

ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT



For

TRUSTPOWER LIMITED

Prepared by: Rebecca Elliot and Steve Woods

Date audit commenced: 28 August 2018

Date audit report completed: 19 September 2018

Audit report due date: 31 October 2018

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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 7.1.

The audit found 25 non-compliances and makes two recommendations. This is a reduction from the 30 non-compliances found in the last audit. Trustpower have a compliance focussed culture which is evident in the improved result found in this audit. The audit risk rating is low for all but one of the non-compliances and the controls are rated as strong for 17 (68%) of the 25 non-compliances found. Of the non-compliances found, only the inaccuracy of the DURL databases has a high audit risk rating due to the impact this has on the market. Trustpower are working with the relevant customers to improve compliance in this area. In summary the non-compliances found this year are similar to last with:

- a minor number of late updates to registry
- a small number of late switching files
- a small number of ICPs with the incorrect statuses resulting in volume being allocated to the incorrect active periods

The next audit frequency indicator recommends that the next audit be conducted in twelve months. I have considered this in conjunction with Trustpower's responses and 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
Provision of information	2.1	11.2 & 15.2	Small number of registry discrepancies affecting three ICPs. Inactive status not being applied for the correct periods for disconnected ICPs with consumption.	Strong	Low	1	Identified
Electrical connection	2.11	10.33A	4 ICPs certified late. 24 ICPs reconnected and not certified within 5 business days. 1 ICP reconnected by bridging and not re-certified.	Strong	Low	1	Identified
Changes to registry information	3.3	10 of schedule 11.1	Registry information not provided within 5 business days.	Moderate	Low	2	Investigating
Provision of registry information	3.5	Clause 9 Schedule 11.1	Some late status updates for new connections.	Moderate	Low	2	Identified
Unmetered load	3.7	Clause 9(1)(f) of Schedule 11.1	Some incorrect unmetered load figures in the registry.	Strong	Low	1	Identified
Management of Active status	3.8	17 of schedule 11.1	Four incorrect active dates.	Moderate	Low	2	Identified
Management of Inactive status	3.9	19 of schedule 11.1	ICPs recorded at the incorrect status on the registry. ICP 0007185876RN16B is at the incorrect status on the registry.	Strong	Low	1	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Switching	4.2	3 of schedule 11.3	16 AN files with AA instead of AD.	Strong	Low	1	Investigating
	4.3	5 of schedule 11.3	Some incorrect switch event meter readings and some incorrect average daily consumption.	Moderate	Low	2	Identified
	4.4	6(1) and 6A Schedule 11.3	11 late files and one actual read recorded as an estimate.	Strong	Low	1	Identified
	4.8	10(1) of schedule 11.3	24 incorrect response codes. Two transfer dates prior to requested dates.	Strong	Low	1	Investigating
	4.10	11 of schedule 11.3	Some incorrect switch reads. Some incorrect daily consumption.	Moderate	Low	2	Identified
	4.11	12 of schedule 11.3	19 late files and two actual reads recorded as estimates.	Strong	Low	1	Identified
	4.15	17&18 of schedule 11.3	21 late withdrawals. One incorrect NW code.	Moderate	Low	2	Identified
Unmetered threshold	5.2	10.14 (2)(b)	1 ICP with consumption over 6,000 kWh per annum.	Strong	Low	1	Identified
Unmetered threshold exceeded	5.3	10.14 (5)	One ICP with annual consumption over 6,000 kWh per annum and remedial actions are not yet complete.	Strong	Low	1	Identified
Distributed unmetered load	5.4	11 Schedule 15.3	Distributed unmetered databases not accurate.	Moderate	High	6	Investigating

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Electricity conveyed	6.1	10.13 of part 10	41 metering installations bridged. 30 metering installations interfered with.	Strong	Low	1	Identified
Derivation of meter readings	6.6	5(c) of schedule 15.2	Phase failure not monitored for meters read by FCLM.	Moderate	Low	2	Identified
NHH meter reading application	6.7	6 Schedule 15.2	Meter readings not applied at the end of the day for NHH to HHR changes and decommissioning events.	Strong	Low	1	Cleared
HHR aggregates	11.4	15.8	HHR aggregates files do not contain electricity supplied information.	Strong	Low	1	Cleared
Creation of submission information	12.2	15.4	Change of profile wasn't zeroed out	Strong	Low	1	Identified
Submission accuracy	12.7	15.12	Volume allocated to the incorrect period for four out of ten ICPs checked. Volume for one half hour period for 19/6/18 for ICP 0003443370BU50D has not been corrected and submitted.	Moderate	Low	2	Identified
Forward estimates	12.12	6 of Schedule 15.3	The accuracy threshold was not met for all months and revisions.	Strong	Low	1	Identified
HE reporting	13.3	10 of Schedule 15.3	Historic estimate thresholds were not met for some revisions.	Strong	Low	1	Identified
Future Risk Rating						38	

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Indicative Audit Frequency						12 months	

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

RECOMMENDATIONS

Subject	Section	Recommendation	Description
Electrical Connection of Point of Connection	2.11	Regarding Clause 10.33A	Identify electrical connection agents and ensure arrangements are in place for all areas.
Provision of registry information	3.5	Clause 9 Schedule 11.1	Update the Active status to the registry for HHR new connections based on when data arrives rather than wait for metering to be loaded by the MEP

ISSUES

Subject	Section	Recommendation	Description

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

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.

Two exemptions in place are relevant to the scope of this audit. They are as follows:

- Exemption 268 allows 30 ICPs, which should be treated as DUMML ICPs, to be treated as standard unmetered load. This exemption expires on 30/04/2020. The ICPs are listed below.

ICP	Comments
0001416838UN920	Exemption still valid
0001416872UN914	Exemption still valid
0001416873UN551	Exemption still valid
0001416874UN89B	Exemption still valid
0001416876UN81E	Exemption still valid
0001416908UN7DC	Now decommissioned
0001416909UNB99	Now decommissioned
0001416910UNF65	Exemption still valid
0001416911UN320	Exemption still valid
0001416957UN00A	Switched away
0001416958UNFD4	Exemption still valid
0001416960UNA38	Exemption still valid
0001416960UNA38	Exemption still valid
0001416962UNABD	Exemption still valid
0001417100UN465	Exemption still valid

ICP	Comments
0001417104UN56F	Exemption still valid
0001417105UN92A	Exemption still valid
0001417128UNB24	Exemption still valid
0001417129UN761	Exemption still valid
0001417130UN39D	Now decommissioned
0001417131UNFD8	Exemption still valid
0001417132UN318	Now decommissioned
0001417133UNF5D	Exemption still valid
0001417134UN297	Exemption still valid
0001417135UNED2	Exemption still valid
0001417136UN212	Exemption still valid
0001417137UNE57	Exemption still valid
0001417138UN189	Exemption still valid
0001454794UN5FB	Exemption still valid
0001416954UNCCA	Exemption still valid

- Exemption 250 Exemption 146 allows ICPs: 0007146031RN859, 0007146032RN499, 0007146034RN516, 0007146035RN953 and 0007146036RN593 to consume more than 6,000 kWh per annum. This exemption expires when either the ICPs are all metered or 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.

1.2. Structure of Organisation

Trustpower's organisational structure was sighted.

1.3. Persons involved in this audit

Auditors:

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

Personnel assisting in this audit were:

Name	Title
Angela Lumby	Meter Reading Manager
Anita Guthrie	Metering Coordinator
Ben Rice	Reconciliation Analyst
Delwyn Jeffrey	Commercial and Industrial Billing Manager
Howard Wood	Commercial Manager (Wholesale)
Jhami Dickson	Junior Analyst
Karen Vanstone	HHR data
Kristy Knox	Provisioning Specialist
Jo Andrews	Team Leader – Provisioning
Lisa Edge	Customer Connections Analyst
Philip Bocock	Location Compliance Team Leader
Rachel Falconer	Assurance & Quality Team Leader
Stephanie Roberts	Revenue Assurance Analyst
Stuart Milsom	Customer Connections Service Delivery Manager
Wendy Pyne	Assurance & Compliance Specialist

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

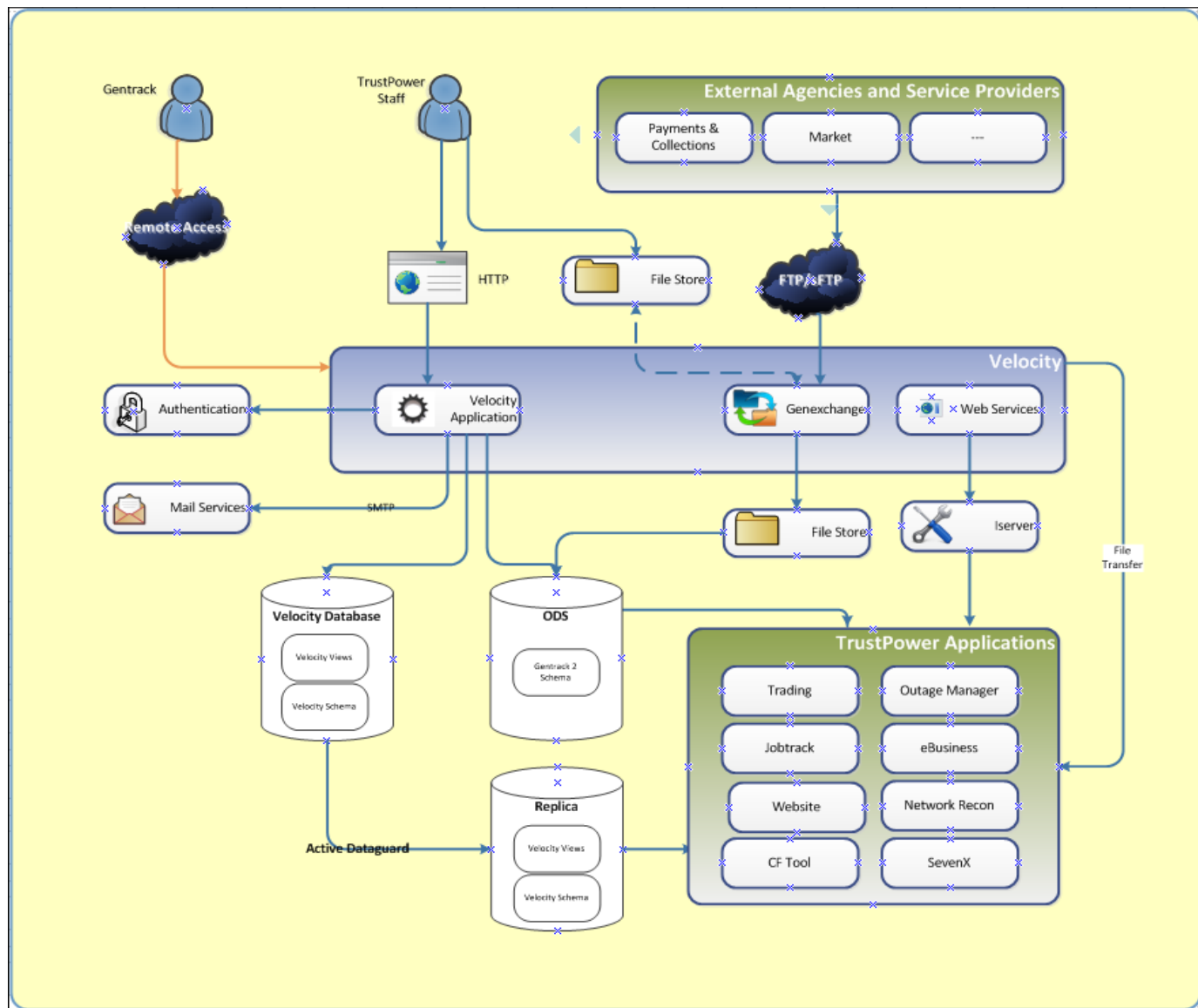
Use of agents was discussed with Trustpower.

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.



1.6. Breaches or Breach Allegations

Trustpower has had no breach allegations relevant to the scope of this audit recorded by the Electricity Authority during the audit period from 1 March 2017 and 31 July 2018.

1.7. ICP Data

Trustpower provided a list file as at June 2018. The active ICPs from the list file are summarised by meter category in the table below. The active sites with no MEP recorded are unmetered, or there were timing differences as discussed in **section 2.1**.

Metering Category	(2018)	(2018)	(2017)
1	260,624	256,587	238,159
2	2,281	2,305	2,362
3	430	450	457
4	163	170	164
5	36	34	36
9	990	1,056	1,441
Blank	1,432	1,445	2,915

Status	Number of ICPs (2018)	Number of ICPs (2017)	Number of ICPs (2016)
Active (2,0)	265,956	262,047	245,534
Inactive – new connection in progress (1,12)	665	654	770
Inactive – electrically disconnected vacant property (1,4)	4,481	4,388	4,350
Inactive – electrically disconnected remotely by AMI meter (1,7)	212	7	7
Inactive – electrically disconnected at pole fuse (1,8)	31	20	2
Inactive – electrically disconnected due to meter disconnected (1,9)	30	7	0
Inactive – electrically disconnected at meter box fuse (1,10)	0	0	0
Inactive – electrically disconnected at meter box switch (1,11)	0	0	0
Inactive – electrically disconnected ready for decommissioning (1,6)	409	802	976
Inactive – reconciled elsewhere (1,5)	0	0	0
Decommissioned (3)	25,094	23,734	22,624

1.8. Authorisation Received

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

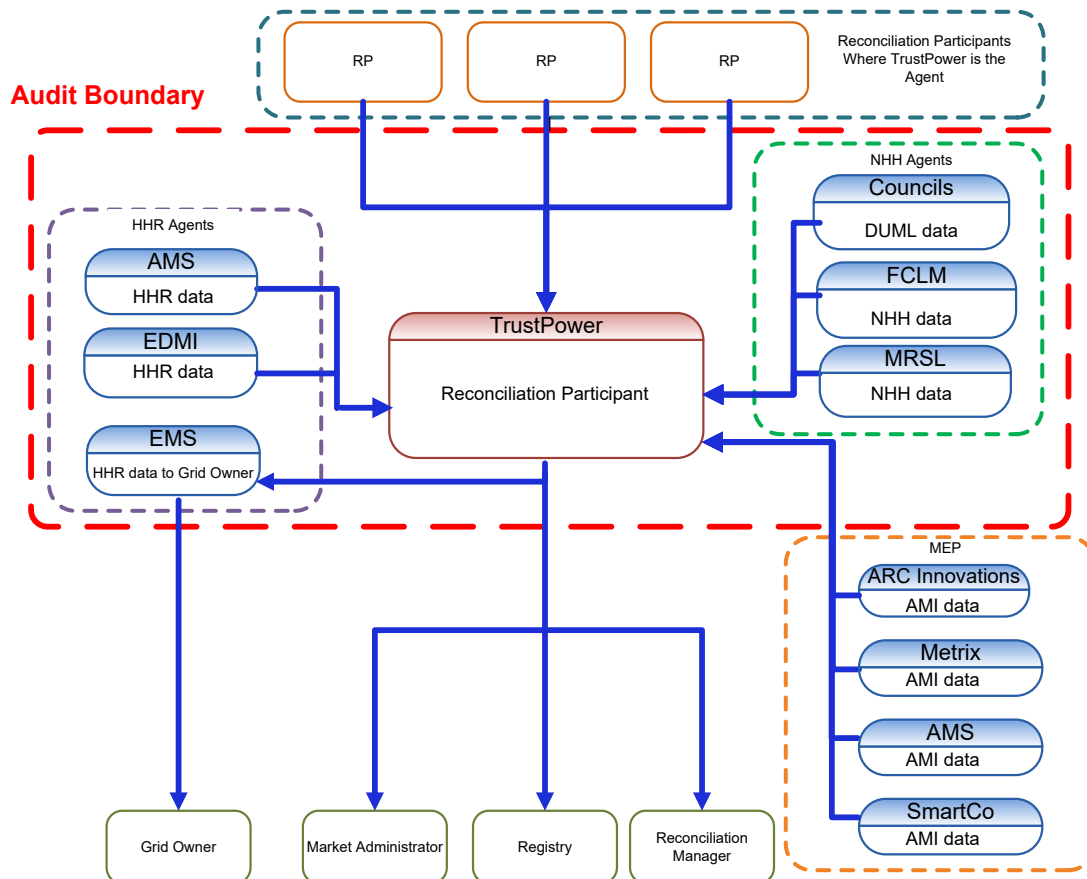
1.9. Scope of Audit

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 V7.1.

