

ELECTRICITY INDUSTRY PARTICIPATION CODE
RECONCILIATION PARTICIPANT AUDIT REPORT



For



Prepared by: Steve Woods

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Audit report due date: 30 March 2018

TABLE OF CONTENTS

Executive summary	5
Audit summary	6
Non-compliances	6
Recommendations	8
Issues 8	
1. Administrative	9
1.1. Exemptions from Obligations to Comply with Code (Section 11)	9
1.2. Structure of Organisation	9
1.3. Persons involved in this audit	10
1.4. Use of Agents (Clause 15.34)	10
1.5. Hardware and Software	10
1.6. Breaches or Breach Allegations	10
1.7. ICP Data	11
1.8. Authorisation Received	12
1.9. Scope of Audit	12
1.10. Summary of previous audit	13
2. Operational Infrastructure	16
2.1. Relevant information (Clause 10.6, 11.2, 15.2)	16
2.2. Provision of information (Clause 15.35)	17
2.3. Data transmission (Clause 20 Schedule 15.2)	17
2.4. Audit trails (Clause 21 Schedule 15.2)	18
2.5. Retailer responsibility for electricity conveyed - participant obligations (Clause 10.4) ..	18
2.6. Retailer responsibility for electricity conveyed - access to metering installations (Clause 10.7(2),(4),(5) and (6))	19
2.7. Physical location of metering installations (Clause 10.35(1)&(2))	20
2.8. Trader contracts to permit assignment by the Authority (Clause 11.15B)	20
2.9. Connection of an ICP (Clause 10.32)	21
2.10. Temporary Electrical Connection of an ICP (Clause 10.33(1))	21
2.11. Electrical Connection of Point of Connection (Clause 10.33A)	22
2.12. Arrangements for line function services (Clause 11.16)	23
2.13. Arrangements for metering equipment provision (Clause 10.36)	23
3. Maintaining registry information	24
3.1. Obtaining ICP identifiers (Clause 11.3)	24
3.2. Providing registry information (Clause 11.7(2))	25
3.3. Changes to registry information (Clause 10 Schedule 11.1)	25
3.4. Trader responsibility for an ICP (Clause 11.18)	27
3.5. Provision of information to the registry manager (Clause 9 Schedule 11.1)	29
3.6. ANZSIC codes (Clause 9 (1)(k) of Schedule 11.1)	30
3.7. Changes to unmetered load (Clause 9(1)(f) of Schedule 11.1)	31
3.8. Management of “active” status (Clause 17 Schedule 11.1)	31
3.9. Management of “inactive” status (Clause 19 Schedule 11.1)	32
3.10. ICPs at new or ready status for 24 months (Clause 15 Schedule 11.1)	32
4. Performing customer and embedded generator switching	34
4.1. Inform registry of switch request for ICPs - standard switch (Clause 2 Schedule 11.3) ..	34

4.2.	Losing trader response to switch request and event dates - standard switch (Clauses 3 and 4 Schedule 11.3)	34
4.3.	Losing trader must provide final information - standard switch (Clause 5 Schedule 11.3).....	36
4.4.	Retailers must use same reading - standard switch (Clause 6(1) and 6A Schedule 11.3).....	37
4.5.	Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3)	39
4.6.	Disputes - standard switch (Clause 7 Schedule 11.3).....	40
4.7.	Gaining trader informs registry of switch request - switch move (Clause 9 Schedule 11.3)	40
4.8.	Losing trader provides information - switch move (Clause 10(1) Schedule 11.3)	41
4.9.	Losing trader determines a different date - switch move (Clause 10(2) Schedule 11.3)	43
4.10.	Losing trader must provide final information - switch move (Clause 11 Schedule 11.3).....	43
4.11.	Gaining trader changes to switch meter reading - switch move (Clause 12 Schedule 11.3)	45
4.12.	Gaining trader informs registry of switch request - gaining trader switch (Clause 14 Schedule 11.3)	46
4.13.	Losing trader provision of information - gaining trader switch (Clause 15 Schedule 11.3).....	47
4.14.	Gaining trader to advise the registry manager - gaining trader switch (Clause 16 Schedule 11.3)	48
4.15.	Withdrawal of switch requests (Clauses 17 and 18 Schedule 11.3).....	48
4.16.	Metering information (Clause 21 Schedule 11.3)	49
4.17.	Switch saving protection (Clause 11.15AA to 11.15AB).....	50
5.	Maintenance of unmetered load	51
5.1.	Maintaining shared unmetered load (Clause 11.14).....	51
5.2.	Unmetered threshold (Clause 10.14 (2)(b))	52
5.3.	Unmetered threshold exceeded (Clause 10.14 (5))	52
5.4.	Distributed unmetered load (Clause 11 Schedule 15.3, Clause 15.37B).....	53
6.	Gathering raw meter data	54
6.1.	Electricity conveyed & notification by embedded generators (Clause 10.13, Clause 10.24 and 15.13)	54
6.2.	Responsibility for metering at GIP (Clause 10.26 (6), (7) and (8)).....	55
6.3.	Certification of control devices (Clause 33 Schedule 10.7 and clause 2(2) Schedule 15.3).....	56
6.4.	Reporting of defective metering installations (Clause 10.43(2) and (3)).....	56
6.5.	Collection of information by certified reconciliation participant (Clause 2 Schedule 15.2).....	57
6.6.	Derivation of meter readings (Clause 3(1), 3(2) and 5 Schedule 15.2)	58
6.7.	NHH meter reading application (Clause 6 Schedule 15.2)	58
6.8.	Interrogate meters once (Clause 7(1) and (2) Schedule 15.2)	60
6.9.	NHH meters interrogated annually (Clause 8(1) and (2) Schedule 15.2).....	60
6.10.	NHH meters 90% read rate (Clause 9(1) and (2) Schedule 15.2)	61
6.11.	NHH meter interrogation log (Clause 10 Schedule 15.2)	62
6.12.	HHR data collection (Clause 11(1) Schedule 15.2)	62
6.13.	HHR interrogation data requirement (Clause 11(2) Schedule 15.2)	63
6.14.	HHR interrogation log requirements (Clause 11(3) Schedule 15.2).....	64
7.	Storing raw meter data	65
7.1.	Trading period duration (Clause 13 Schedule 15.2)	65
7.2.	Archiving and storage of raw meter data (Clause 18 Schedule 15.2)	65
7.3.	Non-metering information collected / archived (Clause 21(5) Schedule 15.2)	66

8.	Creating and managing (including validating, estimating, storing, correcting and archiving) volume information.....	67
8.1.	Correction of NHH meter readings (Clause 19(1) Schedule 15.2).....	67
8.2.	Correction of HHR metering information (Clause 19(2) Schedule 15.2).....	67
8.3.	Error and loss compensation arrangements (Clause 19(3) Schedule 15.2)	69
8.4.	Correction of HHR and NHH raw meter data (Clause 22(1) and (2) Schedule 15.2)	70
9.	Estimating and validating volume information.....	71
9.1.	Identification of readings (Clause 3(3) Schedule 15.2).....	71
9.2.	Derivation of volume information (Clause 3(4) Schedule 15.2).....	72
9.3.	Meter data used to derive volume information (Clause 3(5) Schedule 15.2).....	72
9.4.	Half hour estimates (Clause 15 Schedule 15.2).....	73
9.5.	NHH metering information data validation (Clause 16 Schedule 15.2)	73
9.6.	Electronic meter readings and estimated readings (Clause 17 Schedule 15.2)	74
10.	Provision of metering information to the pricing manager in accordance with subpart 4 of Part 13 (clause 15.38(1)(f))	76
10.1.	Generators to provide HHR metering information (Clause 13.136)	76
10.2.	Unoffered & intermittent generation provision of metering information (Clause 13.137).....	76
10.3.	Loss adjustment of HHR metering information (Clause 13.138).....	77
10.4.	Notification of the provision of HHR metering information (Clause 13.140)	77
11.	Provision of submission information for reconciliation.....	78
11.1.	Buying and selling notifications (Clause 15.3).....	78
11.2.	Calculation of ICP days (Clause 15.6)	78
11.3.	Electricity supplied information provision to the reconciliation manager (Clause 15.7)	79
11.4.	HHR aggregates information provision to the reconciliation manager (Clause 15.8)	81
12.	Submission computation	83
12.1.	Daylight saving adjustment (Clause 15.36)	83
12.2.	Creation of submission information (Clause 15.4).....	83
12.3.	Allocation of submission information (Clause 15.5)	84
12.4.	Grid owner volumes information (Clause 15.9)	84
12.5.	Provision of NSP submission information (Clause 15.10)	85
12.6.	Grid connected generation (Clause 15.11).....	85
12.7.	Accuracy of submission information (Clause 15.12)	86
12.8.	Permanence of meter readings for reconciliation (Clause 4 Schedule 15.2).....	87
12.9.	Reconciliation participants to prepare information (Clause 2 Schedule 15.3)	87
12.10.	Historical estimates and forward estimates (Clause 3 Schedule 15.3).....	89
12.11.	Historical estimate process (Clause 4 and 5 Schedule 15.3)	90
12.12.	Forward estimate process (Clause 6 Schedule 15.3)	91
12.13.	Compulsory meter reading after profile change (Clause 7 Schedule 15.3).....	92
13.	Submission format and timing.....	94
13.1.	Market Administrator Meter Reading Reports (Clauses 8 & 9 of Schedule 15.2)	94
13.2.	Provision of submission information to the RM (Clause 8 Schedule 15.3)	94
13.3.	Reporting resolution (Clause 9 Schedule 15.3)	95
13.4.	Historical estimate reporting to RM (Clause 10 Schedule 15.3)	95
	Conclusion	96
	Participant response	97

EXECUTIVE SUMMARY

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

Some of the non-compliances from the previous audit have been resolved but the submission related issues still remain. Two of the main issues will require changes to the ETS system in order for compliance to be achieved. The first issue is the replacement of actual HHR data with estimated data when data for part of a day is missing. The other matter is that NHH historic estimate revisions are not conducted using the relevant shape files.

Other issues leading to incorrect consumption information are as follows:

1. Submission has not occurred for one month for a switched in ICP with unmetered load. The switch for this ICP was withdrawn following the audit, therefore submission is now not required.
2. Submission of generation volumes did not occur correctly for eight ICPs
3. Minor errors are present when profile changes occur on estimates.
4. Minor errors are present when switch event meter readings from losing traders are not used

Most of the registry and switching related issues were caused because of manual processes, which NextGen intends to resolve through automation.

The breach risk rating total is 57, which results in a recommended audit frequency of three months. NextGen intends to automate their registry management function and they intend to initiate changes to the ETS system to ensure HHR and NHH submission practices are compliant. I recommend the next audit is conducted once the system changes are complete and have been tested, which is expected to be in the last quarter of 2018, therefore my next audit date recommendation is eight months. The system changes are likely to require material change audits to ensure they will be compliant prior to implementation.

The matters identified are shown in the tables below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2.1	10.6, 11.2, 15.2	Some information not complete and accurate.	Weak	Medium	6	Identified
Registry updates	3.3	10 of schedule 11.1	Registry information not updated within 5 business days of the event.	Weak	Low	3	Identified
Trader responsibility	3.4	11.18	One incorrect MEP nomination.	Strong	Low	1	Identified
Provision of registry information	3.5	9 of Schedule 11.1	Registry information not updated within 5 business days of the event for one status change and one MEP nomination	Weak	Low	3	Identified
Switching	4.2	3 and 4 of Schedule 11.3	Incorrect AN response codes of AA instead of AD.	Moderate	Low	2	Identified
	4.3	5 of Schedule 11.3	Switch event meter readings for the incorrect date.	Moderate	Low	2	Identified
	4.4	6(1) and 6A Schedule 11.3	One incorrectly labelled reading One incorrect reading	Moderate	Low	2	Identified
	4.5	6(2) and (3) Schedule 11.3	Switch event meter reading from CS file not always used if it is different to the AMI reading.	Weak	Low	3	Identified
	4.8	10(1) of Schedule 11.3	Incorrect AN response codes of AA instead of AD	Moderate	Low	2	Identified
	4.10	11 of Schedule 11.3	Switch event meter readings for the incorrect date. 7 late CS files.	Moderate	Low	2	Identified
	4.11	12 of Schedule 11.3	Switch event meter reading from CS file not always used if it is different to the AMI reading.	Weak	Low	3	Identified
Quantification	6.1	10.13, Clause 10.24 and 15.13	Two ICPs without an EG channel to quantify DG volumes	Moderate	Low	2	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
NHH reading application	6.7	6 of Schedule 15.2	Readings for 24:00 on the switch date provided as switch event meter readings for 00:00 on the switch date	Moderate	Low	2	Identified
HHR correction	8.2	Clause 19(2) Schedule 15.2	Correction process for HHR data includes substitution of "actual" data with estimated data.	Weak	Low	3	Identified
Identification of readings	9.1	3(3) Schedule 15.2	HHR estimates identified at a daily level rather than an interval level.	Weak	Low	3	Identified
Electricity supplied	11.3	15.7	Electricity supplied files aggregated by consumption month not invoice month	Moderate	Low	2	Identified
HHR aggregates	11.4	15.8	Aggregates file contains submission information.	Strong	Low	1	Identified
Accuracy of submission information	12.7	15.12	No NHH revision process in place	Weak	Low	3	Identified
Preparation of submission information	12.9	2 of Schedule 15.3	Incorrect submission information.	Weak	Medium	6	Identified
HE calculations	12.11	4 and 5 Schedule 15.3	HE calculations and revisions not conducted after Day 4	Weak	Low	3	Identified
Profile change reading	12.13	7 Schedule 15.3	Profile changes not always made with an actual reading	Weak	Low	3	Identified
Future Risk Rating						57	
Next indicative audit frequency						3 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
Interrogate meters once	6.8	Clause 7(1) and (2) Schedule 15.2	Develop reporting for ICPs not read during the period of supply
Compensation factors	12.9	Clause 2(3) of Schedule 15.3	Automate the application of compensation factors

ISSUES

Subject	Section	Clause	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

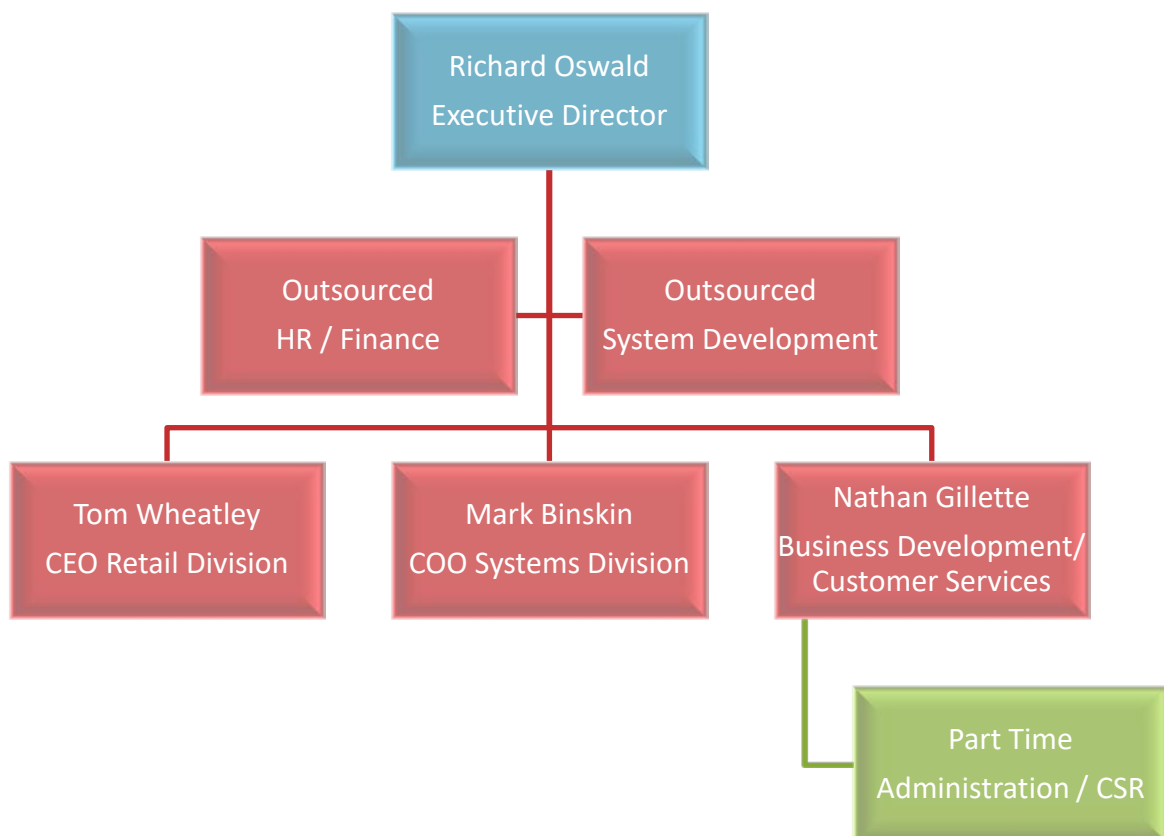
The Electricity Authority website was checked to identify any exemptions currently in place for NextGen.

Audit commentary

There are no exemptions in place.

1.2. Structure of Organisation

NextGen provided a current organisational chart.



1.3. Persons involved in this audit

Auditors:

Name	Company	Role
Steve Woods	Veritek Limited	Auditor

NextGen personnel assisting with this audit:

Name	Title
Tom Wheatley	CEO Retail Division
Nathan Gillette	Business Development/Customer Services

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

NextGen does not use any agents to perform any functions.

Audit commentary

NextGen does not use any agents to perform any functions.

1.5. Hardware and Software

NextGen has a suite of bespoke systems, including a MS Access based reconciliation system (ETS) and an sql based CRM.

Backup arrangements are in accordance with standard industry protocols.

1.6. Breaches or Breach Allegations

NextGen does not have any breach allegations recorded by the Authority.

1.7. ICP Data

NextGen provided a list as at February 2018. The quantity of ICPs by status is shown below:

Status	Number of ICPs 2018
Active (2,0)	412
Inactive – new connection in progress (1,12)	0
Inactive – electrically disconnected vacant property (1,4)	0
Inactive – electrically disconnected remotely by AMI meter (1,7)	0
Inactive – electrically disconnected at pole fuse (1,8)	0
Inactive – electrically disconnected due to meter disconnected (1,9)	0
Inactive – electrically disconnected at meter box fuse (1,10)	0
Inactive – electrically disconnected at meter box switch (1,11)	0
Inactive – electrically disconnected ready for decommissioning (1,6)	0
Inactive – reconciled elsewhere (1,5)	0
Decommissioned (3)	0

The active ICPs on the list file were summarised by meter category in the table below.

Metering Category	2018
1	403
2	9
3	0
4	0
5	0
9	0
Blank	0

1.8. Authorisation Received

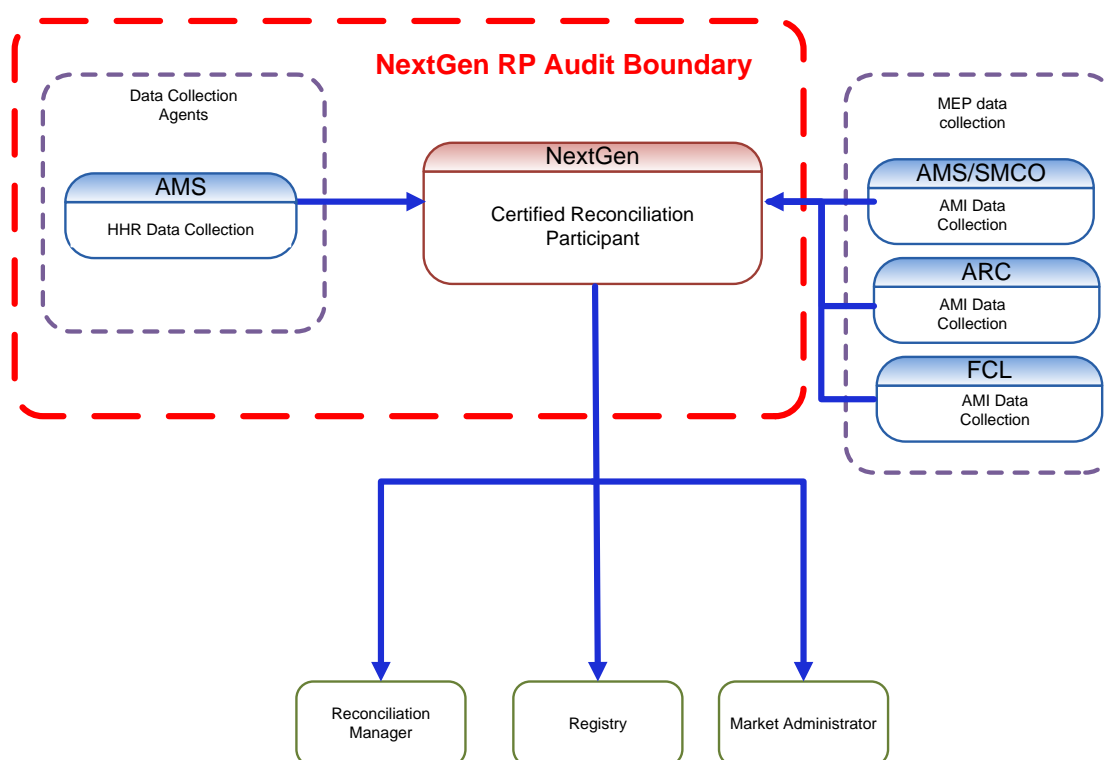
A letter of authorisation was not required or sought.

1.9. Scope of Audit

This Electricity Industry Participation Code Reconciliation Participant audit was performed at the request of NextGen, 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 NextGen's premises in Nelson on 17-18 April 2018. The scope of the audit is shown in the diagram below, with the NextGen audit boundary shown for clarity.



The table below shows the tasks under clause 15.38 of part 15 for which NextGen requires certification. This table also lists any 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	AMS – HHR data collection	AMS SMCO ARC FCLM

(c)(iii) - Creation and management of HHR and NHH volume information	AMS – HHR data collection	AMS SMCO ARC FCLM
(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		

NextGen uses AMS as an agent for HHR data collection. AMS has been audited in accordance with the Guidelines for Reconciliation Participant Audits that were current at the time of the agent's audits. The AMS audit report is greater than seven months old; therefore some additional checks were conducted to ensure compliance is still achieved.

The AMS audit report is expected to be submitted along with this report.

1.10. Summary of previous audit

NextGen provided a copy of the report from the audit conducted in June 2017 by Ewa Glowacka. The results are shown below. Further comment is made in the relevant sections of this report.

Table of non-compliance

Subject	Section	Clause	Non-compliance	Status
MEP arrangements	2.13	10.36	No arrangement for provision MEP services with TRUM, FCLM, LGML, and CTCT	Cleared
Changes to registry information	3.3	10 of schedule 11.1	16 updates out of 109 of information to the registry (trader were later than 5 business days. The latest was 61 days	Still existing
Provision of registry information	3.5	9 of schedule 11.1	Incorrect type of reconciliation for 7 ICPs recorded in the registry	Still existing

Subject	Section	Clause	Non-compliance	Status
ANZSIC codes	3.6	9(1)(k) of schedule 11.1	2 ICPs had ANZSIC code T994 and 2 ICPs incorrect ANZSIC code	Cleared
Management of Active status	3.8	17 of schedule 11.1	One incorrect Active status.	Still existing
Switching	4.5	6 & 6A of Schedule 11.3	NextGen does not use the switch event read provided by the losing trader for HHR ICPs	Still existing
	4.7	9 of schedule 11.3	Notification for 3 ICPs were sent later than 2 business days after the arrangement with a customer comes into effect	Cleared
	4.15	18(d) of schedule 11.3	NextGen sent AW for 3 ICPs later than 5 business days	Cleared
Meter reading reports	6.10	9(3) of Schedule 15.2	No meter reading frequency report sent to the Market administrator	Cleared
HHR correction	8.2	19(2) of Schedule 15.2	Non-compliant methodology to estimate missing interval readings	Still existing
Identification of readings	9.1	3(3) of Schedule 15.2	Identification of reading for HHR ICPs incorrect. It is against each day not each interval	Still existing
Electricity supplied	11.3	15.7 of part 15	AV120 - Volumes of energy supplied are not aggregated by invoice month but by submission month. Volumes should be based on participant's billing system, not reconciliation system	Still existing
Submission accuracy	12.7	11.16 of Part 11	There are two problems with accuracy of submissions. First one is related to the fact that NextGen not always uses the switch event reads provided by the losing trader when switching using AMI meter from NHH to HHR reconciliation. Second one, NHH ICPs volume should be forwards estimated if there is no read on the last day of the month	Still existing

Subject	Section	Clause	Non-compliance	Status
Creation of submission information	12.9	2 of Schedule 15.3	Submission not checked and negatives values submitted in May'17, the file was rejected and re-submitted	Cleared
HE and FE	12.10	3 of Schedule 15.3	ETS does not calculate FE for ICPs which do not have validated meter readings at the end of reconciliation period	Still existing
Forward estimates	12.12	6 of Schedule 15.3	Next Gen does not calculate FE for ICPs which do not have validated meter readings at the end of reconciliation period	Cleared (a non-compliant practice exists in relation to HE not FE)

Table of Recommendations

Subject	Section	Clause	Recommendation for Improvement	Status
Creation of submission information	12.2	15.4	Meter change NHH to HHR and change of reconciliation type on the same day. Review process how volumes are reconciled on the day of meter change from NHH to HHR.	Still existing

Table of Issues

Subject	Section	Clause	Recommendation for Improvement	Status
Creation of submission information	12.2	15.4	<p>Meter change NHH to HHR and change of reconciliation type on the same day.</p> <p>Part of energy recorded on the day of meter change is not reconciled when type of reconciliation is changed from NHH to HHR on a day of meter change.</p>	No examples found but issue is still valid

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, and to identify any registry discrepancies. The registry validation process was examined in detail in relation to the achievement of this requirement.

Audit commentary

NextGen imports registry information daily and it becomes the “starting point” for all relevant fields. Any differences between this information and information in ETS is resolved each day.

Analysis of the list file only found one issue. There are eight ICPs with solar generation recorded by the Distributor but without NHH submission (PV1 profile) or without HHR submission. NextGen will ensure revisions are conducted to submit the generated volume for these ICPs.

In section 12.9 there are submission related issues recorded which also result in non-compliance with clause 15.2 because information is not complete and accurate.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 10.6, 11.2, 15.2 From: 01-Jul-17 To: 15-Feb-18	Some information not complete and accurate. Potential impact: Medium Actual impact: Medium Audit history: None Controls: Weak Breach risk rating: 6
Audit risk rating	Rationale for audit risk rating

Medium	<p>Controls are rated as weak because the design of some processes and parts of the ETS system do not mitigate compliance risk.</p> <p>The audit risk rating is medium because there is a moderate impact on submission accuracy.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Issues with PV1 code corrected		Complete	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Process has been updated to ensure further occurrences do not happen.		Complete	

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

I reviewed the method to receive meter reading information.

Audit commentary

All HHR data and NHH data is provided by SFTP, which is considered a compliant method.

Audit outcome

Compliant

2.4. Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

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

The audit trail must include details of information:

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

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

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

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

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10.4

Code related audit information

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

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

Audit observation

I reviewed NextGen's current terms and conditions.

Audit commentary

The terms and conditions include arrangements for meter access and shutdowns, and these clauses extend to agents. 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

I reviewed NextGen's current terms and conditions, and discussed compliance with these clauses.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 10.35(1)&(2)

Code related audit information

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

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

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

Audit observation

A discussion was held regarding knowledge of any ICPs with loss compensation present. The presence of loss compensation factors was also checked by examining multipliers for all CT metered ICPs.

Audit commentary

NextGen is not responsible for any metering installations with loss compensation factors.

Audit outcome

Compliant

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

Code reference

Clause 11.15B

Code related audit information

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

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

- the trader to assign the rights and obligations of the trader to another trader (clause 11.15B(1)(e)).

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

Audit observation

I reviewed NextGen's current terms and conditions.

Audit commentary

NextGen's terms and conditions contain the appropriate clauses to achieve compliance with this requirement. 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 one or more metering installations for the point of connection.*

Audit observation

One new connection was conducted for ICP 0000054581NT990. The registry and process details were checked.

Audit commentary

NextGen had accepted responsibility for this ICP prior to it being connected.

NextGen has arrangements in place with all relevant MEPs.

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

One new connection was conducted for ICP 0000054581NT990. The registry and process details were checked.

Audit commentary

This ICP was not temporarily electrically connected.

Audit outcome

Not applicable

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

One new connection was conducted for ICP 0000054581NT990. The registry and process details were checked.

Audit commentary

New Connections

ICP 0000054581NT990 was certified on the day of electrical connection.

Reconnected ICPs

All five reconnected ICPs had certified metering installed.

Audit outcome

Compliant

2.12. Arrangements for line function services (Clause 11.16)

Code reference

Clause 11.16

Code related audit information

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

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

Audit observation

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

Audit commentary

NextGen has arrangements for line function services with all relevant Distributors.

Audit outcome

Compliant

2.13. Arrangements for metering equipment provision (Clause 10.36)

Code reference

Clause 10.36

Code related audit information

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

Audit observation

The process to ensure an arrangement is in place with the metering equipment provider before an ICP can be created or switched in was checked.

Audit commentary

NextGen has appropriate arrangements with all relevant MEPs.

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

One new connection was conducted for ICP 0000054581NT990. The registry and process details were checked.

Audit commentary

A walkthrough of the process confirmed that this requirement is well understood and managed by NextGen. There were no connections to networks identified without ICPs.

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 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 are detailed there.

Audit commentary

The new connection process is detailed in **sections 2.9** and **3.5**. The process in place ensures that the trader required information is populated as required by this clause.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 11.1

Code related audit information

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

Audit observation

The process to manage status changes is discussed in detail in **sections 3.8** and **3.9** below. In this Section I have examined the event detail report for the period from 01/07/17 to 21/03/18 to determine the overall performance for that period. I used the extreme case methodology examining all 35 ICPs that were updated greater than five days from the event date; with the exclusion of new connections in progress (these can only be non-compliant if not updated within five business days of electrical connection).

Audit commentary

The table below shows the level of compliance for changes to Active. There were no changes to inactive.

Event	Year	Total ICPs	ICPs Notified Within 5 Days	ICPs Notified Greater Than 5 Days	Average Notification Days	Percentage Compliant
Changes to active - reconnections	2018	5	0	5	7.6	0.0%
Changes of MEP	2018	18	1	17	38	5.6%
Trader updates (profile changes)	2018	17	4	13	9.5	24%

The findings of the evaluation of reasons for late updates is discussed below.

Reconnections

All examples were where reconnections had occurred at the time of switch in and the notification was received from the field but the status update was overlooked.

Change of MEP

NextGen were waiting for confirmation from the field that metering had been changed before nominating the new MEP. NextGen has recognised that this process will always result in delays because MEPs have 15 business days to populate the registry upon a change of MEP but NextGen only has five days.

Trader updates (profile changes)

These updates are all NHH to HHR or HHR to NHH and the reason for them being late is because NextGen waits for confirmation of a reliable source of HHR data from the MEP and makes the change to HHR, or if the ICP is already HHR and the data is unreliable, the ICP is changed from HHR to NHH. Backdating occurs back to the date the data is reliable or unreliable, depending on the nature of the change.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.3 With: Clause 10 of schedule 11.1 From: 01-Jul-17 To: 21-Mar-18	Registry information not updated within 5 business days of the event. Potential impact: Medium Actual impact: Low Audit history: Once Controls: Weak Breach risk rating: 3
Audit risk rating	Rationale for audit risk rating

Low	<p>Controls do not mitigate risk most of the time and are recorded as weak.</p> <p>The audit risk rating is low because there is a minor impact on submission for some of the late updates to Active and late MEP nominations can cause MEPs to be late with their metering updates. Late profile changes result in the need for revisions to occur.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Recognition that MEP updates are allowed more time than retailers and therefore MEP status changes cannot be the trigger of the process			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Processes to be updated to reflect new trigger points in workflow			

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

One new connection was conducted for ICP 0000054581NT990. The registry and process details were checked.

ICP Decommissioning

No ICPs have been decommissioned during the audit period.

Audit commentary

Retailers Responsibility to Nominate and Record MEP in the Registry

ICP 0000054581NT990 had NGCM nominated but the MEP was actually SMCO. The registry has the correct MEP recorded now. The incorrect nomination is recorded as non-compliance.

ICP Decommissioning

No ICPs have been decommissioned during the audit period.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.4 With: Clause 11.18 From: 06-Mar-18 To: 19-Mar-18	One incorrect MEP nomination. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong because they mitigate risk most of the time. The audit risk rating is low as settlement still occurred as required, but the MEP could not populate the registry due to the incorrect nomination.		
Actions taken to resolve the issue		Completion date	Remedial action status
Delays in receiving MEP confirmation of metering caused delay/change to MEP nomination			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
The issue is not expected to re-occur as MEP confirmation will be sought prior to nomination			

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

One new connection was conducted for ICP 0000054581NT990. The registry and process details were checked.

Audit commentary

The registry was populated late for the one new connection ICP because NextGen were waiting for confirmation from the field.

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	2018	1	0	1	9	0%
MEP nomination	2018	1	0	1	9	0%

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.5 With: Clause 9 of Schedule 11.1 From: 06-Mar-18 To: 19-Mar-18	Registry information not updated within 5 business days of the event for one status change and one MEP nomination. Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as weak because a process change is required to ensure the registry can be populated without waiting for the MEP to provide advice. The audit risk rating is low as there was no impact on settlement but the MEP could not update the registry on time.		
Actions taken to resolve the issue		Completion date	Remedial action status
This is the same ICP and root issue as section 3.4, is this double counting the non-compliance?			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
as above			

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. A Registry list file was reviewed to check ANZSIC codes. This was checked for:

- no ANZSIC codes
- “T99” codes
- accuracy of ANZSIC codes applied.

The accuracy was checked by selecting a random sample of 30 active ICPs using the diverse characteristics methodology and checking them by using google streetview.

Audit commentary

NextGen ensure that all new customers are assigned an ANZSIC code. Reports for missing or “T99” – non-specific ANZSIC codes are checked as part of the registry discrepancy process.

The list file was analysed and found that all active ICPs had an ANZSIC code applied and there were only three ICPs with T995 (refused to answer). These ICPs are all with the same customer and NextGen confirmed the customer does not want the nature of their business to be published.

Of the 30 ICPs checked I was unable to tell if the registry was correct for 10, but I confirmed the registry was correct for 20.

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

NextGen has one unmetered load ICP and the registry is populated correctly.

Audit commentary

NextGen has one unmetered load ICP and the registry is populated correctly.

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 11.1

Code related audit information

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

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

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

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

Audit observation

The new connection process was examined in detail as discussed in **sections 2.9** and **3.5**. I checked for variances between the initial electrical connection date and the Active date for the one new connection.

The process for the management of ICP reconnection was examined. The event detail report for the period 01/07/17 to 21/03/18 was analysed and the findings in relation to the timeliness of updates to registry is recorded in **section 3.3**.

Audit commentary

NextGen's processes will ensure that there is only one customer associated with any ICP and that there is a method of quantification.

Active Date vs. Initial Electrical Connection Date

The Active date matches the Initial Electrical Connection date for the one new connection.

Active Date vs. Meter Certification Date

The Active date matches the certification date for the one new connection.

No examples of incorrect statuses were identified.

Audit outcome

Compliant

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

Code reference

Clause 19 Schedule 11.1

Code related audit information

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

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

Audit observation

The inactive status has not been used by NextGen.

Audit commentary

The inactive status has not been used by NextGen.

Audit outcome

Not applicable

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

No ICPs were found in the list file in the new or ready status, and they have not received any requests from Distributors.

Audit outcome

Compliant

4. PERFORMING CUSTOMER AND EMBEDDED GENERATOR SWITCHING

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

Code reference

Clause 2 Schedule 11.3

Code related audit information

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

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

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

Audit observation

I checked the event detail report for ICPs where the switch event date was more than two business days prior to the date the NT file was sent.

Audit commentary

NextGen does not conduct any direct marketing; therefore the sections of the Fair Trading Act are not relevant.

No NT files were sent later than two business days of the event date.

Audit outcome

Compliant

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

Code reference

Clauses 3 and 4 Schedule 11.3

Code related audit information

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

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

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

Audit observation

An event detail report for the audit period was reviewed, to identify AN files issued by NextGen during the audit period. All AN files were sent with the AA code. I checked whether any should have been sent with different codes.

The switch breach report was examined for the audit period.

The event detail report was analysed to assess compliance with the requirement to meet the setting of event dates requirement.

Audit commentary

NextGen has used the AA code for all AN files; however a check of 10 of 27 AN files confirmed that all 10 should have the AD code used because advanced metering was present.

The switch breach report for the audit period was checked and it confirmed all AN files were sent on time.

The event detail report contained 13 transfer switches. 12 had an event date within five days and none were greater than ten days.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.2 With: Clause 3(a)(i)(B) of Schedule 11.3 From: 01-Jul-17 To: 21-Mar-18	Incorrect AN response codes of AA instead of AD. Potential impact: Low Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Strong controls are in place with regard to timeliness of AN files and setting of event dates. Controls require strengthening to ensure the "most valid" AN response code is used. There is no impact to other participants from using AA instead of AD. Traders use the content of the registry rather than the AN response code to determine whether AMI is present. The audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Processes will be updated to ensure the correct response codes are issued.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

As above.		
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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

An event detail report for the audit period was reviewed, to identify CS files issued by NextGen during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of five records (two TR and three MI switches). 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
- examples of zero average daily consumption
- examples high average daily consumption.

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

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

Audit commentary

One issue was found with the content of CS files. Switch event meter readings are for 24:00 on the day of the switch instead of 00:00 on the day of the switch (24:00 on the day before the switch). This means one day of consumption will be incorrectly apportioned to NextGen rather than the gaining trader.

The switch breach report for the audit period was checked and it had two late CS files recorded.

Average daily consumption was correct for all files checked.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.3 With: Clause 5 of Schedule 11.3 From: 01-Jul-17 To: 21-Mar-18	Switch event meter readings for the incorrect date. 2 late CS files. Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement with regard to switch event meter reading accuracy and timeliness of CS files. The impact on settlement and participants is minor (one day of consumption for switched out ICPs); therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Processes to be reviewed and updated.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above.			

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 requests was examined.

The event detail report and switch breach report were analysed to identify all read change requests and acknowledgements during the audit period.

A combined sample of eight read change files from the event detail report was selected using the diverse sample methodology. The sample included both transfer and gaining trader read requests, files exchanged with different traders, and a mix of acceptances and rejections.

The switch breach history report for the audit period was reviewed and found no late RR files.

Audit commentary

Two issues were found with the read change process. ICP 0000015458NT9B2 had an RR file sent with readings labelled as estimates when they were actuals. ICP 0000047305NT1D7 had switch event meter readings derived by subtracting interval data from a future dated register read. When this calculation was repeated during the audit, there was a different result with one register being five kWh too high and the other being five kWh too low.

Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 4.4 With: Clause 6(1) and 6A Schedule 11.3 From: 01-Jul-17 To: 21-Mar-18	One incorrectly labelled reading One incorrect reading Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2	
Audit risk rating	Rationale for audit risk rating	
Low	The controls are recorded as moderate because they mitigate risk most of the time. There is a very minor impact on settlement and participants due to over or under billing and submission. The audit risk rating is low.	
Actions taken to resolve the issue		Completion date
Processes were changed by the time of audit to ensure 'E' isn't used for actuals. This was a one off issue.		
Preventative actions taken to ensure no further issues will occur		Completion date
		Identified

RR process to be reviewed to ensure calculations are consistent going forward.		
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4.5. Non-half hour switch event meter reading - standard switch (Clause 6(2) and (3) Schedule 11.3)

Code reference

Clause 6(2) and (3) Schedule 11.3

Code related audit information

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

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

Audit observation

A combined sample of eight read change files from the event detail report was selected using the diverse sample methodology. The sample included both transfer and gaining trader read requests, files exchanged with different traders, and a mix of acceptances and rejections

Audit commentary

An issue was found with the RR process. When another trader rejects an RR request (due to the request being outside the 5 day window), NextGen does not use the read from the CS file, they use the read derived from AMI metering. This practice leads to over or under billing of the customer and over or under submission. The Code requires NextGen to use the reading in the CS file if agreement is not reached on a change in reading.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.5 With: Clause 6(2) and (3) Schedule 11.3 From: 01-Jul-17 To: 21-Mar-18	Switch event meter reading from CS file not always used if it is different to the AMI reading. Potential impact: Medium Actual impact: Low Audit history: Once Controls: Weak Breach risk rating: 3
Audit risk rating	Rationale for audit risk rating
Low	The controls are recorded as weak because they do not appear to mitigate risk most of the time with regard to the use of correct switch event meter readings. There is a minor impact on settlement and participants due to over or under billing and submission. The audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
System changes (ETS) to be designed to ensure HHR metering can incorporate manual/CS register read data		Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
As above.		

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

Audit commentary

There were no examples of disputes that needed to be resolved under this clause.

Audit outcome

Not applicable

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

A sample of all 24 ICPs with backdated NT dates was checked to confirm that these were notified to the registry within two business days of agreement with the customer.

Audit commentary

All switches were sent within two business days of the agreement being reached and the clearance of any pre-conditions. In nearly all cases, the customer contacted NextGen after they moved into the premise.

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:

 - o confirmation of the switch event date; and
 - o a valid switch response code; and
 - o 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—

 - o is not earlier than the gaining trader's proposed event date, and
 - o 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

An event detail report for the audit period was reviewed, to identify AN files issued by NextGen during the audit period. All AN files were sent with the AA code. I checked whether any should have been sent with different codes.

The switch breach report was examined for the audit period.

The event detail report was analysed to assess compliance with the requirement to meet the setting of event dates requirement.

Audit commentary

NextGen has used the AA code for all AN files; however a check of 10 of 27 AN files confirmed that all 10 should have the AD code used because advanced metering was present.

The switch breach report for the audit period was checked and it confirmed all AN files were sent on time.

The event detail report contained 15 move switches. No event dates were set earlier than the proposed date and none were greater than ten days.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.8 With: Clause 10(1) Schedule 11.3 From: 01-Jul-17 To: 21-Mar-18	Incorrect AN response codes of AA instead of AD Potential impact: None Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Strong controls are in place with regard to timeliness of AN files and setting of event dates. Controls require strengthening to ensure the “most valid” AN response code is used. There is no impact to other participants from using AA instead of AD. Traders use the content of the registry rather than the AN response code to determine whether AMI is present. The audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Processes to be revised to ensure the correct codes are issued.			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
This looks like a duplicate of 4.2? – same ICPs causing issue/ double counting non-compliance.			

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 sub-clause (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 setting of event dates for move switches was examined. The event detail report for all switch moves recorded for the audit period was examined, comparing the NT requested event date with the AN event date sent by NextGen for any switches dated earlier than the NT requested date. The report was also checked for any event dates that were set greater than ten days from the NT receipt date.

Audit commentary

Analysis found no switches with where the event date was set earlier than the gaining trader's requested date, and no ICPs were found with event dates set greater than ten business days from the NT receipt date.

Audit outcome

Compliant

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

Code reference

Clause 11 Schedule 11.3

Code related audit information

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

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

Audit observation

An event detail report for the audit period was reviewed, to identify CS files issued by NextGen during the audit period. The accuracy of the content of CS files was confirmed by checking a sample of five records (two TR and three MI switches). 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
- examples of zero average daily consumption

- examples high average daily consumption.

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

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

Audit commentary

One issue was found with the content of CS files. Switch event meter readings are for 24:00 on the day of the switch instead of 00:00 on the day of the switch (24:00 on the day before the switch). This means one day of consumption will be incorrectly apportioned to NextGen rather than the gaining trader.

The switch breach report for the audit period was checked and it had two late CS files recorded.

Average daily consumption was correct for all files checked.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.11 With: Clause 11 of Schedule 11.3 From: 01-Jul-17 To: 21-Mar-18	Switch event meter readings for the incorrect date. 7 late CS files. Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement with regard to switch event meter reading accuracy and timeliness of CS files. The impact on settlement and participants is minor (one day of consumption for switched out ICPs); therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The one incorrect switch event 'time' was due to manual error and is isolated. Training has been put in place. The late CS files are a result of using the Registry 'Switch Breach' report, at the audit the auditor confirmed the registry logic is incorrect, hence the reliance on this report has caused the issue.		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Request registry logic is changed and ensure process overlay is updated to ensure files are not late.		Complete	

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 4 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

A combined sample of eight read change files from the event detail report was selected using the diverse sample methodology. The sample included both transfer and gaining trader read requests, files exchanged with different traders, and a mix of acceptances and rejections

Audit commentary

An issue was found with the RR process. When another trader rejects an RR request (due to the request being outside the 5 day window), NextGen does not use the read from the CS file, they use the read derived from AMI metering. This practice leads to over or under billing of the customer and over or under submission. The Code requires NextGen to use the reading in the CS file if agreement is not reached on a change in reading.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.11 With: Clause 12 Schedule 11.3 From: 01-Jul-17 To: 21-Mar-18	Switch event meter reading from CS file not always used if it is different to the AMI reading. Potential impact: Medium Actual impact: Low Audit history: Once Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as weak because they do not appear to mitigate risk most of the time with regard to the use of correct switch event meter readings. There is a minor impact on settlement and participants due to over or under billing and submission. The audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Duplicate Non compliance as per 4.5		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above.		Completed	

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

Code reference

Clause 13 Schedule 11.3

Code related audit information

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

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

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

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

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

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

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

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

14(4)(a) – the proposed event date is in the same month as the date on which the gaining trader advised the registry manager; or

14(4)(b) – the proposed event date is no more than 90 days before the date on which the gaining trader advises the registry manager and this date is agreed between the losing and gaining traders.

Audit observation

NextGen has not conducted any HHR switches.

Audit commentary

NextGen has not conducted any HHR switches.

Audit outcome

Not applicable

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

Code reference

Clause 15 Schedule 11.3

Code related audit information

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

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

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

Audit observation

NextGen has not conducted any HHR switches.

Audit commentary

NextGen has not conducted any HHR switches.

Audit outcome

Not applicable

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

Code reference

Clause 16 Schedule 11.3

Code related audit information

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

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

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

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

Audit observation

NextGen has not conducted any HHR switches.

Audit commentary

NextGen has not conducted any HHR switches.

Audit outcome

Not applicable

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

Code reference

Clauses 17 and 18 Schedule 11.3

Code related audit information

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

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

- *for each ICP, the trader withdrawing the switch request must provide the registry manager with (clause 18(c)):*
 - 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 5 business days after receiving notice from the registry manager of a switch, the trader receiving the withdrawal must advise the registry manager that the switch withdrawal request is accepted or rejected. A switch withdrawal request must not become effective until accepted by the trader who received the withdrawal. (clause 18(d))*
- *on receipt of a rejection notice from the registry manager, in accordance with clause 18(d), a trader may re-submit the switch withdrawal request for an ICP in accordance with clause 18(c). All switch withdrawal requests must be resolved within 10 business days after the date of the initial switch withdrawal request. (clause 18(e))*

- *if the trader requests that a switch request be withdrawn, and the resolution of that switch withdrawal request results in the switch proceeding, within 2 business days after receiving notice from the registry manager in accordance with clause 22(b), the losing trader must comply with clauses 3,5,10 and 11 (whichever is appropriate) and the gaining trader must comply with clause 16 (clause 18(f)).*

Audit observation

The switch withdrawal process was examined. The content of a sample of 12 ICPs covering all withdrawal codes from the event detail report were checked using the typical sampling methodology. I checked the switch breach report to identify late files.

Audit commentary

All NW files contained the correct NW code.

The sample of rejected switch requests checked confirmed they had all been rejected for valid reasons and the reason codes were correct.

The switch breach report did not identify any late files.

Audit outcome

Compliant

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. This process is discussed further in earlier sections where some issues were recorded.

NextGen'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

The Electricity Registry switch save protected retailer list was examined to confirm that NextGen is a save protected retailer.

Winback processes were examined to determine whether they are compliant.

I checked the event detail report for all withdrawn switches from the audit period, to identify any withdrawn switches with a CX code applied prior to the switch completion date in relation to any switch save protected retailers.

Audit commentary

The check of the event detail report confirmed that no NW files were sent for CX during the period from sending the NT until the switch completion date. NextGen does not have a “winback” outbound process.

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

NextGen does not have any shared unmetered load.

Audit commentary

NextGen does not have any shared unmetered load.

Audit outcome

Not applicable

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

NextGen does not have any unmetered load over 3,000 kWh.

Audit commentary

NextGen does not have any unmetered load over 3,000 kWh.

Audit outcome

Non-compliant

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

Code reference

Clause 10.14 (5)

Code related audit information

If the unmetered load limit is exceeded the retailer must:

- *within 20 business days, commence corrective measure to ensure it complies with Part 10*
- *within 20 business days of commencing the corrective measure, complete the corrective measures*
- *no later than 10 business days after it becomes aware of the limit having been exceeded, advise each participant who is or would be expected to be affected of:*
 - 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

NextGen does not have any unmetered load over 3,000 kWh.

Audit commentary

NextGen does not have any unmetered load over 3,000 kWh.

Audit outcome

Not applicable

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

There are no distributed unmetered load ICPs.

Audit commentary

There are no distributed unmetered load ICPs.

Audit outcome

Not applicable

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 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 energised ICP that is not also an NSP, and for which it is recorded in the registry as being responsible, ensure that:

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

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

Audit observation

The registry list was examined to determine compliance. Processes for distributed generation were reviewed.

Audit commentary

All active ICPs have at least one meter installed.

NextGen's registry list file as at February 2018 showed eight active ICPs with generation listed by the Distributor where submission is not occurring by NextGen. Six of these ICPs have import and export channels and two do not have the import channel. This is raised as non-compliance because electricity conveyed is not quantified. For the six with import channels, electricity is quantified but non-compliance is recorded in **Sections 11.4** and **12.7**.

NextGen does not intend to initiate meter bypass instructions to any MEP or contractor. If they request a remote reconnection in the future, the MEP is expected to either conduct this, or make necessary arrangements for reconnection without bypassing. No examples were identified during the audit.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.1 With: Clause 10.13, Clause 10.24 and 15.13 From: 09-Oct-17 To: 21-Mar-18	Two ICPs without an EG channel to quantify DG volumes Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact on settlement is minor because this volume is not submitted; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Duplicate non-compliance – issue caused by same ICPs in section: 2.1		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above.		Completed	

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

NextGen is not responsible for any grid metering.

Audit commentary

NextGen is not responsible for any grid metering.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

Audit observation

NextGen does not use any profiles where control device certification is required.

Audit commentary

NextGen does not use any profiles where control device certification is required.

Audit outcome

Not applicable

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

Code reference

Clause 10.43(2) and (3)

Code related audit information

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

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

Audit observation

Processes relating to defective metering were discussed and examples were requested.

Audit commentary

No faulty or bridged meters were identified by NextGen during the audit period. I specifically checked with AMS whether any faulty metering installations had been detected during the audit period. They confirmed that none were identified.

Audit outcome

Not applicable

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 on 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

NextGen, their agents and MEPs are responsible for the collection of HHR and AMI data. Collection of data and clock synchronisation was reviewed as part of the AMS HHR data collection audit.

Audit commentary

All information used to determine volume information is collected from the services interface or the metering installation by NextGen, AMS or the MEP.

Compliance with this clause has been demonstrated by AMS as part of their agent audit. I conducted additional checks which confirmed there were no clock errors during the audit period for AMCI meters.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

All validated meter readings must be derived from meter readings.

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

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

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

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

Audit observation

The data collection process was examined.

Processes for customer and photo reads were reviewed.

Audit commentary

I conducted a walk-through of the data loading processes and I confirm that appropriate checks and controls are in place to ensure the correct records are loaded for the right day.

Customer readings are recorded as estimates for the purposes of submission.

NHH meter reading is conducted by NextGen. The relevant points above are all checked to ensure there is no tampering, damage or unsafe situations.

Audit outcome

Compliant

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

Code reference

Clause 6 Schedule 15.2

Code related audit information

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

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

Audit observation

The process of the application of meter readings was examined.

Audit commentary

All AMI systems have a clock synchronisation function, which ensures correct timestamping. NextGen imports the midnight AMI midnight readings, which are applied as at 2400hrs.

Manual readings taken by NextGen are applied correctly.

Application of reads was reviewed as part of the historic estimate checks in **section 12.11**, and found to be compliant. The content of CS files was examined in **sections 4.4, 4.5 and 4.11**. This check confirmed that switch event meter readings are not correctly applied. Readings from 24:00 on the switch date are provided when readings from 00:00 on the switch date (24:00 the day before) should be provided.

I checked the process for NHH to HHR meter changes in relation to this clause. There were no meter changes at the same time as a profile change. There were several NHH to HHR profile changes for existing meters and this process is discussed further in Section 12.13.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.7 With: Clause 6 Schedule 15.2 From: 01-Jul-17 To: 21-Mar-18	Readings for 24:00 on the switch date provided as switch event meter readings for 00:00 on the switch date. Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because risk is mitigated most of the time. There is a minor impact on settlement and other participants; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Processes have been updated to ensure the reads are applied from the correct date		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above.		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 by a walk-through of the trigger points leading to actions to get meter readings.

NextGen does not have a list of ICPs not read during the period of supply.

Audit commentary

Meter readings are obtained by AMI or by manual readings conducted in the first four working days of the month. I checked the event detail report and there were no ICPs switched out on estimates. One ICP had estimates recorded but it was confirmed these were actual reads.

I recommend reporting is developed to monitor meter readings during the period of supply.

Audit outcome

Compliant

Recommendation	Description	Audited party comment	Remedial action
Clause 7(1) and (2) Schedule 15.2	Develop reporting for ICPs not read during the period of supply	System to be developed to include meters not read report.	Identified

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 meter reading frequency reports for the months of January and February 2018 were provided.

Audit commentary

NextGen provides monthly reports on meter reading frequency to the Electricity Authority. I reviewed the reports for January and February 2018 and confirmed that they were submitted on time and the content of the reports met the requirements of clauses 8 and 9 of schedule 15.2.

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 12 months	NSPs <100% read	ICPs unread for 12 months	Overall percentage read
November 2017	1	1	0	100%
December 2017	1	1	0	100%

Manual meter reading processes are robust and ensure meter readings are obtained.

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 4 months for 90% of the non-half hour meters.

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

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

Audit observation

The meter reading process was examined. Monthly meter reading frequency reports for the months of January and February 2018 were provided.

ICPs not read in the previous four months were reviewed to determine whether reasonable endeavours were used to attain reads, and if exceptional circumstances existed.

Audit commentary

The monthly meter reading reports provided were reviewed.

Month	Total NSPs where ICPs were supplied > 4 months	NSPs <90% read	ICPs unread for 4 months	Overall percentage read
November 2017	5	5	0	100%
December 2017	5	5	0	100%

Manual meter reading processes are robust and ensure meter readings are obtained.

Audit outcome

Compliant

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

Code reference

Clause 10 Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

NHH meter reading is conducted manually and the data is then entered into the database. The process was examined to confirm compliance.

Audit commentary

Only one person conducts meter reading and the records identify the person. The records contain the relevant information listed above.

Audit outcome

Compliant

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

Code reference

Clause 11(1) Schedule 15.2

Code related audit information

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

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

Audit observation

HHR data is collected by AMS as an agent. HHR interrogation data requirements were reviewed as part of their agent audit.

Audit commentary

Compliance with this clause has been demonstrated by AMS as part of their agent audit. Because the audit reports are more than seven months old, I confirmed that there have been no changes to their processes since their April 2017 audit.

Audit outcome

Compliant

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

Code reference

Clause 11(2) Schedule 15.2

Code related audit information

The following information is collected during each interrogation:

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

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

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

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

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

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

Audit observation

HHR data is collected by AMS as an agent. HHR interrogation data requirements were reviewed as part of their agent audit.

Audit commentary

The AMS audit report confirms compliance with this clause. I checked all event log correspondence for the audit period to ensure it was supplied and there were no issues present.

Audit outcome

Compliant

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

Code reference

Clause 11(3) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

HHR data is collected by AMS as an agent. HHR interrogation log requirements were reviewed as part of their agent audit.

Audit commentary

The AMS audit report confirms compliance with this clause.

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

HHR data is collected by AMS as an agent. Trading period duration was reviewed as part of their agent audit.

Audit commentary

Compliance with this clause has been demonstrated by AMS as part of their agent audit.

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

NextGen's agent (AMS) and MEPs retain a copy of the raw meter data, and their compliance with the archiving and storage requirements was reviewed as part of their audits.

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

Raw meter data from the commencement of trading was reviewed to ensure that it is retained.

Audit commentary

When data reaches NextGen's systems, the level of security is robust and data cannot be accessed by unauthorised personnel.

NextGen has retained reading data since they began trading, and intends to retain reading data for at least 48 months.

Compliance with clause 18.3 of schedule 15.2 was examined, which requires that ".....meter readings cannot be modified without an audit trail being created." Readings cannot be modified without an audit trail being created. Readings are entered into a data table and any adjustments or corrections have an appropriate 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

Processes to record and archive non-metering information were discussed, and non-metering information was viewed to determine whether the archiving requirements were met.

Audit commentary

NextGen does not deal with any non-metering information.

Audit outcome

Not applicable

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

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

Code reference

Clause 19(1) Schedule 15.2

Code related audit information

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

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

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

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

Audit observation

Processes for the correction of NHH meter readings were reviewed by checking the process and system capability. There were no correction examples during the audit period.

Audit commentary

There were no examples of corrections to actual NHH metering data available during the audit period. An ICP was identified where an estimated reading at the time of a profile change needs to be replaced with an actual reading. This change was conducted and submission was re-run to confirm it flowed through to the submission file. This check also confirmed that the estimated reading was not over written.

NHH readings and associated photos are collected and stored in a compliant manner. In the unlikely event that a reading failed validation, another photo read would be obtained.

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

Processes for correction of HHR meter readings were reviewed.

Audit commentary

NextGen is often required to populate missing trading periods with estimated data. At the time the estimate is conducted it is not known whether this estimate will become permanent or whether the missing data will be supplied. I consider that if the data is not provided and the estimates are made permanent, this is considered “substitution”. