection functions by conducting a walk-through of the processes, and I checked the management of events by checking a sample of files from all relevant providers.

Audit commentary

MV90 HHR and generation data

MV90 Interrogation occurs either nightly or every second night, so there is little risk that data will be overwritten.

Each validity check for automatically collected half-hour metering information includes the following:

1. checks for missing data (an export to "trading" will not occur if data is missing),
2. checks for invalid dates and times (an export to "trading" will not occur if dates and times are invalid),
3. checks of unexpected zero values (these settings are at channel level and some are set to allow for a certain number of zeros depending on the customer type),
4. comparison with expected or previous flow patterns (demand and energy maximum and minimum settings exist at channel level), and
5. a review of meter and data logger event list.

Any event that could have affected the integrity of metering is investigated.

HHR data received from agents.

This function was examined as part of the MEP and agent audits and found to be compliant.

AMI data

For AMI data collection (conducted by MEPs), the check for invalid dates and times is conducted at the time the files are loaded. There is an exception if the incorrect file is attempted to be loaded. A check for missing data, unexpected zeros and a comparison with previous flow patterns is conducted as part of the normal validation process.

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

These requirements have changed from February 1st, 2021, therefore I checked how each MEP provided event information and what steps were taken by Trustpower once the event information was received. The table below describes the different event management processes.

MEP	Full event list provided	Specific notification of critical events	Comments
NGCM	Yes	Yes	
SMCO	Yes	Yes	
ARCS	Yes	Yes	ARC events are limited to power down, power up and clock changes, due to the hardware limitations.
MTRX	No	Yes	MTRX provides ICP specific information to the Revenue Assurance helpdesk if there is a critical event. MTRX is therefore acting as Trustpower's agent.

IHUB	No	Yes	IHUB provides ICP specific information to the Revenue Assurance helpdesk if there is a critical event. IHUB is therefore acting as Trustpower's agent.
COUP	No	Yes	COUP provides ICP specific information to the Revenue Assurance helpdesk if there is a critical event. COUP is therefore acting as Trustpower's agent.
FCLM	Yes	No	FCLM does not filter events to provide ICP specific notification of critical events, therefore Trustpower needs to analyse the events.

All events sent to the Revenue Assurance helpdesk are acted upon. All "bulk" events are loaded into a table, but no further action is taken. This is mainly a risk for FCLM because FCLM does not do their own analysis of events. I recommend Trustpower seeks the event information explanations for each event and then builds 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.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 17 Schedule 15.2	Obtain event information description information from MEPs. Ensure all events, including tamper, are appropriately evaluated.	We agree with this suggestion and have already reached out to MEPs to facilitate this change.	Identified

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 9.6 With: Clause 17 Schedule 15.2 From: 01-Apr-20 To: 29-Mar-21	Event information is not analysed and acted upon for all MEPs. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	**Rationale for audit risk rating**		
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact on settlement and participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**

We are reviewing our processes in partnership with the MEPs to ensure we are getting the data we need sent to us and then actioned on our side.	30 August 2021	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We are following Steve's suggestion of understanding events we need to look at and will set up the appropriate technology and reporting processes to manage the data.	30 November 2021	

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

This process is managed by EMS on behalf of Trustpower.

Audit commentary

Compliance is confirmed in EMS' audit report.

Audit outcome

Compliant

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

This process is managed by EMS on behalf of Trustpower.

Audit commentary

Compliance is confirmed in EMS' audit report.

Audit outcome

Compliant

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

Code reference

Clause 13.138

Code related audit information

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

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

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

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

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

Audit observation

This process is managed by EMS on behalf of Trustpower.

Audit commentary

Compliance is confirmed in EMS' audit report.

Audit outcome

Compliant

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

This process is managed by EMS on behalf of Trustpower.

Audit commentary

Compliance is confirmed in EMS' audit report.

Audit outcome

Compliant

11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

11.1. Buying and selling notifications (Clause 15.3)

Code reference

Clause 15.3

Code related audit information

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

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

Audit observation

The registry list for 1 April 2020 to 28 January 2021 was reviewed to confirm the profiles used. I checked examples of notifications provided and whether any breach allegations had been made.

Audit commentary

Trustpower conducts a check each month as part of the process for preparing submission information.

There have not been any breach allegations in relation to this clause during the audit period.

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 a sample of NSPs with a small number of ICPs to confirm the AV110 ICP days calculation was correct.

I reviewed the GR100 ICP days comparison reports for the audit period and investigated a sample of variances.

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

Audit commentary

Breach information provided by the Electricity Authority did not identify any late ICP days submissions.

I checked the ICP days calculations as part of the Historic Estimate process and they calculate correctly.

The following table shows the ICP days difference between Trustpower files and the RM return file (GR100) for all available revisions for several months at an aggregate level. Positive numbers indicate that the Trustpower 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
Feb-19	-	-	-		0.01%
Mar-19	-	-			0.01%
Apr-19	-	-			0.00%
May-19					0.00%
Jun-19					0.00%
Jul-19					0.02%
Aug-19					0.00%
Sep-19				0.01%	
Oct-19				0.02%	
Nov-19				0.00%	-
Dec-19				0.00%	-
Jan-20			0.01%	0.00%	-
Feb-20			0.02%	0.03%	-
Mar-20	0.04%	0.03%	0.00%	0.00%	-
Apr-20	0.01%	0.02%	0.00%	0.00%	-
May-20	0.02%	0.00%	0.00%	0.00%	
Jun-20	0.01%	0.00%	0.03%		

Month	Ri	R1	R3	R7	R14
Jul-20	0.02%	0.01%	0.00%		
Aug-20	0.02%	0.04%	0.00%		

I checked a sample of 10 HHR differences and 20 NHH differences present at r3 or later and found the following issues:

- ICP 1000541815PC0C6 is at Kinleith and is generation only; the code for creating the AV110 was only picking up ICPs with load, or load and generation, not ICPs with generation only,
- ICP 0030286285PCB22 was one day short due to an incorrect date entry in GTV,
- install 500445 had the incorrect NSP and therefore incorrect ICP days, and
- install 807770603 had incorrect ICP days due to an incorrect date in GTV.

The other ICP days discrepancies relate to backdated registry events or incorrect registry information for a period of time by the Distributor or errors in the ICPCOMP report.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.2 With: Clause 15.6 From: 01-Aug-19 To: 30-Mar-21	Incorrect ICP days for four ICPs. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as strong because they mitigate risk to an acceptable level. The impact on settlement and participants is minor; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
The existing revision cycle will replace with updated ICP days files	Complete	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
File creation code has been enhanced to eliminate the need for a load meter to be onsite in order for inclusion in the ICP days file	Complete	

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

Code reference

Clause 15.7

Code related audit information

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

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

Audit observation

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

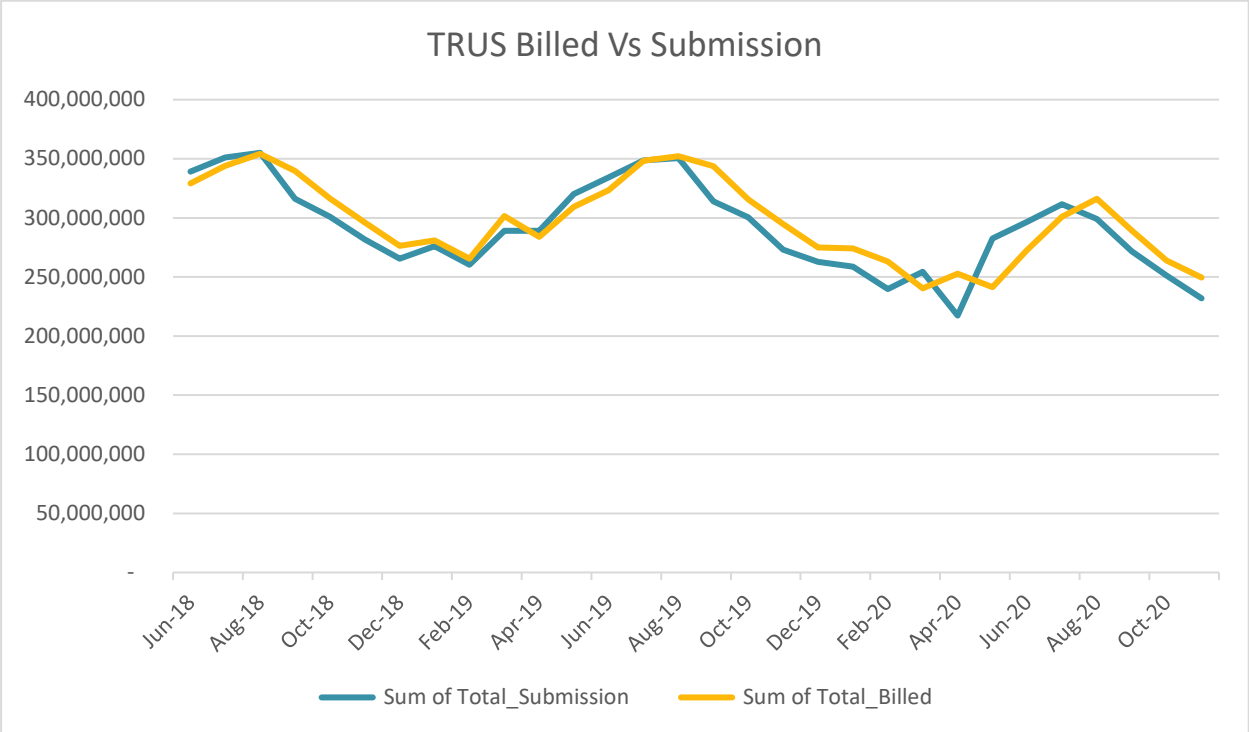
GR130 reports for June 2018 to November 2020 were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

Audit commentary

The process for the calculation of as billed volumes was examined by checking five NSPs with a small number of ICPs against Trustpower's invoice information for December 2020.

Trustpower has robust monitoring and controls in place to identify any possible errors in files.

I also checked the difference between submission and electricity supplied information for the period June 2018 to November 2020, and the results are shown in the chart below. The total difference is 0.9% for the period.



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 ten submissions.

The GR090 ICP Missing files were examined for March 2020 to November 2020. An extreme case sample of the 14 ICPs missing from the most revisions were checked.

I checked the raw data in MV90 through to the data in the aggregates file for five ICPs.

Audit commentary

Non-compliance was found because the HHR aggregates report contains submission information, not electricity supplied information as specified under clause 15.8. Although the reports Trustpower produces are consistent with the Reconciliation Manager Functional Specification, this is recorded as technical non-compliance below.

I checked the process for aggregation of HHR data is correct, by matching HHR aggregates information to the volumes for ten submissions. The volumes and aggregates matched exactly to two decimal places. I checked the raw data in MV90 through to the data in the aggregates file for five ICPs.

The GR090 ICP Missing files were examined for all revisions for March 2020 to November 2020. I checked an extreme case sample of the 14 ICPs missing from the most revisions and found they related to:

- backdated switch outs,
- backdated changes to a NHH submission type and profile, and
- backdated NSP changes.

In all cases, the aggregates file matched the vols file.

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-Apr-20 To: 29-Mar-21	HHR aggregates file does not contain electricity supplied information. Potential impact: None Actual impact: None 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 the issue relating to content of the aggregates file is an error in the code, Trustpower are providing submission information as expected. The HHR aggregates file cannot contain electricity supplied information, or other reports relying on the aggregates file will not be accurate, therefore I consider this matter does not have a risk rating.

Actions taken to resolve the issue	Completion date	Remedial action status
Due to code contradictions, we are unable to comply	n/a	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We were under the impression that this contradiction was being addressed by the EA. We have yet to see any updates.	n/a	

12. SUBMISSION COMPUTATION

12.1. Daylight saving adjustment (Clause 15.36)

Code reference

Clause 15.36

Code related audit information

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

Audit observation

HHR data is collected by AMS, EMS and EDMI as agents. Daylight savings adjustments were reviewed as part of their agent audits.

I checked files for the start and end of daylight savings to ensure they were correct.

Audit commentary

Compliance with this clause has been demonstrated by Trustpower's agents as part of their agent audits.

Trustpower uses the "trading period run on" technique. The files for the start of daylight savings were correct.

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

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

Generation

Generation submissions were checked in **section 12.6** and found to be compliant.

HHR

HHR submissions were checked in **section 11.4** and found to be compliant. A sample of corrections were reviewed to ensure that they flowed through to revision submissions in **section 8.2**.

HHR volumes are reviewed prior to submission, these checks are discussed in **section 12.3**.

I checked the ICPMISS report and identified four ICPs missing from the aggregates file where more analysis was required. Three ICPs were correctly submitted but the registry was incorrect. The registry has now been updated.

ICP 0000880323NVEBD was not submitted in March and April 2020 for Day 4 but was in the Day 13 files for both months. Trustpower is looking into why this occurred, because the controls appear to be strong.

NHH

Trustpower prepares NHH submissions using GTV.

A sample of NHH ICPs were checked to make sure they are handled correctly, including unmetered load, distributed generation, and vacant ICPs with consumption:

- five ICPs with injection/export registers were checked and found that generation consumption was correctly submitted,
- five ICPs with vacant consumption were checked and found that vacant consumption was correctly submitted,
- any consumption while disconnected will be reported, and this was confirmed by checking the historic estimate scenario in **section 12.11**, and
- ten ICPs with unmetered volumes were reviewed, including five ICPs with standard and five ICPs with shared unmetered and found that the correct consumption was submitted.

NHH volumes are reviewed prior to submission, these checks are discussed in **section 12.3**.

Audit outcome

Non-compliant

<table>
<tr><th>Non-compliance</th><th colspan="3">Description</th></tr>
<tr><td>Audit Ref: 12.2
With: Clause 15.4

From: 01-Mar-20
To: 31/4/2020</td><td colspan="3">ICP 0000880323NVEBD was not submitted in March and April 2020 for Day 4 but was in the Day 13 files for both months.
Potential impact: Low
Actual impact: Low
Audit history: Once
Controls: Strong
Breach risk rating: 1</td></tr>
<tr><th>Audit risk rating</th><th colspan="3">Rationale for audit risk rating</th></tr>
<tr><td>Low</td><td colspan="3">The controls are strong, only one ICP had a discrepancy.
The impact on settlement is minor, therefore the audit risk rating is low.</td></tr>
<tr><th colspan="2">Actions taken to resolve the issue</th><th>Completion date</th><th>Remedial action status</th></tr>
<tr><td colspan="2">Natural revision cycle has ensured that the volumes have been included.</td><td>Complete</td><td rowspan="3">Cleared</td></tr>
<tr><th colspan="2">Preventative actions taken to ensure no further issues will occur</th><th>Completion date</th></tr>
<tr><td colspan="2">Additional checks taken during file creation process</td><td>Complete</td></tr>
</table>

12.3. Allocation of submission information (Clause 15.5)

Code reference

Clause 15.5

Code related audit information

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

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

Audit observation

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

I evaluated the process for ensuring the correct NSP is recorded by conducting a walk-through of the registry validation and submission processes for NHH and HHR. NSP errors will also show in the ICPCOMP and ICPMISS reports, so these were checked as well.

The process for aggregating the AV080 was examined by checking five NSPs with a small number of ICPs.

Audit commentary

HHR

HHR submission occurs by using the registry as the starting point; this ensures the correct NSP is used for any given submission because the data used includes history of NSP changes.

NHH

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

The NHH registry validation is robust and includes the NSP. The check of the AV080 confirmed the correct aggregation factors were present.

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

I checked whether Trustpower was a grid owner to determine whether this clause applied.

Audit commentary

Trustpower is not a grid owner, therefore this clause does not apply.

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

Trustpower is responsible for the NSP vols submission for the Waipori Village embedded network. I checked the HHR submission processes by conducting a walk-through of the relevant steps and I checked that the data from MV90 flowed through to the relevant submission files.

Audit commentary

Compliance is confirmed for all HHR submission steps.

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

Trustpower is responsible for the NSP vols submission for six grid connected generators. I checked the HHR submission processes by conducting a walk-through of the relevant steps and I checked that the data from MV90 flowed through to the relevant submission files.

Audit commentary

Compliance is confirmed for all HHR submission steps.

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 8.1** and **8.2**.

Audit commentary

Review of alleged breaches confirmed there were no late revision submissions.

I checked the revision process for ten examples of stopped meters, 36 examples of bridged meters and ten disconnected ICPs with consumption. All corrections occurred accurately. There were no compensation factor discrepancies because compensation factors are checked daily against the registry.

I checked the kWh information in GTV before and after the corrections, and I confirmed that the data flowed through to the submission files by checking these at ICP level.

During the previous audit, it was recorded that corrections made from RR read amendments were not always being applied to the consumption history resulting in the incorrect volume being reconciled. I found that whilst there were readings not displaying in the consumption history, the consumption figures were calculated from the correct reading for all of the ICPs recorded in the previous audit except for one. The ICP is shown below and was not corrected because it switched out.

ICP	Switch date	CS file read	RR amended read	Reading used	kWh difference
0000001313UNA28 (Switch in)	03/10/19	86805	86355	86805	450
0000001313UNA28 (switch out)	8/11/19	87443	86875	86875	0

GR170 and AV080 files for nine revisions were compared. The AV080 files matched the GR170 files for all files. Trustpower has robust monitoring and controls in place to ensure data looks reasonable at an aggregated level.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.7 With: Clause 15.12 From: 03-Oct-19 To: 08-Nov-19	One ICP from the previous audit with an accepted RR read that was not used, resulting in under submission of 450 kWh. 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 rated as strong. Although the RR reads are not visible to the user in some cases, they are present in GTV. The potential impact is low based on the kWh difference. This ICP did not have the reading changed because it switched out.

Actions taken to resolve the issue	Completion date	Remedial action status
The amended SWG read was not passed from switching form billing to be applied before the site switched out. Due to the site no longer being retailed by TRUS this cannot be cleared.	n/a	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Additional reporting implemented to capture scenarios for an amended switch read has been received and not applied.	Complete	

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

NHH volumes 14-month revisions were reviewed for July to September 2018 to identify any forward estimate still existing.

Audit commentary

Review of the 14-month revisions for January to September 2019 showed that not all estimated meter readings had been replaced with validated meter readings. This is recorded as non-compliance below.

Month	Forward estimate	% of total submission
Mar-19	577	0.06%
Apr-19	580	0.06%

To determine the reasons that forward estimate remained, I checked all NSPs with forward estimate remaining, and found that this was due to a report issue which looks for forward estimates remaining prior to the R14 revision. For the ICP affected the submit flag was set to Null and therefore the report didn't identify them. The reporting has since been corrected.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.8 With: Clause 4 of Schedule 15.2 From: 01-Mar-19 To: 30-Apr-19	Forward estimates were not replaced by revision 14 for March and April 2019. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as strong as the reporting has since been modified to capture all ICPs with FE remaining. The impact is low. Total forward estimate for the ICP was 577 to 580 kWh.

Actions taken to resolve the issue	Completion date	Remedial action status
Report updated to account for anomally.	Complete	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Additional peer review checks to be undertaken to identify any FE remaining at 14-month revision.	Complete	

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

Code reference

Clause 2 Schedule 15.3

Code related audit information

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

- *half hour volume information for the total metered quantity of electricity for each ICP notified in accordance with clause 11.7(2) for which there is a category 3 or higher metering installation (clause 2(1)(a)) for each ICP about which information is provided under clause 11.7(2) for which there is a category 1 or category 2 metering installation (clause 2(1)(b)):*
  - *a) any half hour volume information for the ICP; or*
  - *b) any non-half hour volumes information calculated under clauses 4 to 6 (as applicable).*
  - *c) unmetered load quantities for each ICP that has unmetered load associated with it derived from the quantity recorded in the registry against the relevant ICP and the number of days in the period, the distributed unmetered load database, or other sources of relevant information (clause 2(1)(c))*
- *to create non half hour submission information a reconciliation participant must only use information that is dependent on a control device if (clause 2(2)):*
  - *a) the certification of the control device is recorded in the registry; or*
  - *b) the metering installation in which the control device is location has interim certification.*
- *to create submission information for a point of connection the reconciliation participant must apply to the raw meter data (clause 2(3):*
  - *a) for each ICP, the compensation factor that is recorded in the registry (clause 2(3)(a))*
  - *b) for each NSP the compensation factor that is recorded in the metering installations most recent certification report (clause 2(3)(b)).*

Audit observation

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

Aggregation and content of reconciliation submissions was reviewed, and the registry lists were reviewed.

Audit commentary

Compliance with this clause was assessed:

- HHR volume is reported for all ICPs with a meter category 3 or higher,
- five ICPs with injection/export registers were checked and found that generation consumption was correctly submitted,
- ten ICPs with unmetered volumes were reviewed, including five ICPs with standard and five ICPs with shared unmetered and found that the correct consumption was submitted,
- all active ICPs had submission types consistent with their profiles,
- unmetered load submissions were checked in **section 12.2,**
- all ICPs on profiles requiring a certified control device had AMI or HHR metering, or a certified control device,
- no loss or compensation arrangements are required, and
- aggregation of the AV080, AV090 and AV140 reports is compliant.

This area has robust management and controls in place.

I checked the process for NHH to HHR upgrades, and HHR to NHH downgrades, to ensure all consumption information was accounted for. I walked through five downgrades and five upgrades to confirm the process.

- for upgrades, the process is to end the NHH meter the day before and consider the ICP HHR all day, with the trading periods prior to the meter change populated with zeros, and
- for downgrades the process is to end the HHR meter on the day of the change and begin the NHH meter from the installation read the following day.

The processes in place ensure all consumption is accounted for.

Audit outcome

Compliant

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

Code reference

Clause 3 Schedule 15.3

Code related audit information

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

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

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

Audit observation

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

I reviewed five 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 (Clause 4 and 5 Schedule 15.3)

Code reference

Clause 4 and 5 Schedule 15.3

Code related audit information

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

If a seasonal adjustment shape is not available, the methodology for preparing an historical estimate of volume information for each ICP must be the same as in clause 4, except that the relevant quantities

kWh_{Px} must be prorated as determined by the reconciliation participant using its own methodology or on a flat shape basis using the relevant number of days that are within the consumption period and within the period covered by kWh_{Px}.

Audit observation

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

Audit commentary

The table below shows that all scenarios are calculating as expected and correct SASV (seasonal adjusted shape values) 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
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

Test	Scenario	Test expectation	Result
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	This was previously non-compliant, but all customer reads are now 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	This was previously non-compliant, but all customer reads, including photo reads, are now 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

I checked the documentation for the forward estimate methodology, and I checked examples where the difference between the Ri and subsequent revisions exceeded 100,000 kWh and 15%.

Audit commentary

Trustpower's 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% and within 100,000kWh. The table below shows the number of balancing areas where this target was not met.

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

Month	Revision 1	Revision 3	Revision 7	Revision 14	Total
Jun 2019	0	1	1	1	199
Jul 2019	2	2	3	3	197
Aug 2019	0	0	0	0	199
Sep 2019	0	0	0		201
Oct 2019	0	1	1		203
Nov 2019	1	1	1		202
Dec 2019	0	0	0		204
Jan 2020	1	0	0		202
Feb 2020	0	0	0		204
Mar 2020	0	4	4		203
April 2020	1	1			202
May 2020	1	1			202
June 2020	0	0			208
July 2020	0	0			208
August 2020	0	0			210

Trustpower has monitoring in place for variations between revisions and in all cases, could explain the reasons for the differences. This monitoring occurs at NSP and at ICP level and includes checks of any ICPs with a change of more than 20,000 kWh plus ICPs with credits of more than 500 kWh. The reasons mostly relate to the following issues:

- movement of volume following the application of seasonal shape files,
- replacement of estimates with actual data, and/or
- seasonal loads.

The process used to calculate the initial submission results in a lower variance between the initial revision and R1 revision.

The table below shows the total variation between revisions, compared to the initial submission.

Month	Revision 1	Revision 3	Revision 7	Revision 14
Jun 2019	-0.58%	-3.69%	-3.94%	-3.94%
Jul 2019	-5.71%	-6.85%	-6.99%	-6.99%
Aug 2019	-2.19%	-3.00%	-3.16%	-3.25%
Sep 2019	2.32%	2.08%	2.02%	
Oct 2019	-0.68%	-0.56%	-0.59%	
Nov 2019	2.60%	3.31%	3.51%	
Dec 2019	-1.98%	-1.75%	-1.94%	
Jan 2020	0.61%	0.30%	0.24%	
Feb 2020	-0.19%	-0.97%	-0.64%	
Mar 2020	-0.98%	-3.89%	-3.36%	
April 2020	1.16%	1.28%		
May 2020	-4.10%	-5.26%		
June 2020	0.79%	0.14%		
July 2020	-3.05%	-3.86%		
August 2020	2.89%	2.66%		

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.12 With: Clause 6 Schedule 15.3 From: 01-Jun-19 To: 31-Aug-20	Some FE thresholds not met in some instances. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are rated as strong as they mitigate risk to an acceptable level. 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
The non-compliances span a period encompassing our meter reading outsourcing project as well as the COVID-19 lockdown period. Due to the large number of legacy meters installed during these periods read attainment was impacted and accuracy reduced. We implemented an end-of-month read for the AMI sites we did have reliable data for at the time (~95k) and this increased our read percentage & accuracy markedly	Complete	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
AMI rollouts have increased, with more than 200k sites now possessing AMI meters. Combined with the ongoing use of the EOM read process has resulted in a more robust process should similar events happen in the future	Ongoing	

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

Code reference

Clause 7 Schedule 15.3

Code related audit information

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

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

Audit observation

The registry list as of 28 January 2021 and event detail report for 1 April 2020 to 28 January 2021 were reviewed to identify any ICPs which have had profile changes. A diverse sample of 15 profile changes were checked to determine whether there was an actual or permanent estimate read on the profile change date.

Audit commentary

In the event of a profile change, Trustpower uses a validated meter reading or a permanent estimate on the day that the change is effective. Trustpower mainly uses the GXP profile for NHH, and a meter change normally occurs at the same time as the profile change.

A sample of 14 profile changes were checked. All of these had a meter change at the time of the profile change and a meter read was gained.

Audit outcome

Compliant

13. SUBMISSION FORMAT AND TIMING

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

Code reference

Clause 8 Schedule 15.3

Code related audit information

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

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

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

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

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

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

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

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

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

Audit observation

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

Aggregation of 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 is aggregated to the following level:

- NSP code,
- reconciliation type,
- profile,
- loss category code,
- flow direction,
- dedicated NSP, and
- trading period for half hour metered ICPs and consumption period or day for all other ICPs.

No incorrect aggregation issues were identified.

Audit outcome

Compliant

13.2. Reporting resolution (Clause 9 Schedule 15.3)

Code reference

Clause 9 Schedule 15.3

Code related audit information

When reporting submission information, the number of decimal places must be rounded to not more than two decimal places.

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

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

Audit observation

I reviewed the rounding of data on the AV090, AV140 and AV080 reports as part of the aggregation checks. AV130 submissions were reviewed in **section 12.6**.

Audit commentary

Submission information is appropriately rounded to no more than two decimal places.

Audit outcome

Compliant

13.3. Historical estimate reporting to RM (Clause 10 Schedule 15.3)

Code reference

Clause 10 Schedule 15.3

Code related audit information

By 1600 hours on the 13th business day of each reconciliation period the reconciliation participant must report to the reconciliation manager the proportion of historical estimates per NSP contained within its non-half hour submission information.

The proportion of submission information per NSP that is comprised of historical estimates must (unless exceptional circumstances exist) be:

- *at least 80% for revised data provided at the month 3 revision (clause 10(3)(a))*
- *at least 90% for revised data provided at the month 7 revision (clause 10(3)(b))*
- *100% for revised data provided at the month 14 revision (clause 10(3)(c)).*

Audit observation

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

I reviewed nine months of AV080 reports to determine whether historic estimate requirements were met.

Audit commentary

The quantity of historical estimates is contained in the submission file and is not a separate report. The proportion of HE in the revision files was checked for nine separate months, and the table below shows that compliance has not been achieved in all instances.

Quantity of NSPs where revision targets were met:

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Jul 2019			288	288
Aug 2019			291	291
Sep 2019			293	293
Feb 2020		279		295
Mar 2020		280		293
Apr 2020		278		291
Jun 2020	284			297
Jul 2020	286			298
Aug 2020	283			300

The table below shows that the percentage HE at a summary level for all NSPs is at or above the required targets for revisions 3 and 7, and 14. I checked 14 NSPs where targets were not met and, in all cases, there were a small number of ICPs in total at the NSPs meaning that if one ICP was not read the target was not met. One remote embedded network at Te Kaha had a low proportion of HE because it was on a 9-month reading cycle but has now been changed to a 6-month cycle.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met
Jul 2019	-	-	100.0%
Aug 2019	-	-	100.0%
Sep 2019	-	-	100.0%
Feb 2020	-	99.06%	-
Mar 2020	-	99.21%	-
Apr 2020	-	99.34%	-
Jun 2020	98.67%	-	-
Jul 2020	98.90%	-	-
Aug 2020	98.89%	-	-

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 13.3 With: Clause 10 of Schedule 15.3 From: 01-Feb-20 To: 31-Aug-20	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	The controls are rated as moderate as the move from inhouse meter reading resulted in a drop in meter reading attainment resulting in more FE and lower HE attainment. Significant improvements have been made and it is likely the results will continue to improve over the next audit period. The audit risk rating is low as overall the meter reading attainment levels are high, but not as high as they have been previously.

Actions taken to resolve the issue	Completion date	Remedial action status
Our R3 HR percentages have increased markedly since last audit largely as a result of the AMI rollout. The scenario that causes the non-compliance (embedded networks with a mix of high & low consumption sites and the high consumption site has restricted access) is still present. We continue to monitor the FE volumes.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
We proposed a change for this part of the code suggest a different approach including a materiality portion but are yet to receive a response from the EA. Our metering services team continue to progress on unread / restricted access sites that flow through to rectifying these scenarios. Also, the AMI rollout is continuing to have a positive impact on these volumes	Ongoing	

CONCLUSION

Trustpower has made good progress in resolving non-compliant issues raised in the last audit. Registry management and switching have continued to have high levels of compliance. The management of distributed unmetered load has made steady improvement during the audit period. The biggest issue in this area is the getting the customers to amend and improve their processes.

Review of the switch saves area highlighted that the initial conversation is confirming that the customer did intend to switch away, however in one of ten calls sampled the agent attempted to save the customer by comparing pricing and was successful. There is an alleged breach currently under investigation for the same activity.

The meter reading and reconciliation functions have shown improvements during the audit period and very few issues were identified. Some improvements are required to the AMI event monitoring area but generally the controls in place are sufficiently strong to ensure issues are identified and resolved prior to the audit. Distributed unmetered load discrepancies are the main issues, which have already been identified by Trustpower and considerable work is being undertaken to make improvements.

The audit found 31 non-compliances and makes four recommendations. This is an improvement from the 38 non-compliances in the previous audit. The future risk rating has improved from 80 to 50.

The next audit frequency indicator recommends that the next audit be conducted in six months. I have considered this in conjunction with Trustpower's responses, which indicate that process improvements have or will be made to resolve the issues, apart from a technical non-compliance relating to the HHR aggregates submission. I recommend the next audit be conducted in 18 months.

PARTICIPANT RESPONSE

Trustpower would like to thank both Veritek and our people for their work on this audit. We acknowledge the hard work and diligence of our teams in continually improving the control environment and delivering service excellence for our customers. The significant improvement in future risk since the last audit (80 to 50) and reduction in non-compliance evidences this.

We have made good progress in resolving non-compliant issues raised in the last audit. Registry management and switching continue to have high levels of compliance, and the meter reading and reconciliation functions have shown improvements during the audit period with very few issues identified.

The introduction of a DUML Governance Group to oversee the management of distributed unmetered load has helped Trustpower to make steady improvement during this audit period. As noted in the report, the biggest issue in this area is the getting the customers to amend and improve their own processes. Whilst we have committed significant resource and continue to find innovative ways to improve compliance in this area, the vast majority of DUML databases that we have issues with are those related to NZTA. The EA is aware of the ongoing issues that all retailers are facing in this respect and we welcome the EA's further intervention with NZTA to resolve this issue for all retailers.

We note the auditor's comments regarding switch saves. When this code change was introduced, there was industry confusion regarding what could and couldn't be said to customers. To help retailers with this confusion, the EA produced some helpful Practice Notes (July 2020) and subsequent to these being published, Trustpower introduced further training. Whilst an internal review found no other instances of switch saves non-compliance, we acknowledge the need to strengthen our control environment and reduce the risk of breaching in the future. We intend to carry out an end to end review of switching processes related to Clause 11.15.