The audit was carried out at Trustpower's premises in Tauranga, on August 28th & 29th 2018.

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 providing services	MEPs providing services
(a) - Maintaining registry information and performing customer and embedded generator switching		
(b) – Gathering and storing raw meter data	MRSL- NHH AMS – HHR EMS – HHR AMS – HHR manual data collection EDMI – HHR	Metrix – AMI as an MEP ARC Innovations – AMI as an MEP AMS – AMI as an MEP Smartco – AMI as an MEP
(c)(iii) - Creation and management of HHR and NHH volume information	AMS – HHR Various Councils – DUML databases EMS – HHR EDMI - HHR	
(d) – Calculation of ICP days		
(da) - delivery of electricity supplied information under clause 15.7		
(db) - delivery of information from retailer and direct purchaser half hourly metered ICPs under clause 15.8		
(e) – Provision of submission information for reconciliation		
(f) - Provision of metering information to the Grid Owner	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 and Marlborough Lines, 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 V7.1. Their audit reports are expected to be submitted with this audit. Comments are included in this report in relation to any issues found.

1.10. Summary of previous audit

Trustpower provided a copy of their previous audit report conducted in May 2017 by Steve Woods of Veritek Limited. The summary tables below show the status of the non-compliances, recommendations and issues raised in the previous audit. Further comment is made in the relevant sections of this report.

NON-COMPLIANCES

Subject	Section	Clause	Non-compliance	Status
Relevant information	2.1	10.6, 11.2, 15.2	Some registry discrepancies.	Still existing
Metering Certification	2.10	10.33(2)	2 ICPs not certified within 5 business days of energisation.	Still existing
Changes to registry	3.3	10 of Schedule 11.1	Registry information not provided within 5 business days.	Still existing
Trader responsibility for an ICP	3.4	11.18	Correct MEP nomination late for three ICPs.	Cleared
Management of "active" status	3.8	17 of Schedule 11.1	Some builders' temporary supplies energised without Trustpower's knowledge.	Still existing
Change of MEP	3.11	10.22(1)(a)(i)	MEP change process not being managed in all instances.	Cleared
Losing trader to provide final information	4.3	5 of Schedule 11.3 and 15.2	Some late CS files.	Still existing
Readers must use same reading	4.4	6 & 6A of schedule 11.3	11 late RR files.	Still existing
Losing trader provides information- switch move	4.8	10 of Schedule 11.3	1 incorrect AN response code sent. Some late CS files.	Still existing
Changes to switch meter reading- switch move	4.11	12(2A)&(2B) of Schedule 11.3	21 late RR files. 1 RR sent with only one validated read gained.	Still existing

Subject	Section	Clause	Non-compliance	Status
Losing trader provision of information	4.13	15 of schedule 11.3	Incorrect AN code of MU sent for 3 HH switches.	Cleared
Withdrawal of switches	4.15	17 & 18 of Schedule 11.3	6 switches withdrawn greater than 2 months of the event date. 1 late AW sent.	Still existing
Unmetered threshold	5.2	10.14(2)(b) of part 10	28 ICPs with annual consumption over 6,000 kWh per annum.	Still existing
Unmetered threshold exceeded	5.3	10.14(2)(b) of part 10	28 ICPs with annual consumption over 6,000 kWh per annum and remedial actions are not yet complete.	Still existing
Distributed unmetered load	5.4	11(1) of schedule 15.3, 10.14 & 15.13	Some incorrect submission information for DUMIL ICPs.	Still existing
Electricity conveyed & notification of embedded generators	6.1	10.13 & 15.13	Some incorrect submission information for ICPs with distributed generation.	Cleared
		10.12 & 10.24(b) of part 10	Six metering installations bridged and two metering installations interfered with.	Still existing
Responsibility for metering at GIP	6.2	10.26(7) of part 10	RM not notified of the new expiry date for Matahina metering installation.	Cleared
Certification of control devices	6.3	33(1A) & (1) of schedule 10.7	4 ICPs without certified control devices.	Cleared
Derivation of meter readings	6.6	5(b)&(c) of schedule 15.2	Customer reads being treated as actuals. Checks for phase failure not conducted and recorded by Datacol.	Still existing
Interrogate meters once	6.8	7(1) and 7(2) of Schedule 15.2	Customer reads being treated as actuals. Checks for phase failure not conducted and recorded by Datacol.	Cleared
NHH meters interrogated annually	6.9	8(1) & (2) of schedule 15.2	ICPs unread at 12 months under reporting.	Cleared

Subject	Section	Clause	Non-compliance	Status
Electronic meter readings & estimated reads	9.6	17(4)(f) of schedule 15.2	Event information not evaluated in accordance with the Code.	Cleared
Calculation of ICP days	11.2	15.6	NHH ICP days discrepancies due to incorrect meter change dates in GTV. HHR ICP days incorrect for ICP 0003443370BU50D.	Still existing
HHR aggregates information	11.4	15.8	HHR aggregates missing from the February 2017 file for 3 ICPs. HHR aggregates file does not contain electricity supplied information.	Still existing
Permanence of meter readings	12.8	4 of schedule 15.2	Some estimated data still existing at 14 months.	Cleared
Forward estimate process	12.12	6 of schedule 15.3	FE accuracy threshold not met for some balancing areas.	Cleared
Compulsory meter reading after profile change	12.13	7 of schedule 15.2	Profile changes made on estimates.	Cleared
Historical estimate reporting	13.4	10 of schedule 15.3	HE targets not met for a small number of NSPs.	Still existing

RECOMMENDATIONS

Subject	Section	Clause	Recommendation	Status
Interrogate meters once	6.8	7(1) & (2) of schedule 15.2	Check unread during period of supply report parameters to ensure the correct ICPs are captured.	Cleared
Calculation of ICP days	11.2	15.6 of part 15	Check whether the ICP days discrepancies due to incorrect meter changes are widespread and consider additional monitoring if this is the case. Include ICPCOMP and ICPMISS reporting in the monthly controls for HHR.	Cleared
HHR aggregates information	11.4	15.8	Suggest Trustpower liaise with other participants to consider recommending a code change to allow aggregates files	Still existing

2. OPERATIONAL INFRASTRUCTURE

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

Code reference

Clause 10.6, 11.2, 15.2

Code related audit information

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

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

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

Audit observation

The process to find and correct incorrect information was examined. The list file was examined to confirm that all information was correct and not misleading. The registry validation process was examined in detail in relation to the achievement of this requirement. The list file was examined to identify any registry discrepancies.

Audit commentary

Trustpower's registry validation and management processes continue to be robust. The analysis of the list file returned the following findings:

Item No.	Issue	2018	2017	2016	2015	Comments
1	Status of "new connection in progress with an initial electrical connection date populated	6	5	12	90	Five of these were updated following the registry list being run, but one is still at inactive new connection in progress. Late updates are discussed in section 3.3 and incorrect statuses are discussed in section 3.9 .
2	Active with no MEP	4	13	6	4	All four had an accepted MEP nomination, and metering details were populated on the registry between the registry list being run and the on-site audit. Refer to section 3.4 .
3	Incorrect submission flag	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	1	56	Compliant.
5	ANZSIC "T999" not stated	4	1	22	47	Refer to section 3.6 . These were resolved as part of validation.

Item No.	Issue	2018	2017	2016	2015	Comments
6	ANZSIC "T994" don't know	0	0	4	10	Compliant.
7	Category 9 but Active with MEP and UML "N"	3	5	9	7	Two ICPs have been updated to inactive statuses. ICP 0004510035WM79C still shows active status and is discussed in sections 3.4 and 3.8 .
8	ICPs with Distributor unmetered load populated but retail unmetered load is blank	27	31	43	185	Refer to section 3.7 . The distributor is incorrect in all 27 cases.
9	ICPs with unmetered load flag Y but load is recorded as zero	4	2	4	4	Refer to section 3.7 . Zero is correct for all four.
10	ICPs with incorrect shared unmetered load	0	0	8	6	Compliant.
11	ICPs with Distributed Generation indicated but no DG profile	18	24	0	0	Refer to section 6.1 . These are all "work in progress" or are resolved

Whilst the registry management processes are sound, the discrepancies above are recorded as non-compliance.

As discussed in **section 3.9**, status updates are not being correctly updated on the registry for four of the ten disconnected ICPs checked with consumption recorded. Rather than reversing the original inactive status update where the original disconnection has failed another inactive status update was sent to the registry. This results in the ICP being recorded as inactive for a longer period than it actually was, resulting in the consumption being allocated across the incorrect active period.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 11.2 & 15.2 From: 01-Jun-17 To: 31-Aug-18	Small number of registry discrepancies affecting three ICPs. Inactive status not being applied for the correct periods for disconnected ICPs with consumption. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are strong, as they mitigate risk to an acceptable level. The impact on settlement is minor, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Trustpower continues to utilise exception reporting as part of our business as usual processes to identify and resolve Registry discrepancies. It's pleasing to see that our focus on data integrity is reflected in the results achieved this audit and the improvement in the results. We will continue to engage with 3rd parties i.e. Traders, Distributors and customers to maintain and, where possible, improve our performance in this area.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Additional discrepancy reporting built to account for inaccurate inactive statuses (as discussed in section 3.9) Trustpower will continue its focus on identifying and resolving Registry discrepancies to ensure the integrity of our data.		Complete by: 01/10/2018 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

Data is transmitted to Trustpower using FTP or zipped and emailed files. NHH meter reading data is collected in the field and entered into a personal digital assistant (PDA) device. The data is stored in the PDA in Structured Query Language (SQL) mobile format. Raw meter data enters SevenX many times per day (every seven minutes) from meter readers' PDA devices via the cellular network in compressed and encrypted serialised format. A non-editable copy is created, and these are retained in an archive directory.

HHR data is provided by all agents in a secure format. NHH meter readings are transmitted by SFTP from FCLM.

Audit outcome

Compliant

2.4. Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

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

The audit trail must include details of information:

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

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

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

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

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

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

Audit observation

The audit trail was examined for all data gathering, validation and processing functions by a walk through 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.

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. Compliance is confirmed.

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. Compliance is confirmed.

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:

- if practical in the circumstances, ensure that the metering installation is located at a point of connection; or*
- 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. Compliance is confirmed.

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 process was examined in detail to evaluate the strength of controls. The list file and event detail reports for the period from April to June 2018 were analysed to confirm process compliance and controls are functioning as expected.

Audit commentary

Trustpower's new connection process varies dependant on the network. In most cases, the customer's agent, usually the electrician, contacts Trustpower to request a new connection. Some networks advise Trustpower of the new connection request via their service portal complete with the ICP. For other networks Trustpower request the creation of an ICP from the relevant Network. Once the ICP is known the new connection is loaded into GTV. GTV then draws all the relevant ICP details through from the registry. This creates a job in GTV to move the ICP to the "New connection in progress" status. All the trader details, including the ANZSIC code and MEP are required to be populated. This writes up to the registry and the MEP nomination is sent at the same time. The job will not proceed unless all required information is populated. Any missing or mismatched data will stop the job progressing. Reporting is in place to identify exceptions and ensure visibility of all work in progress. Compliance is confirmed.

Audit outcome

Compliant

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

Code reference

Clause 10.33(1)

Code related audit information

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

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

Audit observation

I asked Trustpower if they were aware of any temporary electrical connections.

Audit commentary

Trustpower is not aware of any temporary electrical connections. The requirements of this clause are understood.

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:

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

Audit observation

The new connection process was examined in detail to evaluate the strength of controls. The list file and event detail report for the period from April to June 2018 were analysed to confirm process compliance and controls are functioning as expected.

Audit commentary

The new connection process is discussed in detail in **section 2.9** above and this confirms that Trustpower accepts responsibility for the point of connection prior to electrical connection and an MEP has been nominated in all instances. Robust reporting is in place to monitor the workflow and identify any exceptions and addressing these in a timely manner.

There were four active ICPs with no MEP recorded in the list file. All four had an accepted MEP nomination, and metering details were populated on the registry between the registry list being run and the on-site audit. Refer to **section 3.4**.

Analysis of the event detail report identified 1,532 new connections. 1,474 of those also had meter certification details present on the PR255. I compared the electrical connection date and meter certification date and found four ICPs where meter certification was more than five business days after the electrical connection date. In all four cases it appears there was insufficient load to conduct certification tests. The ATHs should have added load or conducted “insufficient load” certification. Trustpower intends to raise this matter with the relevant MEPs for the ICPs in question.

ICP	Active date	Initial electrical connection date	Certification date	Working days difference	Metering category
0000507256DE6DA	23/03/2018	23/03/2018	09/04/2018	10	3
1002047762LCA4D	24/04/2018	Not populated	14/05/2018	15	3
1002045759LC021	24/04/2018	Not populated	20/06/2018	39	2
1002046053LCF52	08/11/2017	Not populated	26/04/2018	113	1

Analysis of the event detail report identified 1,665 reconnections. 1,387 of those also had meter certification details present on the PR255. I compared the certification details to the reconnection date to identify ICPs that had expired and/or interim certification on reconnection. I found no ICPs which had expired full certification, and 24 ICPs had expired interim certification.

ICP	Event Date	Metering Installation Type	Metering Installation Certification Type	Metering Installation Certification Date	Metering Installation Certification Expiry Date
0000033115CP75F	29/01/2018	I	NHH	0	01/04/2015
0000608418UN639	3/04/2018	I	NHH	0	01/04/2015
0000195661TR505	3/05/2018	I	NHH	0	01/04/2015
0000301977WA600	9/05/2018	I	NHH	0	01/04/2015
0036802117PC2D6	22/06/2018	I	NHH	0	01/04/2015
0000042102CPB21	24/04/2018	I	NHH	0	01/04/2015
0000123747TRB12	14/05/2018	I	NHH	0	01/04/2015
0030386375PC65D	17/04/2018	I	NHH	0	01/04/2015
0000707014WE86B	19/06/2018	I	NHH	0	01/04/2015
0000019150CPF38	20/04/2018	I	NHH	0	01/04/2015
0000145547TR68D	14/04/2018	I	NHH	0	01/04/2015
0000164187TR50E	24/05/2018	I	NHH	0	01/04/2015
0000166232UN068	6/06/2018	I	NHH	0	01/04/2015
0001605911WM5ED	20/04/2018	I	NHH	01/04/2000	01/04/2015
0004103600CA8BE	18/05/2018	I	NHH	0	01/04/2015
0030084198PC64F	18/06/2018	I	NHH	0	01/04/2015
0030086261PC84A	29/03/2018	I	NHH	0	01/04/2015
0030462423PCE2E	27/06/2018	I	NHH	0	01/04/2015
0030402372PC739	26/04/2018	I	NHH	0	01/04/2015
0083223602PCE6A	13/04/2018	I	NHH	0	01/04/2015
0030462423PCE2E	3/04/2018	I	NHH	0	01/04/2015
0000102684TR154	22/05/2018	I	NHH	0	01/04/2015
0000044124TRC70	10/04/2018	I	NHH	0	01/04/2015
0032756005PC89F	1/06/2018	I	NHH	0	01/04/2015

Discrepancies from the 2017 audit were followed up:

- ICP 0000755006WAA5A's active date has been corrected to 27/10/2016, consistent with the paperwork and electrical connection date
- ICP 0000232170MP8A1's active date is consistent with the electrical connection date but was certified late.

Trustpower provided details of 41 bridged meters during the audit period. I check the certification records for all 41 and found that ICP 1001118012UNFB5 is noted as re-certified in the job completion details but the registry is not updated. ICP 0000531640TED54 was not recertified on reconnection because the new meter will not fit. The existing meter is pre-pay, so the ICP had to switch back to Contact. Certification is cancelled but the registry has not been updated. Non-compliance exists for Trustpower because electrical connection occurred without certification having occurred within five business days of the electrical connection.

During the audit it was found that it is not always clear which party is conducting electrical connection. Clause 10.33A states that only reconciliation participants can electrically connect, therefore Trustpower is required to authorise this activity and should know who the agent is. I recommend Trustpower clarifies this for both HHR and NHH.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 10.33A	Identify electrical connection agents and ensure arrangements are in place for all areas.	Trustpower has strong existing relationships with fieldwork contractors. We are committed to developing these relationships through a continuous process of evaluation and review in order to help ensure that errors are reduced and that the New Connection process is streamlined.	Investigating

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 2.11</p> <p>With: Clause 10.33A</p> <p>From: 01-Jun-17</p> <p>To: 31-Jul-18</p>	<p>4 ICPs certified late.</p> <p>24 ICPs reconnected and not certified within 5 business days.</p> <p>1 ICP reconnected by bridging and not re-certified.</p> <p>Potential impact: Medium</p> <p>Actual impact: Low</p> <p>Audit history: Once</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as strong because reporting is in place to identify metering certification issues, so they can be resolved.</p> <p>The impact on settlement is recorded as minor because the 24 installations with expired interim certification may be less accurate than certified metering installations.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Trustpower continues to utilise exception reporting as part of our business as usual processes to identify and resolve livening discrepancies. It's pleasing to see that our focus on data integrity is reflected in the results achieved this audit. We will continue to engage with 3rd parties i.e. Traders, Distributors and customers to maintain and where possible, improve our performance in this area.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>We have built additional reporting to identify reconnections that have occurred on fully, or interim expired, meters so we can work with the MEP to have the meter recertified within 5 business days. Along with also identifying un-bridged meters that also require recertification.</p> <p>We are engaging with our HHR MEPs to reach agreement on having all HHR meters certified the day of livening, even if there isn't appropriate load on site.</p>		<p>Completed on: 1/10/2018</p> <p>Completed by: 30/11/2018</p>	

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 and controls within GTV were checked.

Audit commentary

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

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, and also a check of controls within GTV.

Audit commentary

Trustpower has an arrangement in place with all MEPs that manage metering in relation to their customer base. All new connections are taken to the status "New connection in Progress" (1,12) and an MEP is nominated as part of this process. GTV holds a table detailing all the MEPs that they have an arrangement in place ensuring that only MEPs that have an arrangement are selected or the job will error.

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. The process is detailed 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. Compliance is confirmed.

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 process was examined in detail. The list file was analysed in conjunction with the event detail report for the period from April to June 2018 to evaluate the updating of the registry in relation to new connections. This clause links directly to **section 3.5** below. The findings for the timeliness of updates is detailed there.

Audit commentary

The new connection process is detailed in **section 2.9** above. The process in place ensures 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. Compliance is confirmed.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 11.1

Code related audit information

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

Audit observation

The process to manage status changes is discussed in detail in **sections 3.8** and **3.9** below.

In this section I have examined the event detail report from April to June 2018.

I used the extreme case methodology to examine the ten latest updates (or the whole population if there were less than ten) for each of the event type updates.

MEP changes were identified by matching MN (MEP nomination acceptance records) with the corresponding trader (MEP nomination record) on the event detail report. Only ICPs where both the nomination and acceptance were present on the event detail report were considered. The 20 latest updates over 30 days were reviewed for MEP changes.

Audit commentary

The table below shows that the registry was not updated within five business days for some status changes.

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Changes to active - reconnections	2015	240	183	57	10.5	76%
	2016	877	700	177	8.1	80%
	2017	3,335	2,942	393	5.4	88%
	2018	1,680	1,405	275	4	84%%
Change to inactive- vacant (excl. new connections in progress and pending disconnection statuses)	2015	359	353	6	1.5	98%
	2016	613	563	50	4.6	92%
	2017	2,988	2,851	137	3.5	95%
	2018	1,792	1,749	43	1.5	97.6%
Change to inactive ready for decommissioning	2015	62	29	33	19.4	47%
	2016	111	56	55	88	50%
	2017	257	153	104	35	56%
	2018	260	166	102	19	64%
Change of MEP	2017	657	605	52	-77*	92%
	2018	4,612	4,324	288	5	93.8%

Inactive - Vacant

The ICP vacant management process is described in detail in **section 3.9** below. A sample of 17 ICPs that were updated greater than 10 days were examined and found:

- seven were due to late notification from distributors, field contractors or MEPs; the status was updated as soon as practicable by Trustpower
- seven were error corrections
- two were internal processing errors
- one was a correction after switching.

Trustpower has robust reporting and controls in this area to identify such instances as soon as possible.

As discussed in detail in **section 3.9** below, Trustpower actively monitors vacant properties from seven days with requests to disconnect properties issued if no response is received within 14 days. Once an installation is disconnected, these are updated on the registry.

Inactive - Ready for Decommissioning

A sample of 15 ICPs that were updated greater than 30 days were examined and found:

- four instances where the status of telecommunications ICPs needed to be decommissioned as part of an ongoing project
- 11 instances where the network or other party has advised Trustpower to update the ICP status to enable decommissioning.

The lack of notification and late notification from customers and Distributors continues to cause the backdating of these events. Trustpower has robust reporting and controls in this area to identify such instances as soon as possible.

Reconnections

Compliance is at a similar level to last year.

I checked 15 updates over 50 days and found:

- six were actually new connections but were not identified as new connections because the initial electrical connection dates were not populated, this is a common issue for Vector ICPs where a large proportion do not have the IECD populated
- six were due to corrections following validation
- one was due to late field notification
- two were due to revenue assurance investigations.

Change of MEP

MEP changes occur across a variety of different scenarios. The MEP change process is well managed in relation to switching. When an ICP switches in the MEP is reviewed and if an MEP change is required a nomination is sent as soon as the switch completes. Validation in this area has improved since the last audit.

I checked 18 updates over 50 days and found:

- eight incorrect nominations needed to be corrected
- eight incorrect event dates; for new connections the “Ready” date is used for the MEP nomination date, even if metering is installed many months later - these appear to be backdated but are not
- one historical clean up related to the purchase of Contact metering by TRUM
- one backdated switch.

The late updating of the registry is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.3</p> <p>With: Clause 10</p> <p>Schedule 11.1</p> <p>From: 01-Jun-17</p> <p>To: 31-Aug-18</p>	<p>Registry information not provided within 5 business days.</p> <p>Potential impact: Medium</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.</p> <p>The impact on settlement and participants is minor; therefore, the audit risk rating is low.</p>		
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. It's pleasing to see this reflected in our results and we will continue to monitor our own performance and work with our MEP and contractors to ensure the timely and accurate return of metering paperwork. We are happy to have shown improvement in 3 out of 4 categories, with just changes to active-reconnections dropping from 88 to 84% - however, our time to process these changes dropped significantly from 5.4 down to 4 days on average.		Ongoing	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Trustpower will continue its focus on identifying and resolving Registry discrepancies to ensure the integrity of our data. We will also continue to engage with 3rd parties i.e. Traders, Distributors and customers to maintain and where possible, improve our performance in this area.		Ongoing	

3.4. Trader responsibility for an ICP (Clause 11.18)

Code reference

Clause 11.18

Code related audit information

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

A trader ceases to be responsible for an ICP if:

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

Retailers Responsibility to Nominate and Record MEP in the Registry

The new connection process was discussed, and the list file was examined to confirm that all active ICPs have an MEP recorded. This analysis found four active ICPs that did not have an MEP recorded in the registry.

ICP Decommissioning

The process for the decommissioning of ICPs was examined. A selection of ten decommissioned ICPs was checked using the typical case method of sampling to prove the process and confirm that controls are in place.

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 takes all new connections to status (1,12) "New connection in progress" in the first instance. An MEP nomination is sent as part of the same action within GTV.

The four active ICPs with no MEP recorded in the registry were examined. All four had an accepted MEP nomination, and metering details were populated on the registry between the registry list being run and the onsite audit.

Three active ICPs with metering category 9 and the unmetered flag set to "no" were identified. Two were subsequently updated to inactive statuses, but ICP 0004510035WM79C is still showing as Active. This ICP switched in without metering recorded in the registry and is under investigation.

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. A sample of ten ICPs was examined to confirm an attempt to read the meter was made at the time of removal. This was confirmed in all cases.

Audit outcome

Compliant

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

Code reference

Clause 9 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

The new connection process was examined in detail. The event detail report was examined for the three months from April to June 2018. This was analysed to assess compliance with updating the registry within five business days of commencement of supply at each ICP. Ten examples of ICPs not updated to active within 20 days were examined.

The HHR new connection process was examined in detail to assess controls. The two latest HHR updates over 20 days to active were reviewed.

Audit commentary

The process of taking a pending new connection was examined. Once the metering paperwork is received back from the field the ICP is updated to active for the electrical connection date recorded. The service order will remain open in Gentrack until the MEP loads the metering information to the registry. Robust controls are in place to ensure that new connections are actively managed. This includes the monitoring of new connections which are active and where the service order is still open. Reporting also identifies any ICPs that are pending electrical connection where the Distributor has recorded an initial electrical connection date and any date mismatches between initial electrical connection and metering certification date. These reports are reviewed on a daily basis.

When an ICP has the initial electrical connection date populated by the Distributor, Trustpower uses this date as the "Active" date and then if they get additional information from Metering records, they change the original date. The issue is that it's not always clear which party is conducting electrical connection. Clause 10.33A states that only reconciliation participants can electrically connect, therefore Trustpower is required to authorise this activity and should know who the agent is. I recommend Trustpower clarifies this for both HHR and NHH. This recommendation is made in **section 2.11**.

HHR new connections follow the same process until the metering is required. At this point it passes to TOU metering team to liaise directly with MEP and manage the meter install process. Reporting captures when the metering is loaded. This is done manually by the TOU metering team and then either the job request is closed, or the connections team are advised by the TOU team that job can be closed. Two late HHR new connections were examined. ICP 1000572764PC51D was made "Ready" for 10/05/18 but the electrical connection date was 08/05/18, therefore Trustpower could not populate the "Active" date until the "Ready" date was corrected. ICP 0000158426CK058 had the metering loaded to the registry late and the status was not changed until the metering was loaded. The Active date is normally known because of when data starts appearing. I recommend the status is updated for HHR ICPs regardless of when metering is loaded because MEPs have 10 business days for new connections and traders only have five.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 9 Schedule 11.1	Update the Active status to the registry for HHR new connections based on when data arrives rather than wait for metering to be loaded by the MEP.	We are undertaking a review of the HHR New Connection process to ensure we are updating the active status to the registry as soon as possible. This is also tied in with discussions related to the certification of HHR meters on the actual livening date.	Investigating

The table below shows that the registry was not updated within five business days for 120 of 1,388 newly connected ICPs.

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Changes to active- new connections	2015	416	58	358	14.3	14%
	2016	695	555	140	4.7	80%
	2017	2,700	2,461	169	2.8	91%
	2018	1,388	1,268	120	2.9	91%

The compliance percentage has remained at 91% and the average time to update the registry has also remained stable at just under three days.

I checked ten of the late updates over 20 days and found the following:

- four were due to late paperwork back from the field
- six were corrections to active dates based on updated information received from the MEP because the IECD had been used.

The accuracy of the active dates for the new connections was checked against the meter certification date and the initial electrical connection date across all identifiable new connections:

Inactive - New Connection in Progress

The table below shows that 93% of changes to “new connection in progress” were made within five business days.

Event	Year	Total ICPs	ICPs Notified Within 5 Days of Electrical connection	ICPs Notified Greater Than 5 Days of Electrical connection	Average Notification Days	Percentage Compliant
Change to inactive new connection in progress	2015	380	287	93	7.9	76%
	2016	1238	1162	76	3.2	99%
	2017	3,294	3,274	20	3.5	99%
	2018	1,535	1,425	110	3.7	93%

The new connection process is described in detail in **section 2.9** above. Trustpower’s new connection process takes all ICPs to the “inactive – new connection in progress” status. As this action occurs before electrical connection, non-compliance can only occur if this status update occurs greater than five business days after (i.e. a backdated new connection). I checked ten ICPs where the change was greater than 50 days and found:

- two have the incorrect event dates
- four were loaded with the ready date as the event date for the status, which gave the appearance of backdating
- four ICPs were backdated new connections.

The late updating of the backdated connected ICPs is recorded as non-compliance below. I note that these are a small number in relation to the overall number of new connections and are not indicative of a systematic issue, but rather exceptions. Trustpower have robust reporting and controls in place to manage and monitor such instances.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.5</p> <p>With: Clause 9 of schedule 11.1</p> <p>From: 01-Jun-17</p> <p>To: 31-Aug-18</p>	<p>Some late status updates for new connections.</p> <p>Potential impact: Medium</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.</p> <p>The impact on settlement and participants is minor; therefore, the audit risk rating is low.</p>		
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 New Connection registry information within 5 business days. We actively look for trends with status breaches to help identify particular participants or contractors that may be dropping the ball. Nonetheless, we are satisfied to see both major categories above the 90% threshold, and can justify the small drop in performance around changes to INC due to our increased activity in the Mutli-Dwelling Unit (MDU) space whereby we often make the decision to delay registrations to help improve efficiency.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will continue to seek out opportunities to improve the efficiency of our New Connection Process to ensure the timeliness and accuracy of our updates are as efficient and streamlined as possible. Under this banner, we are undertaking a review of the HHR New Connection process as a large percentage of our HHR New Connections result in late status changes, or discrepancies - part of this will involve working on changing the behavior of other participants.		Complete by 1/11/18	

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 ANZSIC codes was examined. The registry list as at 30 June 2018 was reviewed to check ANZSIC codes.

- I checked all ICPs with “T99” series ANZSIC codes to confirm whether they were known.
- I selected a diverse sample of 175 ICPs to confirm the validity of the ANZSIC codes applied.

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. Any discrepancies are captured as part of the registry discrepancy reporting and managed accordingly.

Four ICPs with T999 (unknown) ANZSIC codes were identified on the registry list. All were corrected to valid ANZSIC codes prior to the on-site audit according to the normal discrepancy reporting process, proving that controls are in place and operating as expected.

The accuracy of the ANZSIC codes for a diverse sample of 175 ICPs were checked. I found they were all correct, which shows the registration and validation processes are operating as expected.

Audit outcome

Compliant

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

Code reference

Clause 9(1)(f) of Schedule 11.1

Code related audit information

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

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

Audit observation

The process to manage unmetered load was examined. The list file as at June 2018 was examined to identify any ICPs where:

- unmetered load is identified by the Distributor, but none is recorded by Trustpower
- Trustpower’s unmetered load figure doesn’t match with the Distributor’s figure (where it’s possible to calculate this if the Distributor is using the recommended format) and the variance is greater than 1.0kWh per day; 1.0 kWh per day was chosen as a sample only and this does not indicate compliance is achieved if an error is found that is less than 1.0 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 continually monitors unmetered load differences and they are working with the relevant Distributors to resolve these differences.

Trustpower has strong controls in place for the management of unmetered load. This includes the identification of changes to distributors' information.

For 1256 standard and shared unmetered load ICPs, the distributor unmetered load details were in a format which enabled unmetered load to be recalculated. The table below lists the discrepancies found.

Issue	Quantity 2018	Quantity 2017	Quantity 2016	Comments
Daily kWh difference more than 0.1 kWh per day	118	762	1,344	There has been a significant improvement.
Daily kWh difference more than 1.0 kWh per day	37	189	122	There has been a significant improvement.
Distributor's unmetered field is populated but the retailer field is not populated	27	31	43	In all cases the distributor's unmetered load details indicate 0 kW or contain only a note.
Unmetered flag = Y but daily unmetered kWh = 0	4	2	4	In all cases zero is correct

All 37 ICPs where the difference was greater than 1.0 kWh per day were investigated and it was found that 11 ICPs have incorrect registry details but correct details for billing and submission. The remaining 26 are under investigation.

Discrepancies identified in the 2017 audit were followed up, and have been resolved:

- ICP 0007162962RNAD5 now has correct trader unmetered load details and daily unmetered kWh recorded
- ICP 0000251048UN45B's incorrect distributor unmetered load has been removed on the registry
- ICP 0007150280RN188 now has correct trader unmetered load details and daily unmetered kWh recorded.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.7 With: Clause 9(1)(f) of Schedule 11.1 From: 01-Jun-17 To: 31-Aug-18	Some incorrect unmetered load figures in the registry. 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 have recently been improved and they identify all potential errors. 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
Prior to the audit we had incorporated new controls (reporting) following recommendation from the last audit. This new control will address issues as they arise, but given the nature of this non-compliance, we will not eliminate the issue, rather address them as they occur.		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will continue to work through the new reporting and correct the unmetered load details currently in existence. This will be an on-going process due to the lack of data around some sites.		Ongoing	

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

Code reference

Clause 17 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

New Connections

The new connection process was examined in detail as discussed in **sections 2.9** and **3.5** above. The list file as at June 2018 was examined to identify any ICPs still at the status “Inactive - new connection in progress” with an initial electrical connection date populated.

The event detail report was analysed in conjunction with the list file to identify any ICPs where there was a variance between the initial electrical connection date and the meter certification date. Any ICPs with a mismatched active date to the meter certification and initial electrical connection dates were checked.

Reconnections

The process for the management of ICP reconnection was examined. The event detail report for the period from April to June 2018. was analysed and the findings in relation to the timeliness of updates to registry is recorded in **section 3.3** above.

Audit commentary

New Connections

The new connection process is discussed in detail in **sections 2.9** and **3.5** above. Specific to this clause, 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.

The status of an ICP is changed to “Active” once confirmation has been received by the electrical connection contractor or the Distributor has populated the initial electrical connection date. For those instances where the active date is updated based on the Distributor’s initial electrical connection date, the active date is confirmed when the electrical connection paperwork is received by the contractor.

The previous audit recorded some builders temporary supplies were electrically connected without Trustpower’s knowledge. Addition communication occurred with field contractors after the last audit and there were no examples found this time.

A review of the list file identified six ICPs which had an initial electrical connection date populated while at “active - new connection in progress” status. Five were timing differences and the registry was updated to “active” prior to the audit. ICP 0007185876RN16B is still recorded as new connection progress because Trustpower is having difficulty determining the electrical connection date. This is currently at the incorrect “inactive” status and is recorded as non-compliance in **section 3.9**.

ICP 0004510035WM79C is active with unmetered flag set to no and a metering category of 9. It is not known if this ICP is active or not and Trustpower is investigating.

The 2017 audit recorded that ICP 1000564966PCEB2 had an initial electrical connection date but was not active. This issue has cleared, the ICP has since been updated to active.

Active Date vs. Initial Electrical Connection Date and Certification Date

Twelve ICPs had a difference between the “Active” date and the IECD or the certification date. I checked all of these and found four Active dates were incorrect. Two were data entry errors, one was due to using the certification date and not the electrical connection date and one was because the IECD was used then the electrical connection notification had a different date. They have now been corrected.

Discrepancies from the 2017 audit were followed up and the results are shown in the table below.

ICP	2017 Active Date	2017 IED	2017 Meter Cert Date	2018 Comment
0000416439WT33B	28-Feb-17	24-Feb-17	24-Feb-17	Cleared. The active date has been corrected to 24/02/2017.
0000755006WAA5A	18-Oct-16	27-Oct-16	27-Oct-16	Cleared. The active date has been corrected to 27/10/2016.
1000559185PC3C9	05-Oct-16	07-Oct-16	07-Oct-16	Cleared. The date of 05/10/16 is confirmed as correct.

Reconnections

All reconnections have a job issued to the relevant service provider to action. These are managed through job track. Remotely disconnected sites are attempted in the first instance remotely. If this is not successful a field contractor is dispatched to complete. AMS and Metrix notify Trustpower and then Trustpower dispatch the field contractor to reconnect.

If a meter is bridged a job is logged to unbridge 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.

The timeliness is detailed in **sections 3.3** and **3.5** above.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.8</p> <p>With: Clause 17 of schedule 11.1</p> <p>From: 01-Jun-17</p> <p>To: 31-Aug-18</p>	<p>Four incorrect active dates.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are rated as moderate as controls will mitigate risk most of the time but there is room for errors to occur.</p> <p>The audit risk rating is low as the volume of ICPs with an incorrect active date was low when compared to the volume of new ICPs electrically connected.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
As noted by the auditors, only 4 ICP's were identified as having incorrect active dates originally populated. Trustpower works closely with its contractors and 3 rd parties to ensure best practice around liveness and communication is adhered to. Whilst ICP's slip through we are satisfied that those identified by the auditor had already appeared on our discrepancy reporting and were currently under investigation. For this reason, these 4 ICPs with incorrect dates were resolved via our business as usual processes after the audit.		Completed on: 1/10/18	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Trustpower remains committed to staying on top of this issue through ensuring every single connection date discrepancy is identified and investigated within a matter of business days. Ensuring each are resolved in a timely matter, and that any worrying trends or behaviour are called out and addressed.		Ongoing	

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

Code reference

Clause 19 Schedule 11.1

Code related audit information

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

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

Audit observation

The process to manage new connections pending connection (recorded in the registry at status “inactive - new connection in progress”) was examined. The list file was examined to identify any ICPs that had been at the “Inactive - new connection in progress” for greater than 24 months. A sample of ten of these ICPs selected using the typical sample methodology were checked.

The process to manage ICPs at the other inactive statuses was examined. A sample of five ICPs at each inactive status (or all if less than five were available) were checked using the typical characteristics methodology.

Audit commentary

Inactive - New Connection in progress

As recorded in **section 1.7** there were 665 ICPs at this status in the list file. Trustpower monitors any ICPs that have been at this status for greater than 180 days. After this time, they contact the customer to confirm if the ICP is still required. If they are no longer required, the “new connection in progress status is reversed and the Distributor is advised via email that the ICP is no longer required. If the ICP is found to be connected Trustpower follows up with the electrical connection agent to get the paperwork in relation to these ICPs and updates accordingly. All contacts with the customer are recorded in the customer’s memo section. There are 22 ICPs that have been at this status greater than 24 months. The sample checked confirmed that all had been contacted on a regular basis, supported by a customer memo.

ICP 0007185876RN16B is still recorded as new connection progress because Trustpower is having difficulty determining the electrical connection date. This is currently at the incorrect inactive status.

Inactive Status (excluding new connection in progress)

ICPs are only changed to “inactive vacant” or similar or “ready for decommissioning” once a Trustpower approved contractor has confirmed that the ICP has been disconnected.

Once a customer final Trustpower sends a request to the premise for any new customer to register supply or the supply will be disconnected. If after 14 days there has been no response a work order is issued to the field. As with reconnections, if a disconnection 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. AMI remotely disconnected sites are added to a manual meter reading round to maintain visibility of these vulnerable sites.

Contractors are periodically audited to ensure the appropriate policies and procedures are being complied with.

Examination of the sample of disconnected ICPs with consumption found that for four of the ten examples checked, rather than reversing the original inactive status update where the original disconnection has failed another inactive status update was sent to the registry. This results in the ICP being recorded as inactive for longer than it actually was. The original event should be reversed in these instances to ensure that the ICP is recorded as active for the correct period. Trustpower are revising the process to ensure that these events are reversed. The volumes are being correctly submitted but are being allocated to the incorrect period. This is recorded as non-compliance in **section 12.7**.

ICP 1000011202BP7FC was recorded as “inactive – vacant” but should be recorded as “inactive – remotely disconnected”. All other ICPs checked had the correct status.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.9 With: Clause 19 Schedule 11.1 From: 01-Aug-17 To: 05-Sep-18	ICPs recorded at the incorrect status on the registry ICP 0007185876RN16B (see section 3.8) is at the incorrect status on the registry. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls in place are rated as moderate as they will mitigate risk most of the time but there is room for errors to occur as was evident in the findings in relation to disconnected ICPs with consumption. The impact is assessed to be low as this affects only a small number of ICPs.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have built several new reports and added new steps to our processes to stop these issues from reoccurring		Completed on: 1 st October 2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We will continue to monitor the effectiveness of these new controls.		Ongoing	

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

Code reference

Clause 15 Schedule 11.1

Code related audit information

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

Audit observation

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

Audit commentary

Trustpower take all new connections to the "Inactive - new connection in progress" status. They also have regular reporting in place that captures any ICPs where they have been nominated but do not have a new connection registered with them. All are investigated and actioned accordingly. There is nothing older than a month in the latest report. There are 22 ICPs that have been at this status greater than 24 months. The sample checked confirmed that all had been contacted on a regular basis, supported by a customer memo. No requests from any Distributors have been received.

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, and a sample of five ICPs using the typical sampling methodology were checked to confirm that these were notified to the registry within two business days.

Audit commentary

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 but withdraw the switch if the customer changes their mind within the cooling off period. The exception is bundled customers which do get 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.

No late NT files were identified of the sample checked. Compliance is confirmed.

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 5 business days after the date of notification. The losing trader must then:

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

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

Audit observation

The event detail report for April to June 2018 was reviewed to:

- identify AN files issued by Trustpower during the audit period; a sample of two ANs per response code were reviewed to determine whether the codes had been correctly applied
- assess compliance with the setting of event dates requirements.

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

Audit commentary

Trustpower have a switch breach report that gives the team visibility on a day to day basis of switches pending breach and day countdown to breach. There is also a monthly switch performance looking at all aspects of compliance which measures the level of compliance.

The registry switch breach report is monitored multiple times during the work day to ensure switches are completed before they breach.

AN response codes are automated and in previous audits have been proved as correct. However, in this audit I found 16 ICPs with AMI metering but the AA response code was used. This is recorded as non-compliance.

The event detail report was reviewed for 1,503 Trustpower transfer switches. 100% had an event date within 10 business days of receipt of the NT.

Trustpower provided a copy of their internal reporting which reflects the same result. This reporting is used internally to monitor compliance.

There were no late AN files during the audit period.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: Clause 3 Schedule 11.3 From: 01-Apr-18 To: 30-Jun-18	16 AN files with AA instead of AD. Potential impact: None Actual impact: None 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. Only one minor issue related to AN response codes was found. Participants do not rely on this field, they rely on the registry fields; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
A job has been logged to analyse why this process is not selecting correctly in <i>all</i> instances.		Complete by: 1/12/2018	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing monitoring. We will also pay attention to the outcomes from the upcoming EA Switch Process consultation.		Complete By: 2/4/19	

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

Code reference

Clause 5 Schedule 11.3

Code related audit information

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

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

Audit observation

The event detail report for April to June 2018 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 five records. The content checked included:

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

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

The switch breach report was analysed for the audit period.

Audit commentary

The check of CS content found two issues. If an actual meter reading (non-AMI) is obtained the day before the switch date, it is used as the switch event meter reading and labelled as an actual read. Because the read was not taken on the switch date, an estimate should be created as at the switch date and sent as an estimate. Three of five ICPs checked were incorrect for this reason. There were 103 CS files in total with Actual reads sent where the date of the previous read was the day prior and these may also be non-compliant. The other issue found was that four of ten ICPs with zero in the daily consumption field were incorrect.

There were no ICPs with negative consumption in this field. Five ICPs with consumption greater than 100 kWh per day were correct.

Reporting is in place to track this process and measure performance for the sending of CS files. No late files were found during the audit period.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.3</p> <p>With: Clause 5</p> <p>Schedule 11.3</p> <p>From: 01-Jun-17</p> <p>To: 31-Aug-18</p>	<p>Some incorrect switch event meter readings and some incorrect average daily consumption.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement with regard to CS file content.</p> <p>The impact on settlement and participants is minor; therefore, the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Prior to the audit, we were that there were sometimes instances of incorrect daily consumption within our CS File Content. A job had already been logged to address this issue prior to the audit but had yet to be completed. Job was logged 21st August 2018.</p> <p>The interpretation around incorrect switch event meter readings has evolved since the last audit. This is related to AMI sites and the need to use midnight reads as at event date. Subsequent to this current audit, Trustpower received confirmation from the EA of the EA's current interpretation.</p> <p>We have multiple jobs logged as high priority to fix final tweaks regarding our CS files. This includes correct reads being populated as at event date, using AMI reads for AMI sites and correct daily average consumption in all instances.</p>		Complete By: 1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Jobs to fix have been escalated as high priority.		Complete By: 1/5/2019	

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

Code reference

Clause 6(1) and 6A Schedule 11.3

Code related audit information

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

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

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

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

Audit observation

The process for the management of read change requests was examined.

The event detail report for April to June 2018 was reviewed to identify all read change requests and acknowledgements during the audit period.

Six RR files for transfer switches were issued by other retailers. Four were accepted and two were rejected. Both rejected files were requested under Clause 6(2) and (3) Schedule 11.3. These switches and are discussed in **section 4.5**.

The content of all rejected RRs for transfer switches issued by Trustpower were checked, along with a diverse sample of a further five RRs for transfer switches.

The switch breach history reports for the audit period were reviewed to identify late RR and AC files.

Audit commentary

The billing team advise the switching team if the start read needs to be revised. The sample checked found all transfer switches were supported with two validated reads.

The sample of reads request acceptances and rejections were found to be compliant from a process perspective. One ICP had an actual read recorded as an estimate.

The switch breach report recorded 11 RR files sent late during the audit period. The late sending of RR requests is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.4 With: Clause 6(1) and 6A Schedule 11.3 From: 01-Jun-17 To: 31-Aug-18	11 late files and one actual read recorded as an estimate. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are 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
Actual read recorded as an estimate – A job is logged with Gentrack to enable read types (actual/estimate) to be recorded when completing Read Change Requests via Gentrack. This auto populates at present to an estimate and cannot be over-ridden.		Complete By: 1/5/2019	Identified
Late read changed requests – A job has been logged to stop any read change requests from within Gentrack being sent outside the 4 month time frame. Negotiation via email between retailers will be used instead. This will eliminate any breaches		Complete By: 1/5/2019	
Preventative actions taken to ensure no further issues will occur		Completion date	
Trustpower will remain focused on this area. Monthly reporting will continue to be monitored for breach numbers until the job has been delivered that will not allow late read change requests to be sent via the Registry.		Ongoing	

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

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

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

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

- *the gaining trader within 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 change requests was examined.

The event detail report for April to June 2018 was analysed to identify read change requests issued and received under Clause 6(2) and (3) Schedule 11.3 and determine compliance.

Audit commentary

Two RR files were issued under Clause 6(2) and (3) Schedule 11.3 by other retailers. Both files were rejected because the switches were withdrawn.

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 sample of five ICPs using the typical sampling methodology were checked to confirm that these were notified to the registry within two business days.

Audit commentary

The sample checked confirmed all were sent within two days of all conditions being met. Compliance is confirmed.

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 for April to June 2018 was reviewed to:

- identify AN files issued by Trustpower during the audit period; a sample of two ANs per response code were reviewed to determine whether the codes had been correctly applied
- assess compliance with the setting of event dates requirements.

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

Audit commentary

AN response codes are automated and in previous audits have been proved as correct. However, in this audit I found 24 ICPs with AMI metering but the AA response code was used. This is recorded as non-compliance.

128 switch move requests were identified on the event detail report for Trustpower. These were analysed and found:

- all ICPs had event dates within ten business days
- two ICPs (0000170639EN7DD and 0000032899EA516) had proposed event dates set before the gaining trader's requested date, due to processing errors.

There were no late AN files recorded on the switch breach report during the audit period.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.8 With: Clause 10(1) Schedule 11.3 From: 01-Jun-17 To: 31-Aug-18	24 incorrect response codes. Two transfer dates prior to requested dates. 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 because they mitigate risk to an acceptable level. There is no impact due to incorrect response codes, other traders use the registry to obtain this information. The impact on participants is minor due to the proposed event date issues; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
A job has been logged to analyse why this process is not selecting correctly in <i>all</i> instances. Transfer dates prior to request dates: A new report will be created and data analysed via monthly to monitor any transfer dates prior to requested dates.		Completed By: 1/12/2018	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing training and monitoring of exceptions In light of the current EA Switch Review consultation, Trustpower is mindful that the costs involved to fix some of these smaller immaterial issues far outweighs the impact.		Ongoing	

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

Code reference

Clause 10(2) Schedule 11.3

Code related audit information

If the losing trader determines a different date, 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 for April to June 2018 was reviewed to:

- identify AN files issued by Trustpower during the audit period; a sample of two ANs per response code were reviewed to determine whether the codes had been correctly applied
- assess compliance with the setting of event dates requirements.

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

Audit commentary

Trustpower accept the date proposed unless their customer has a final date later than the gaining trader's date. If the property is occupied the switch will stop and the customer is contacted to confirm the move and book a final or appropriate action e.g. withdrawal if a customer isn't moving.

Analysis found two ICPs (0000170639EN7DD and 0000032899EA516) had proposed event dates set before the gaining trader's requested date. This is recorded as non-compliance in **section 4.8**.

There were no late AN files during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 11 Schedule 11.3

Code related audit information

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

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

Audit observation

The event detail report for April to June 2018 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 five records. The content checked included:

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

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

The switch breach report was analysed for the audit period.

Audit commentary

Reporting is in place to track this process and measure performance for the sending of the CS information. There were no late CS files during the audit period.

The check of CS content found three issues. If an actual meter reading (non-AMI) is obtained the day before the switch date, it is used as the switch event meter reading and labelled as an actual read. Because the read was not taken on the switch date, an estimate should be created as at the switch date and sent as an estimate. Two of five ICPs checked were incorrect for this reason. There were 103 CS files in total with Actual reads sent where the date of the previous read was the day prior and these may also be non-compliant. The second issue found was that three of ten ICPs with zero in the daily consumption field were incorrect. The third issue found was one ICP where the last billed reads and not the last validated reads were sent in the CS file. The ICP was vacant for a short period after the final bill, which means the vacant consumption became the responsibility of the gaining trader.

There were no ICPs with negative consumption in this field. No ICPs with consumption greater than 100 kWh per day were identified.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.10</p> <p>With: Clause 11</p> <p>Schedule 11.3</p> <p>From: 01-Jun-17</p> <p>To: 31-Aug-18</p>	<p>Some incorrect switch reads.</p> <p>Some incorrect daily consumption.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Moderate</p> <p>Breach risk rating: 2</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.</p> <p>The impact on and participants is minor; therefore, the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Prior to the audit, we were that there were sometimes instances of incorrect daily consumption within our CS File Content. A job had already been logged to address this issue prior to the audit but had yet to be completed. Job was logged 21st August 2018.</p> <p>The interpretation around incorrect switch event meter readings has evolved since the last audit. This is related to AMI sites and the need to use midnight reads as at event date. Subsequent to this current audit, Trustpower received confirmation from the EA of the EA's current interpretation.</p> <p>We have multiple jobs logged as high priority to fix final tweaks regarding our CS files. This includes correct reads being populated as at event date, using AMI reads for AMI sites and correct daily average consumption in all instances.</p>		Complete By: 1/5/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Jobs to fix have been escalated as high priority.		Complete By: 1/5/2019	

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

Code reference

Clause 12 Schedule 11.3

Code related audit information

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

- *if the switch meter reading established by the gaining trader differs by less than 200 kWh from that provided by the losing trader, both traders must use the switch event meter reading provided by the gaining trader (clause 12(2)(a)); or*
- *if the switch event meter reading provided by the losing trader differs by 200 kWh or more from a value established by the gaining trader, the gaining trader may dispute the switch meter reading. In this case, the gaining trader, within four calendar months of the actual event date, must provide to the losing trader a changed validated meter reading or a permanent estimate supported by 2 validated meter readings and the losing trader must either (clause 12(2)(b) and clause 12(3)):*
- *advise the gaining trader if it does not accept the switch event meter reading and the losing trader and the gaining trader must resolve the dispute in accordance with the 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 process for the management of read change requests was examined.

The event detail report for April to June 2018 was reviewed to identify all read change requests and acknowledgements during the audit period.

No RR files for switch moves were issued by other retailers.

The content of five rejected RRs for switch moves issued by Trustpower were checked, along with a diverse sample of a further five RRs for switch moves.

The switch breach history reports for the audit period were reviewed to identify late RR and AC files.

Audit commentary

The sample of reads request acceptances and rejections were found to be compliant from a process perspective. Two ICPs had actual reads recorded as estimates.

The switch breach report recorded 19 RR files sent late during the audit period. The late sending of RR requests is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.11 With: Clause 12 of Schedule 11.3 From: 01-Jun-17 To: 31-Aug-18	19 late files and two actual reads recorded as estimates. 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 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
Actual read recorded as an estimate – A job has been logged with Gentrack to enable read types (actual/ estimate) to be recorded when completing Read Change Requests. This auto populates at present to an estimate and cannot be over-ridden.		Complete by: 1/5/20	Identified
Late read changed requests – A job has been logged to stop any read change requests from within Gentrack being sent outside the 4 month time frame. Negotiation via email between retailers will be used instead. This will eliminate any breaches.		Complete by: 1/5/2019	
Preventative actions taken to ensure no further issues will occur		Completion date	
Trustpower will remain focused on this area. Monthly reporting will continue to occur and will monitor for breach numbers until such times as the above change requests have delivered.		Complete by: 1/5/2019	

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

Code reference

Clause 13 Schedule 11.3

Code related audit information

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

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

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

A gaining trader must advise the registry manager of the switch and expected event date no later than three 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, and a sample of five ICPs using the typical sampling methodology were checked to confirm that these were notified to the registry within two business days.

Audit commentary

The half hour billing team manage these switches. The Account Manager sends through the signed contract. This is then loaded into GTV with an entry date. The NT is sent on the entry date, or if later than the entry date the date of loading.

There were no late NT files.

Audit outcome

Compliant

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

Code reference

Clause 15 Schedule 11.3

Code related audit information

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

15(a) - provide to the registry manager a valid switch response code as approved by the Authority; or

15(b) - provide a request for withdrawal of the switch in accordance with clause 17.

Audit observation

The event detail report for April to June 2018 was reviewed to identify AN files issued by Trustpower during the audit period.

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

Audit commentary

No HH ANs were issued by Trustpower, and no late AN files were recorded on the switch breach report.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 11.3

Code related audit information

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

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

16(a)- give the losing trader or MEP for the ICP an opportunity to interrogate the metering installation immediately before the ICP is electrically disconnected or the metering equipment is removed; or

16(b)- carry out an interrogation and, no later than five business days after the metering installation is electrically disconnected or removed, advise the losing trader of the results and metering component numbers for each data channel in the metering installation.

Audit observation

The HH switching process was examined.

The switch breach history report for the audit period was reviewed to identify late CS files.

Audit commentary

CS file content was reviewed for ten HH switches and found to be accurate.

There were no late CS files.

Audit outcome

Compliant

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

Code reference

Clauses 17 and 18 Schedule 11.3

Code related audit information

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

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

- *for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*
 - o *the participant identifier of the trader making the withdrawal request (clause 18(c)(i));*
 - and*
 - o *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 switch withdrawal process was examined.

The event detail report for April to June 2018 was reviewed to:

- identify all switch withdrawal requests issued by Trustpower; the content of a sample of at least three ICPs from the event detail report for each withdrawal code (or all if less than three were available) were checked using the typical sampling methodology, as well as a sample of ten withdrawal requests rejected by other traders
- identify all switch withdrawal acknowledgements issued by Trustpower. A sample of ten rejections were checked
- confirm timeliness of switch requests, as this is not currently being identified in the switch breach report.

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

Audit commentary

The win back process is manual, and withdrawals can get delayed as this is managed by emails between departments as per the example detailed below. The process to manage withdrawals is well understood by the switching team and once in progress these are managed via a dashboard.

The content of 19 of NW files was compared to GTV details. ICP 0000048933TR09A had the CE code and should have had the CX code. The other 18 codes were correct.

A sample of 10 withdrawal requests rejected by Trustpower were checked and the rejections were all valid.

The event detail report found 21 switch withdrawals backdated greater than two months. These were checked and there were varied and complex issues leading to the withdrawals.

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

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 4.15</p> <p>With: Clause 17&18 of schedule 11.3</p> <p>From: 01-Jun-17</p> <p>To: 31-Aug-18</p>	<p>21 late withdrawals.</p> <p>One incorrect NW code</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Once</p> <p>Controls: Moderate</p> <p>Breach risk rating:</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.</p> <p>The impact on settlement and participants is minor; therefore, the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>We have updated our internal process recently to ensure that a wizard populates if a site has been with Trustpower for longer than 2 months. An email is sent to the alt retailer to ask if they will accept the NW before we send. This has proven to be a longer waiting process as response times from other retailers can be up to 4-6 weeks if there is no risk of breaching. Where acceptance is agreed the NW will be sent.</p> <p>Additional training has taken place.</p>		Completed on: 1/10/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Our processes now accommodate the sending of late withdrawals with the fixes in place now. We will continue to monitor.</p>		Ongoing	

4.16. Metering information (Clause 21 Schedule 11.3)

Code reference

Clause 21 Schedule 11.3

Code related audit information

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

21(a)- the trader who carries out the interrogation, switch event meter reading must ensure that the interrogation is as accurate as possible, or that the switch event meter reading is fair and reasonable.

21(b) and (c) - the cost of every interrogation or switch event meter reading carried out in accordance with clauses 5(b) or 11(b) or (c) must be met by the losing trader. The costs in every other case must be met by the gaining trader.

Audit observation

The meter reading process in relation to meter reads for switching purposes was examined. Examples to confirm this procedure have been examined as part of the sending of final information for switches and read requests made.

Audit commentary

All meter readings used in the switching process are validated meter readings or permanent estimates.

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

Audit outcome

Compliant

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

Code reference

Clause 11.15AA to 11.15AB

Code related audit information

A trader that buys electricity from the clearing manager may elect to have a switch saving protection by giving notice to the Authority in writing.

If a protected trader enters into an arrangement with a customer of another trader (the losing trader), or a trader enters into an arrangement with a customer of a protected trader, to commence trading electricity with the customer, the losing trader must not, by any means, initiate contact with the customer to attempt to persuade the customer to terminate the arrangement during the period from the receipt of the NT to the event date of the switch including by:

11.15AB(4)(a)- making a counter offer to the customer; or

11.15AB(4)(b)- offering an enticement to the customer.

Audit observation

Trustpower is a switch save protected retailer having joined on 24 August 2016. The processes in place to manage this were examined. The event detail report for April to June 2018 was examined. All withdrawals for reason code CX were checked.

Audit commentary

They exclude any Switch Save protected retailer files from their pre-switch completion save programme and all staff have been trained in relation to the requirements of this clause. I checked the event detail report for all withdrawn switches from the audit period. There were no switches that were withdrawn with the code "CX" applied prior to the switch completion date in relation to any switch save protected retailers.

Audit outcome

Compliant

5. MAINTENANCE OF UNMETERED LOAD

5.1. Maintaining shared unmetered load (Clause 11.14)

Code reference

Clause 11.14

Code related audit information

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

11.14(2) - The distributor must give written notice to the traders responsible for the ICPs across which the unmetered load is shared, of the ICP identifiers of the ICPs.

11.14(3) - A trader who receives such a notification from a distributor must give written notice to the distributor if it wishes to add or omit any ICP from the ICPs across which unmetered load is to be shared.

11.14(4) - A distributor who receives such a notification of changes from the trader under (3) must give written notice to the registry manager and each trader responsible for any of the ICPs across which the unmetered load is shared.

11.14(5) - If a distributor becomes aware of any change to the capacity of a shared unmetered load ICP or if a shared unmetered load ICP is decommissioned, it must give written notice to all traders affected by that change as soon as practicable after that change or decommissioning.

11.14(6) - Each trader who receives such a notification must, as soon as practicable after receiving the notification, adjust the unmetered load information for each ICP in the list for which it is responsible to ensure that the entire shared unmetered load is shared equally across each ICP.

11.14(7) - A trader must take responsibility for shared unmetered load assigned to an ICP for which the trader becomes responsible as a result of a switch in accordance with Part 11.

11.14(8) - A trader must not relinquish responsibility for shared unmetered load assigned to an ICP if there would then be no ICPs left across which that load could be shared.

11.14(9) - A trader can change the status of an ICP across which the unmetered load is shared to inactive status, as referred to in clause 19 of Schedule 11.1. In that case, the trader is not required to give written notice to the distributor of the change. The amount of electricity attributable to that ICP becomes UFE.

Audit observation

The shared unmetered load process was examined. The list file as at June 2018 was examined in relation to ICPs with shared unmetered load indicated. The load was calculated against the Distributor's record.

Audit commentary

Trustpower has 83 ICPs where shared unmetered load exists. All had the unmetered flag populated correctly and were found to match the distributor's details within 0.1 kWh.

Most distributors have populated the registry correctly and have used the recommended format for their data including the ballast figure where appropriate. Northpower has only populated the daily kWh figure. Therefore, there are no watts or hours data to support the daily kWh calculation. Trustpower hold only two ICPs on the Northpower network with shared unmetered load, which are shown below.

ICP	Distributor unmetered load details
0000539546NR622	0.11 kWh: Per Day: Private Streetlights
0000538240NR90F	0.13 kWh: Per Day: Private Streetlights

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 process for the management of the unmetered threshold was examined. The list file as at June 2018 was examined. Any ICPs with an unmetered threshold greater than 3,000 kWh per annum were examined.

Audit commentary

Trustpower has 2,598 ICPs with standard unmetered load.

There are 19 ICPs with an unmetered load of between 3,000 and 6,000 kWh per annum. I checked the records and I confirm they all have an approved load type.

There are 37 ICPs where the annual consumption exceeds 6,000 kWh per annum. Six of these have incorrect average daily consumption because they are for backup pumps, which have a high capacity but are only used in certain circumstances. The consumption is unknown, but it is likely to be less than 6,000 and probably less than 3,000. If the consumption was estimated to be between 3,000 and 6,000 compliance would be achieved because pumps are on the list of approved predictable load types, despite being one of the least predictable load types in the industry. Two ICPs are now decommissioned, one has switched away and exemptions are in place for 27, leaving ICP 0001416961UN67D as non-compliant. It has annual consumption of 90,000 kWh and is a master ICP for telecommunications cabinets.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 5.2 With: Clause 10.14 (2)(b) From: 01-Jun-17 To: 31-Aug-18	1 ICP with consumption over 6,000 kWh per annum. 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 because they identify all examples and only one example has not been addressed by being added to the exemption list. The impact on settlement is low because the load concerned is predictable and the calculation of consumption appears sound; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
ICP 0001416961UN67D relates to 45 Chorus unmetered assets, generally cabinets. Trustpower is currently undertaking a project to identify where these cabinets are and then applying for new independent ICPS. The long term plan to resolve all issues and decommission this ICP. The EA is aware of this situation and has granted Trustpower an exemption until 2020 to resolve.		31/12/2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing project as above.		31/12/2020	

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:
 - o the date the limit was calculated or estimated to have been exceeded
 - o the details of the corrective measures that the MEP proposes to take or is taking to reduce the unmetered load.

Audit observation

The process for the management of unmetered load thresholds is discussed in **section 5.2** above. The list file was examined to identify any ICPs that exceed the 6,000 kWh per annum threshold. All were examined to determine compliance.

Audit commentary

As mentioned in **section 5.2**, non-compliance exists for one ICP where the annual unmetered consumption exceeds 6,000 kWh. Trustpower has commenced corrective actions but they are not yet complete and were not completed within 20 business days of commencement. This issue does not affect any other participants.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 5.3 With: Clause 10.14 (5) From: 01-Jun-17 To: 31-Aug-18	One ICP with annual consumption over 6,000 kWh per annum and remedial actions are not yet complete. 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 because they identify all examples and only one example has not been addressed by being added to the exemption list. The impact on settlement is low because the load concerned is predictable and the calculation of consumption appears sound; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
ICP 0001416961UN67D relates to 45 Chorus unmetered assets, generally cabinets. Trustpower is currently undertaking a project to identify where these cabinets are and then applying for new independent ICPS. The long term plan to resolve all issues and decommission this ICP. The EA is aware of this situation and has granted Trustpower an exemption until 2020 to resolve.		31/12/2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing project as above.		31/12/2020	

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 21 DUML databases. All but three of these have been audited under the new audit regime.

Audit commentary

The table below shows the findings from the last audits. The three databases that have not been audited (highlighted in blue) were discussed and found:

- Lakeridge Estate was expected to be metered by the end of May 2018, Trustpower have revised this and now expect this to be metered by the end of September and therefore once metered an audit will not be required
- Western Bay NZTA is awaiting an updated database extract before the field audit can be undertaken
- NZTA - Otagonet's load is being investigated as it appears that at least some and possibly all of this unmetered load is recorded in local council databases. Once this has been resolved an audit will be undertaken if required.

			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	1/12/19	7/3/18	No	Yes	Yes	Yes	No	No	Yes	No	No
Kingfisher Residents Association - Parawera	Under review recommended 36 mths	1/6/18	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NZTA Taupo	1/12/2018	1/6/18	No	Yes	Yes	Yes	Yes	No	Yes	No	No
Taupo DC	1/12/2018	1/6/18	No	No	Yes	No	No	Yes	Yes	No	No
Otorohanga DC	1/06/2019	1/6/18	No	Yes	No	Yes	Yes	Yes	Yes	No	No
Waitomo DC	Under review recommended 36 mths	25/7/17	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Lakeridge Subdivision	No	No	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Tauranga NZTA	1/12/2018	1/6/18	No	No	No	No	No	Yes	Yes	No	No
Ocean Shores Village Ltd	30/5/2021	1/6/18	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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)
Western Bay NZTA	No	No	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Tauranga CC-streetlights	1/12/2018	1/6/18	No	No	No	No	No	No	Yes	No	No
Tauranga CC-parks & reserves	1/12/2019	1/6/18	No	Yes	No	No	No	Yes	Yes	No	No
WBOP DC-parks & reserves	30/5/2021	1/6/18	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Ruapehu DC	Under review recommended 36 mths	29/3/17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nelson CC	1/3/2019	1/6/18	No	No	Yes	No	Yes	Yes	Yes	No	No
Ashburton DC	1/6/2019	23/3/18	No	Yes	Yes	Yes	No	No	Yes	No	No
Invercargill CC	1/12/2018	1/6/18	No	Yes	No	Yes	No	No	Yes	No	No
NZTA Otago – Otagonet	No	No	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
NZTA Otago-Aurora	1/3/2019	1/6/18	No	Yes	Yes	No	Yes	Yes	Yes	No	No
Westland DC	Under review-recommended 12 mths	1/6/18	No	Yes	Yes	No	No	Yes	Yes	No	No

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 5.4 With: Clause 11 Schedule 15.3 From: 01-Jun-17 To: 01-Jun-18	Distributed unmetered databases not accurate. 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 are working to resolve the issues found. The impact on settlement is major because the incorrect submission figures are major for some databases.		
Actions taken to resolve the issue		Completion date	Remedial action status
We recognise that this first round of new audit regime for DUML has been a learning opportunity for both participants and the EA. Trustpower is working closely with customers to reduce the instances of incorrect data.		Ongoing	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Trustpower is committed to working with all stakeholders to ensure that databases are accurate and that robust processes are in place to guide and support the customer through the DUML process.		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 process to manage distributed generation was examined. The list file was analysed and all ICPs where the Distributor has indicated distributed generation were identified. This was further broken down to identify any ICPs with a non-distributed generation profile. The metering configuration for these ICPs was analysed to confirm if an injection channel was present and therefore if distributed generation is present.

There were 41 bridged meters identified in the audit period. The reason for bridging was provided and evaluated to confirm whether compliance had been achieved.

Audit commentary

Trustpower monitors all ICPs with distributed generation to ensure it is correctly recorded by the Distributor and to ensure metering is correct if Trustpower has an agreement with the customer to purchase their output.

Trustpower's list file was examined in relation to ICPs where distributed generation is indicated by the Distributor. 2,391 ICPs were identified. Reporting is in a place to identify any sites with generation indicated. Trustpower checks with the customer to determine if they wish to be paid for generation or wish to gift. Those who wish to gift send a letter to the Reconciliation Manager to advise, and the letter is appended to customer account.

The list file was checked and found 18 ICPs with the GXP profile applied. All 18 were checked with the following findings:

- the distributor's information was incorrect for three ICPs
- gifting is occurring for four ICPs and the appropriate notification was provided
- six were resolved by the time of the on-site audit, they were already in progress
- one has switched out

- one is a builder's temporary supply and will be appropriately metered when it goes to permanent
- three are in progress and will have a profile change once metering is changed, if the meter change is possible and not hampered by H&S issues or space.

There were no examples found during the audit which were unknown to Trustpower.

Trustpower provided a list of 41 ICPs that had bridged meters during the audit period. These were analysed, and I found:

- 14 were bridged to sites switching in with pre-pay metering, these sites are bridged to restore power until the pre-pay meter can be changed out.
- ten were bridged due to the reconnection occurring after hours
- eight ICPs were bridged due to the soft reconnection not being successful
- six were due to faulty meters, these sites are bridged until the faulty meter can be fixed or changed out
- three were found to be bridged when they switched in.

Therefore, bridging occurred at Trustpower's request for 30 ICPs, by the MEP for eight ICPs and three ICPs were bridged when they switched in. When a meter is bridged, Trustpower is not compliant with the requirement to ensure all electricity conveyed is quantified in accordance with the Code. For the 30 ICPs where Trustpower initiated the bridging, compliance is not achieved with Clause 10.12, which relates to interference with metering installations.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.1 With: Clause 10.13, Clause 10.24 From: 01-Jun-17 To: 31-Aug-18	41 metering installations bridged. 30 metering installations interfered with. 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 strong with regard to identification of bridged meters. Trustpower only initiates bridging themselves in exceptional circumstances to ensure customers have electricity supply. 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
These meters are bridged as we do not have the ability to accept prepay meters. When a customer moves into a property with one, but does not give us any lead time, we are acting in the customer's best interest to ensure that they have power the day they move in as opposed to choosing not to bridge and denying the customer power. After hours reconnection is due to AMI communication errors / issues. We continue to monitor the situation.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Ongoing monitoring and reconnecting to act in the best interest of the customer and prevent loss of power		Ongoing	

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

Code reference

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

Code related audit information

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

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

The participant responsible for the metering installation must:

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

Audit observation

The NSP table 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	Certification record
TRUS	ARGYLE	ARG1101TRUSGG	TPNZ	GG	9/04/2021	8/04/2021
TRUS	BERWICK	BWK1101TRUSGG	TPNZ	GG	29/06/2019	20/06/2019
TRUS	COLERIDGE	COL0661TRUSGG	TRUM	GG	25/11/2018	25/11/2018
TRUS	HAWERA	HWA1101TRUSGG	TPNZ	GG	24/01/2021	24/01/2021
TRUS	MATAHINA	MAT1101TRUSGG	TRUM	GG	29/09/2018	29/09/2018
TRUS	ROTORUA	ROT1101TRUSGG	TPNZ	GG	14/12/2020	14/12/2020

All metering installations have a current certification. Two dates were found to be different than that recorded on the meter certification. I was unable to determine whether the notification was incorrect or if it was a data entry error when the table was updated as there is no audit trail for such notifications in the RM portal therefore I have recorded compliance. These have been corrected on the NSP supply point table.

All of the grid connected metering installations have been recertified during the audit period and the date has been notified via the RM portal. The Reconciliation Manager provided the update dates for all of the notifications and this confirmed that all updates were provided in the required timeframe.

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

A registry list file was reviewed for the audit period to confirm what profiles were being used by Trustpower and whether control devices were certified where necessary.

Audit commentary

All ICPs with controlled profiles had certified control devices.

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

Examples of defective metering installations were requested from Trustpower including stopped meters, incorrect multipliers and bridged meters.

Audit commentary

Examples of defective metering installations were requested from Trustpower including stopped meters, incorrect multipliers and bridged meters. Relevant MEPs were advised as required for stopped meters and multiplier issues.

The matter of “bypassed” metering was evaluated during the audit. This occurs when an ICP has an AMI metering installation and remote disconnection has occurred, then Trustpower requests a reconnection and the field technician physically bypasses the meter. The bypass occurs due to a lack of communications (bypass occurs by the MEP) or because it is an afterhours reconnection and the MEP does not provide a 24/7 reconnection service.

Trustpower provided a list of all ICPs with AMI where bridging had occurred during the audit period. There were 41 examples. 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.

In all cases, the MEP had been notified in accordance with this clause, but recertification had not been conducted for one of the 41 ICPs. Non-compliance is recorded in **section 6.1** in relation to quantification and in **section 2.11** for the one ICP not recertified.

Compliance is confirmed in relation to this clause.

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 it does not exceed the maximum interrogation cycle in the registry.

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

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

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

2(6) – The interrogation systems must record:

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

Audit observation

The data collection process was examined, and any agents identified in **section 1.5** have audit reports supplied along with this report. A sample of five meter reads per agent were checked using the typical case sample methodology.

Audit commentary

Most information used to determine volume information is collected by Trustpower or one of their agents. Data is provided by way of photos for some substations in the Marlborough Lines and Powerco areas 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”.

The sample checked confirmed compliance.

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 meter reading process was reviewed to confirm that any broken seals and checks for phase failure (if appropriate) and any signs of tampering are checked for and noted if any evidence of this is found.

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

The process for customer reads was reviewed.

Audit commentary

The checking of a metering installation is part of BAU for all Trustpower meter readers.

The MRSI report records compliance in relation to the checking of metering installations.

Datacol is no longer used as a meter reading agent.

FCLM is a new meter reading agent and they are in the process of implementing a process for the identification of phase failure. They identify other issues as required by the Code.

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.

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.

The sample checked confirmed compliance. Validated meter readings are derived from meter readings.

Customer readings, even from photos, are not treated as validated readings.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.6 With: Clause 5(c) of schedule 15.2 From: 05-Jul-18 To: 06-Sep-18	Phase failure not monitored for meters read by FCLM. Potential impact: Medium Actual impact: Unknown Audit history: Once Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact on settlement and participants could be minor; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Engagement with FCLM to confirm training will occur with respect to Phase Failure.		Completed on: 18/9/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Training records to be provided by FCLM to Trustpower annually.		Ongoing	

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

Code reference

Clause 6 Schedule 15.2

Code related audit information

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

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

Audit observation

The process of the application of meter readings was examined. An event detail report for the audit period was reviewed to identify CS files issued by Trustpower during the audit period. A sample of TR CS files and MI CS files containing actual reads were reviewed to determine whether the data provided was complete and accurate. I also checked the meter change processes to ensure they complied with the Code.

Audit commentary

PDA time synchronisation occurs every time a meter reader logs on to SevenX, prior to the sending of meter read files and before any new rounds are downloaded.

If a PDA is unable to log onto SevenX due to being out of range, then the meter reader is expected to manually check the date and time prior to commencing the meter-reading round.

When a NHH to HHR meter change occurs, the process used by Trustpower (and most other traders) is to “remove” the NHH meter in GTV on the day before the physical meter change, which makes the NHH meter reading effective at 24:00 on that day. The day of the meter change is considered HHR all day. This process is employed because the registry won’t allow two MEPs for the same day and it also ensures consumption information and ICP days aligns with the registry. Whilst this process achieves accuracy, it is technically non-compliant, because the NHH meter reading is made effective at the beginning of the day rather than the end of the day.

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).

The checks of the CS files confirmed that Trustpower is using the correct application of meter reading for actuals for switch event meter readings.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 6.7</p> <p>With: Clause 6</p> <p>Schedule 15.2</p> <p>From: 01-Jun-17</p> <p>To: 31-Aug-18</p>	<p>Meter readings not applied at the end of the day for NHH to HHR changes and decommissioning events.</p> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: Multiple times</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as strong because accuracy is achieved for submission, billing and ICP days</p> <p>There is no impact on settlement or other participants; therefore the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>When a NHH to HHR meter change occurs, the process used by Trustpower (and most other traders) is to “remove” the NHH meter in GTV on the day before the physical meter change, which makes the NHH meter reading effective at 24:00 on that day. The day of the meter change is considered HHR all day. This process is employed because the registry won’t allow two MEPs for the same day and it also ensures consumption information and ICP days aligns with the registry. Whilst this process achieves accuracy, it is technically non-compliant, because the NHH meter reading is made effective at the beginning of the day rather than the end of the day.</p> <p>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).</p> <p>No further action to be taken.</p>		Completed	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Due to the nature of this technical breach, no further action		Completed	

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. A sample of ten ICPs using the typical case methodology from the report of all ICPs that were not read during the period of supply for the audit were examined.

Audit commentary

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
- 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.

The provided reporting in relation to those ICPs that did not get a read during period of supply identified 335 ICPs. 308 (92%) of these sites were with Trustpower for less than 30 days.

Audit outcome

Compliant

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

Code reference

Clause 8(1) and (2) Schedule 15.2

Code related audit information

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

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

Audit observation

The meter reading process was examined. Monthly reports for the months of January to June 2018 were provided.

I reviewed meter reading reports for January to June 2018 to confirm that they meet the meter reading frequency report requirements.

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

Audit commentary

Trustpower's meter reading process remains unchanged from the previous audit period and includes the following steps to assist with meter reading attainment:

- each round has a report with all meters that were "skipped" during the previous cycle and these are given a higher priority, including phone calls the night before to make arrangements
- meters that have been skipped more than twice are referred to regional team leaders for resolution, including requesting photos from customers
- some customers are sent "access" letters when other direct methods are not successful.

Examination of the six months of reporting provided recorded:

Month	Not Read @ 12 months	Total ICPs
January 2018	151	212,191
February 2018	152	211,865
March 2018	156	212,008
April 2018	188	212,979
May 2018	180	212,603
June 2018	178	211,938

The sample of ten checked from the June 2018 report confirmed that exceptional circumstances existed. In all cases, there had been many attempts to gain access. Compliance is confirmed.

The previous audit report recorded that the meter reading reports were excluding ICPs where a "permanent estimate" was created to achieve compliance with the requirement to ensure all forward estimates become permanent estimates by the 14-month revision. This matter is now resolved.

I reviewed meter reading reports for January to June 2018 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 four months, for which consumption information is required to be reported into the reconciliation process. A validated meter reading is obtained at least once every four months for 90% of the non half hour metered ICPs.

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

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

Audit observation

The meter reading process was examined and is discussed in detail in the Sections above. Monthly reports for the months of January to June 2018 were provided.

Audit commentary

The table below shows a summary of reading attainment at four months.

Month	Total NSPs read	NSPs <90%
January 2018	256	7
February 2018	257	10
March 2018	258	12
April 2018	260	8
May 2018	260	5
June 2018	258	7

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. Trustpower's reporting confirmed that exceptional circumstances were in place in all cases.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

For the ICPs where the data is collected by agents these processes were reviewed as part of their agent audit, and these are attached to this report.

For the ICPs where the data is collected by the MEP these processes were reviewed as part of their MEP audits.

For those sites read by Trustpower meter readers, the interrogation log was checked.

Audit commentary

All actual reads are received from Trustpower meter readers, agents, switching files or MEPs. The agents reports recorded compliance in relation to this clause.

The Trustpower read meters interrogation log contained the following information:

- meter reader ID
- a unique identifier including meter and register identification
- the method being used for the interrogation and the user ID for equipment being used for interrogation of the meter; and
- date and time.

Compliance is 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

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

Audit commentary

Trustpower interrogates half hour interval meters at approximately 2,000 ICPs with their MV90 system. This includes all Generation meters. Remotely collected data is also provided by EDM and AMS. No data is collected manually

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.

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

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

Audit commentary

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

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

The 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
- 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

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

Audit commentary

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
- 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 $\pm 0.1\%$ (± 2 seconds).

Audit observation

The trading period duration, normally 30 minutes, is kept within $\pm 0.1\%$ (± 2 seconds).

Audit commentary

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

Generation

A review of one generation read file confirmed that trading period duration is 30 minutes.

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

These processes were reviewed at MRSL and FCLM as part of their agent audits.

Processes to archive and store raw meter data were reviewed and included the sighting of examples of archived raw meter data from 48 months prior.

Audit commentary

All data is archived for a period well in excess of 48 months required by the code. Password protection is in place to ensure unauthorised personnel cannot access raw meter data.

Raw meter data from the SevenX system is archived in accordance with clause 10.7 of part 10. Unauthorised personnel cannot access this data. The PDA's have the data stored on SD cards, so if a device is damaged the data is still available.

Meter readings can also be modified in SevenX; however, Trustpower do not use this capability. If meter readings were changed in SevenX the previous reading would still be present. In addition, the database requires the user to record the reason for the change.

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.

Copies of paper-based readings are scanned and archived as pdf documents once the meter reading has been entered into GTV. Once a meter reading has been entered into GTV it can be discarded and another read entered. The original read is retained with a full audit trail.

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

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

19(1)(b) - replacement of the original meter reading by another meter reading (even if the replacement meter reading may be at a different date)

19(1)(c) - if the original meter reading cannot be confirmed or replaced by a meter reading from another interrogation, then an estimated reading is substituted, and the estimated reading is marked as an estimate and it is subsequently replaced in accordance with clause 4(2).

Audit observation

I conducted a walk-through of the process and I checked the records for ten stopped meters, two multiplier corrections (only two were identified during the audit period) and ten bridged meters to confirm compliance.

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.

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. I checked the following worksheets during the audit:

- ten stopped meters
- two multiplier corrections
- ten bridged meters.

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.

Audit outcome

Compliant

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

Code reference

Clause 19(2) Schedule 15.2

Code related audit information

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

19(2)(a) - if a check meter or data storage device is installed at the metering installation, data from this source may be substituted

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

Audit observation

I checked the records for ten examples where correction had occurred.

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. The sample checked confirmed that the estimation was calculated correctly and was subsequently replaced with actual data once this was available.

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

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

Audit observation

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 22(1) and (2) Schedule 15.2)

Code reference

Clause 22(1) and (2) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

I checked all relevant processes through interviews with relevant personnel to confirm whether any processes or people could access and alter raw meter data.

Audit commentary

NHH raw meter data cannot be accessed or over written 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

Identification of readings was checked as part of the meter reading, switching and reconciliation functions to confirm compliance.

Audit commentary

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

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

Identification of readings was checked as part of the meter reading, switching and reconciliation functions to confirm compliance. I also checked the reconciliation function to confirm that all volume information was correctly derived.

Audit commentary

Volume information is directly derived from validated meter readings, estimated readings or permanent estimates.

Audit outcome

Compliant

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

Code reference

Clause 3(5) Schedule 15.2

Code related audit information

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

Audit observation

A sample of submission data was reviewed in **sections 11** and **12**, to confirm that volume was based on readings as required.

NHH data is collected by Trustpower's own meter readers, MRSL and FCLM, and HHR data is collected by AMS, EDM, FCLM.

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 Gentrack. AMI and HHR data is not truncated on import.

Generation data was checked during the audit and rounding only occurs at the time of submission to 2 decimal places.

Audit outcome

Compliant

9.4. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

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

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

Audit observation

Trustpower uses the same process for estimation as for correction. The ten examples checked in **section 8.2** are also relevant to this section and were all checked in detail, along with a walk-through of the process.

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 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 non half hour meter readings and estimated readings must include the following:

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

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

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

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

Audit observation

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

Audit commentary

Data validation for NHH metering information occurs at three levels. Firstly, at the handheld level where a localised validation will occur to ensure the reading is within expected high/low parameters. The parameters are set at 150% and 50% and changing of these parameters requires management sign off. Readings that fail this validation are required to be re-entered, and if the two readings are the same, the second reading will be accepted. If the second reading is different, (potentially indicating the first reading was incorrect) then the second reading is required to be re-entered.

If data becomes corrupted, including dates and times, SevenX will not allow this to be uploaded and an investigation will then occur.

Meter serial numbers are provided to meter readers and can be viewed in their hand-held devices. This assists with ensuring that meter readings relate to the correct meter.

Meter readers are provided with training, which includes validation of the “order” of multiple register meters to ensure that readings for the correct registers are recorded.

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 and issues are resolved in a short timeframe (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
- 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
- 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.

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 list. Any event that could have affected the integrity of metering data must be investigated.

Audit observation

I checked the HHR, C&I 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 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” won’t occur if data is missing)
2. checks for invalid dates and times (an export to “trading” won’t 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)
5. a review of meter and data logger event list.

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

Compliance is confirmed.

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 HHR validation process.

The Code requires “...a review of meter and data storage device event log. Any event that could have affected the integrity of metering data must be investigated.”

The MEPs must check the event log for evidence of malfunctioning or tampering and they must pass relevant event log entries to the reconciliation participant for the metering installation. The reconciliation participant must conduct a review of meter and data storage device event log. Any event that could have affected the integrity of metering data must be investigated. Trustpower receives AMI data from all MEPs and there is routine monitoring function in place for all events from all MEPs.

Audit outcome

Compliant

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

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

Code reference

Clause 13.136

Code related audit information

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

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

Audit observation

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 pricing manager and the relevant grid owner half-hour metering information for:

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

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

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

Audit observation

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 the pricing manager or a grid owner under clauses 13.136 to 13.138, or 13.138A, it must also, by 0500 hours of that day, advise the relevant grid owner.

Audit observation

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

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

A check was conducted of ICP days discrepancies from the ICPCOMP report for a selection of ten NHH and ten HHR rows. The ICP days aggregation process was examined by selecting nine NSPs with a low number of ICPs (less than 10) and confirming that the ICP days was correct compared to the records in GTV.

Audit commentary

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
Jan 2017	0.00%	-0.01%	-0.01%	0.00%	0.00%
Feb 2017	0.01%	0.00%	0.00%	0.00%	0.00%
Mar 2017	0.07%	0.01%	0.00%	0.00%	0.00%
Apr 2017	0.00%	0.00%	0.00%	0.02%	0.00%
May 2017	0.00%	0.01%	0.00%	0.00%	-
Jun 2017	0.01%	0.00%	0.00%	0.02%	-
Jul 2017	0.03%	0.00%	0.00%	0.02%	-
Aug 2017	0.00%	0.00%	0.02%	0.00%	-
Sep 2017	0.01%	0.00%	0.00%	0.00%	-
Oct 2017	0.01%	0.02%	0.02%	0.00%	-
Nov 2017	0.04%	0.07%	0.02%	0.00%	-
Dec 2017	0.05%	0.03%	0.00%	-	-
Jan 2018	0.01%	0.01%	0.00%	-	-
Feb 2018	0.00%	0.00%	0.00%	-	-
Mar 2018	0.02%	0.00%	0.00%	-	-
Apr 2018	0.02%	0.00%	-	-	-
May 2018	0.00%	0.00%	-	-	-
Jun 2018	0.01%	-	-	-	-

The ICP differences checked all related to backdated switches, status updates and one related to a profile change. Late status updates are discussed in **sections 3.3** and **3.5**, and backdated switches are discussed in **sections 4.3** and **4.7**. The issue identified in the last audit of a meter change causing a one day ICP day discrepancy was not evident in this audit. Checks carried out by Trustpower did not find this to be a widespread issue. They have adopted last the recommendation in the last audit to monitor the ICPCOMP report as part of the BAU process.

Most of the HHR ICP days discrepancies relate to backdated registry events or incorrect registry information for a period of time by Trustpower or the Distributor.

The one HHR ICP day discrepancy found in the last audit in relation to ICP 0003443370BU50D has been resolved. Trustpower have adopted the recommendation to monitor the ICPCOMP and ICPMISS reports for HHR connections as part of the BAU process.

Audit outcome

Compliant

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 “as billed” calculation was confirmed by selecting nine NSPs with a small number of ICPs and checking the consumption for all months that the customer record was “active”. I also compared the submission information to the electricity supplied information at an aggregate level to identify any potential issues.

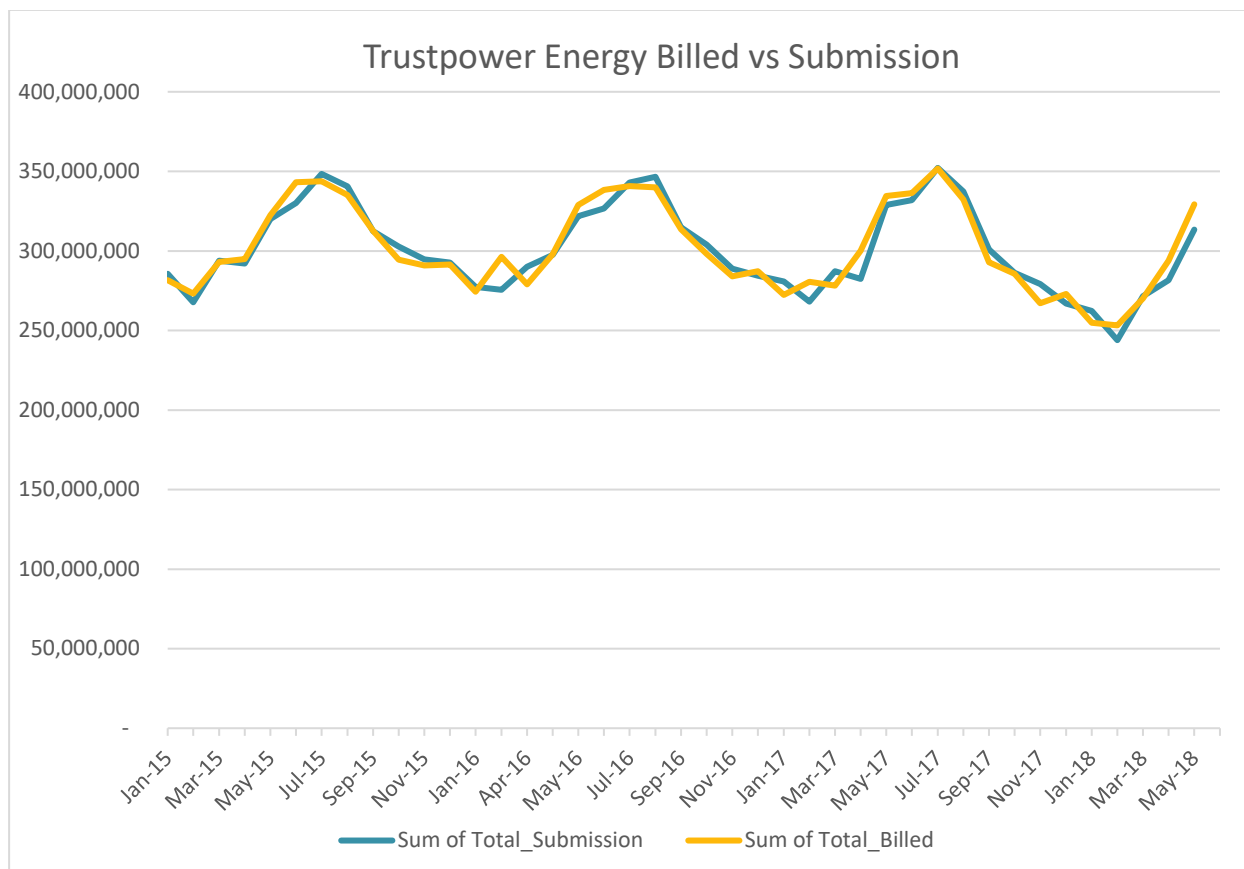
Audit commentary

The calculation is accurate for the nine NSPs checked.

The overall difference between billed and submitted quantities for the period January 2015 to May 2018 is 0.27%, with the submitted total being higher. This is slightly different to the last audit where Ri and R1 revisions were excluded. Considering that Ri and R1 revisions are not as accurate as R3 onward revisions this is a good result.

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

The table below shows the difference between billed and submission totals.



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 by comparing the HHR aggregates files to the HHR vols files for the months of January to March 2018 for all revisions. I also checked the ICP missing reports for any missing ICPs from the aggregate files for all revisions from July 2017 to June 2018, and finally I checked the raw data in MV90 through to the data in the aggregates file for five ICPs.

Audit commentary

The HHR vols and HHR aggregates files matched. The check of raw data through to HHR aggregates records proved compliance.

The ICPMISS reports found that these related to backdated switch losses and gains, NSP changes and profile changes.

As discussed in **section 11.2**, Trustpower have adopted the recommendation to monitor the ICPCOMP and ICPMISS reports for HHR connections as part of the BAU process.

As reported in the last audit, the HHR aggregates reports contain submission information, not electricity supplied information as specified under clause 15.8. Although the reports produced are consistent with the Reconciliation Manager Functional Specification, this is recorded as non-compliance below.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 11.4</p> <p>With: Clause 15.8</p> <p>From: 01-Jun-17</p> <p>To: 31-Aug-18</p>	<p>HHR aggregates files do not contain electricity supplied information.</p> <p>Potential impact: None</p> <p>Actual impact: None</p> <p>Audit history: Once</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>		
Audit risk rating	Rationale for audit risk rating		
Low	<p>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.</p> <p>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.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>We created our submission using submitted data as directed in the Reconciliation Managers Functional Specification and our interpretation is that this is in the best interests of the market, as it is more timely and accurate to submit using submitted rather than supplied, which is not available until a customer has been billed. The code currently contradicts the Reconciliation Managers Functional Specification and it would seem that we are following best practice to provide accurate data in a timely manner.</p> <p>Note: Our view is that we should not receive a non-compliance at this time and that the EA clarify whether submitted or supplied information should be used</p>		N/A	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
None, awaiting direction from the EA on whether submitted or supplied information should be used in this instance.		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

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

Audit commentary

Trustpower uses the “trading period run on” technique. The files for the start and end 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

I checked whether any breach allegations had been made for late files, and I checked that corrected data flowed through to revision files. I also compared the AV080 files to the GR170 files for nine months to ensure complete revision files were being sent, and that “zeroing” occurred when a revision file needed to “back out” any consumption as a result of a backdated event, like a backdated switch out.

A sample of NHH ICPs were checked to make sure they are handled correctly, including:

- ten ICPs with standard or shared unmetered load
- two ICPs with distributed unmetered load
- ten ICPs with distributed generation
- ten vacant ICPs with consumption; and
- ten inactive ICPs with consumption.

Audit commentary

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

Corrected data flowed through to revision files for sample checked. As discussed in **section 3.9**, due to the incorrect status application the volumes in four instances has been allocated across the incorrect period. This is recorded as non-compliance in **section 3.9** and **12.7**.

The AV080 files matched the GR170 files for all files with the exception of the R3 revision for January 2018. I checked the earlier revisions and found that a combination was present in R1 and R2 revisions but was not present in the R3 submission. This was investigated and found that it related to change of profile that wasn't zeroed out. This appears to be a one-off incidence and will be corrected in the R4 revision. Trustpower are investigating as to why this has occurred. Overall 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: 12.2 With: Clause 15.4 From: 01-Sep-17 To: 16-Aug-18	Change of profile wasn't zeroed out. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	Controls in place are rated as strong and will mitigate risk to an acceptable level. The impact is assessed to be low. Submission differences will be corrected and washed up through the revision process.		
Actions taken to resolve the issue		Completion date	Remedial action status
This had been identified and corrected. This was an omission in one month R3 file and has been fixed in the normal wash-up process.		Completed on 20/08/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Additional profile checks have been implemented in the validation of submission revisions		Completed on 01/09/2018	

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.

I requested Trustpower to provide any information regarding to notifications under clause 15.13.

Audit commentary

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

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. There were eight ICP discrepancies in the ICPMISS files indicating an incorrect NSP for the Ri submission for February 2018. These were checked and were found to be due to a backdated NSP change made by the network on 6/03/18 (day 4) after Trustpower had completed their submission for the month of February. This change flowed through in the R1 submission.

As detailed in **section 3.9**, due to the incorrect status application the volumes in four instances has been allocated across the incorrect period. This is recorded as non-compliance in **section 12.7**.

Trustpower is not aware of any notifications under clause 15.13 where they are the trader.

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

The accuracy of submission information was reviewed, including a review of corrections in **sections 8.1** and **8.2**.

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

Audit commentary

I checked the revision process for ten examples of stopped meters, two multiplier errors, ten examples of bridged meters, ten vacant ICPs with consumption, ten disconnected ICPs with consumption. 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. As detailed in **section 3.9**, due to the incorrect status application the volumes for four ICPs with consumption whilst disconnected has been allocated across the incorrect period. This is recorded as non-compliance below.

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

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.7 With: Clause 15.12 From: 01-Jun-17 To: 31-Aug-18	Volume allocated to the incorrect period for four out of ten ICPs checked. Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls in place are rated as moderate as they will mitigate risk most of the time but there is room for errors to occur as was evident in the findings in relation to disconnected ICPs with consumption. The impact is assessed to be low. Submission differences will be corrected and washed up through the revision process.		
Actions taken to resolve the issue		Completion date	Remedial action status
Additional reporting has been put in place to identify consumption on disconnected sites.		Completed August 2017	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Additional reporting has already been put in place to identify this prior to the audit		Completed 29/03/2018	

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

Code reference

Clause 4 Schedule 15.2

Code related audit information

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

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

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

Audit observation

NHH volumes 14-month revisions were reviewed for February to April 2017 to identify any forward estimate still existing.

Audit commentary

All estimated data is replaced with actuals or permanent estimates.

Audit outcome

Compliant

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

Code reference

Clause 2 Schedule 15.3

Code related audit information

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

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

Audit observation

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

Numerous checks were conducted to determine compliance with this clause including

- check of unmetered submission at ICP level for a part month and complete month
- review of Revenue Assurances processes to ensure issues are found and resolved at the earliest opportunity
- check of ICPMISS files for the audit period
- check of the total number of ICPs with NHH submission compared to the number of ICPs on the registry for five NSPs

- check of aggregation processes for nine NSPs
- check of HHR submission from raw meter data through to submission files.

This area has robust management and controls in place. I did not identify any non-compliance with regard to submission activities.

Audit outcome

Compliant

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

Code reference

Clause 3 Schedule 15.3

Code related audit information

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

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

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

Audit observation

I checked the processes for the calculation of forward and historic estimates, and I checked the identification of submission information by reviewing NSPs where the relevant thresholds had not been met to identify any potential incorrect recording.

Audit commentary

Whilst some thresholds were not met for the proportion of HE, I did not identify any incorrect labelling of historic or forward estimates.

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

Compliance is confirmed for all scenarios

Test	Scenario	Test Expectation	Result
A	ICPs become Inactive part way through a month.	Consumption is only calculated for the Active portion of the month.	Compliant
B	ICPs become active then inactive within a month.	Consumption is only calculated for the Active portion of the month.	Compliant
C	ICPs become inactive, then active, then inactive again within a month.	Consumption is only calculated for the Active portion of the month.	Compliant
D	Network/GXP/Connection (POC) alters partway through a month.	Consumption is separated and calculated for the separate portions of where it is to be reconciled to.	Compliant
E	ICPs start on the 1st day of a month.	Consumption is calculated to include the 1st day of responsibility.	Compliant
F	ICPs end on the last day of the month.	Consumption is calculated to include the last day of responsibility.	Compliant
G	ICPs start part way through a month.	Consumption is calculated to include the 1st day of responsibility.	Compliant
H	ICPs end part way through a month.	Consumption is calculated to include the last day of responsibility.	Compliant
I	ICP is Lost and Won Back in a month.	Consumption is calculated for each day of responsibility.	Compliant
J	Unmetered Load for a full month	Consumption is calculating correct based on daily unmetered kWh for a whole month	Compliant
K	Unmetered load for a part month (switch out or disconnected partway through a month)	Consumption is calculating correct based on daily unmetered kWh only for the Active part of the month	Compliant
L	ICP starts on 1st and Ends on Last day of month.	Consumption is calculated for each day of responsibility.	Compliant
M	Rollover Reads	Consumption is calculated correctly in the instance of meter rollovers.	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 remains unchanged from the last audit and is based on the following:

- consumption from the same period one year earlier, adjusted by profile shape data (note that as the consumption may have changed over the one-year period, another date range is compared and the most suitable one used)
- if a read was not conducted in the previous year then the last read period will be used
- 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
Feb 2017	0	0	0	1	172
Mar 2017	1	1	1	1	172
Apr 2017	1	3	3	3	168
May 2017	0	3	3	-	172
Jun 2017	0	1	2	-	166
Jul 2017	0	1	1	-	166
Aug 2017	1	0	0	-	168

Month	Revision 1	Revision 3	Revision 7	Revision 14	Total
Sep 2017	2	2	2	-	170
Oct 2017	0	5	5	-	169
Nov 2017	1	2	2	-	171
Dec 2017	2	3	-	-	173
Mar 2018	1	1	-	-	175

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
- seasonal loads.

As recorded in the last audit one of the main challenges in achieving compliance with the FE accuracy threshold is the estimation of the start of irrigation in the Ashburton region. Trustpower reviewed the data for HHR metered irrigation ICPs and adjusting the shape files they use for NHH forward estimates (provisional shape files). Trustpower's use of provisional shape files was expected to help with the accuracy of their Ri submissions but as was evident in the October 2017 revisions this was not initially achieved. This was not due to use of the provisional shape file but because they had not taken into account that Trustpower's market share had increased. This has now been factored into the calculation and this is expected to improve the accuracy of the Ri submission going forward. This is evident at the end of summer in the March 2018 revisions.

The table below shows the total variation between revisions, compared to the initial submission.

Month	Revision 1	Revision 3	Revision 7	Revision 14
Feb 2017	0.54%	-0.46%	-0.64%	-0.58%
Mar 2017	-0.45%	-1.41%	-1.26%	-1.23%
Apr 2017	-2.63%	-3.88%	-4.12%	-3.88%
May 2017	-4.46%	-7.75%	-7.79%	-
Jun 2017	-3.53%	-5.99%	-5.94%	-
Jul 2017	-0.94%	-4.35%	-4.43%	-

Month	Revision 1	Revision 3	Revision 7	Revision 14
Aug 2017	2.63%	2.42%	2.44%	-
Sep 2017	0.94%	2.09%	2.07%	-
Oct 2017	2.97%	5.43%	5.47%	-
Nov 2017	5.40%	6.62%	6.69%	-
Dec 2017	6.27%	5.76%	-	-
Mar 2018	4.77%	3.43%	-	-

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.12 With: Clause 6 Schedule 15.3 From: Sep-17 To: Jul-18	The accuracy threshold was not met for all months and revisions. Potential impact: High 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. A small number of submissions had differences over the threshold.		
Actions taken to resolve the issue		Completion date	Remedial action status
Revisions have already been submitted		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We have undertaken a significant amount of work to improve the accuracy of our submissions and are continually investigating improvements to our estimation processes as can be seen by our development and implementation of FE profile shapes to account for changes in average weather compared to historical records.		Complete By: 1/04/2019	

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

Trustpower changed a number of profiles from GXP to PV1 or EG1 during the audit period. I checked the process employed for these changes by conducting a walk-through.

A sample of 10 profile changes were checked and confirmed that an actual or permanent estimate existed on the day of the profile change.

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. The non-compliance raised last year related to profile corrections for ICPs with distributed generation installed which did not have a meter read taken for the date of the profile change. As detailed in **section 6.1**, Trustpower monitors ICPs with distributed generation indicated.

A sample of 10 profile changes were checked and confirmed that an actual or permanent estimate existed on the day of the profile change.

Audit outcome

Compliant

13. SUBMISSION FORMAT AND TIMING

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

Code reference

Clause 8 Schedule 15.3

Code related audit information

Submission information provided to the reconciliation manager must be aggregated to the following level:

- *NSP code (clause 8(a))*
- *reconciliation type (clause 8(b))*
- *profile (clause 8(c))*
- *loss category code (clause 8(d))*
- *flow direction (clause 8(e))*
- *dedicated NSP (clause 8(f))*
- *trading period for half hour metered ICPs and consumption period or day for all other ICPs (clause 8(g)).*

Audit observation

I conducted a walk-through of Trustpower's process in relation to the correct aggregation of submission information. I also checked the ICPCOMP report for obvious aggregation factor errors.

Audit commentary

The "starting point" for aggregation factors is the data in GTV. The registry validation process includes all of the relevant fields and is designed to ensure the data in GTV is accurate.

The accuracy of submission files was confirmed by selecting nine NSPs with a small number of ICPs and confirming that the aggregate data was the correct sum of ICP level data. This was compared to the billed data as a "reasonableness" check.

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 checked the content of all relevant types of submission files to confirm rounding practices are correct. I also compared the HHR Vols file to the HHR aggregates file to ensure they were the same and that incorrect rounding had not resulted in different totals.

Audit commentary

Submission information is appropriately rounded to 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

I analysed the GR170 file for 12 months to evaluate compliance.

Audit commentary

The table below shows that compliance has not been achieved in every instance. The proportion of HE at an aggregate level is well above the required thresholds and is 100% at the 14-month revision.

Quantity of NSPs where revision targets were met.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Feb 2017	255	263	265	265
Mar 2017	259	263	265	265
Apr 2017	260	263	265	265
May 2017	260	263	-	265
Jun 2017	253	256	-	265
Jul 2017	259	258	-	262
Aug 2017	256	259	-	261

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met	Total
Sep 2017	258	257	-	263
Oct 2017	254	258	-	262
Nov 2017	257	260	-	264
Dec 2017	256	-	-	266
Mar 2018	261	-	-	269

The table below shows that Trustpower's percentage HE at a summary level for all NSPs is well above the required targets.

Proportion of HE at an aggregate level.

Month	Revision 3 80% Met	Revision 7 90% Met	Revision 14 100% Met
Feb 2017	98.1%	99.8%	100%
Mar 2017	98.1%	99.8%	100%
Apr 2017	98.4%	99.7%	100%
May 2017	98.6%	99.8%	-
Jun 2017	98.9%	99.8%	-
Jul 2017	99.0%	99.8%	-
Aug 2017	98.9%	99.8%	-
Sep 2017	99.1%	99.7%	-
Oct 2017	99.84%	99.8%	-
Nov 2017	98.1%	99.8%	-
Dec 2017	98.5%	-	-
Mar 2018	98.6%		-

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 13.3 With: Clause 10 of Schedule 15.3 From: Sep-17 To: Jul-18	Historic estimate thresholds were not met for some revisions. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are strong to ensure meter readings are obtained which in turn leads to a high percentage of HE. Trustpower were reasonably close to the target in all cases. The impact is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
None as revisions have already been submitted		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Additional checks are to be added to the R3 and R7 revision validations to highlight NSP's that are outside of required limits or within 15% of required limits. These sites will then be passed to our Meter Reading team and prioritised		Complete By: 1/11/2018	

CONCLUSION

The audit found 25 non-compliances and makes two recommendations. This is a reduction from the 30 non-compliances found in the last audit. Trustpower have a compliance focussed culture which is evident in the improved result found in this audit. The audit risk rating is low for all but one of the non-compliances and the controls are rated as strong for 17 (68%) of the 25 non-compliances found. Of the non-compliances found, only the inaccuracy of the DUML databases has a high audit risk rating due to the impact this has on the market. Trustpower are working with the relevant customers to improve compliance in this area. In summary the non-compliances found this year are similar to last with:

- a minor number of late updates to registry
- a small number of late switching files
- a small number of ICPs with the incorrect statuses resulting in volume being allocated to the incorrect active periods

The next audit frequency indicator recommends that the next audit be conducted in twelve months. I have considered this in conjunction with Trustpower's responses and recommend the next audit be conducted in 18 months.

PARTICIPANT RESPONSE

The findings in this report demonstrate Trustpower's continued commitment to a compliance-focussed culture, ensuring that controls are strong and that processes are robust through ongoing self-review and improvement practices.

We are pleased to note the significant improvements since the 2017 audit; the reduction of non-compliances in number (29-25) and audit risk rating (48-39), and that breach risk ratings, apart from DUML, are all classified as 1 or 2. Furthermore, 96% of the non-compliances recorded in this report (24 of the 25 reported) are classified as having a low audit risk rating, with 64% (16) of those having strong controls in place.

We recognise that the new DUML audit regime has been a learning opportunity for both the participants and the EA. Trustpower is committed to working with all stakeholders to find workable solutions to improving compliance in this area.

We believe that, as the new DUML audit regime is effectively a standalone audit process, the findings of which are subsequently captured in this report, DUML audit outcomes should not negatively affect the frequency of this audit. The improvements evidenced since the last audit, together with the low level of audit and breach risk ratings determined in this report, indicates a strong assurance position that should determine a 24 month frequency for the next audit.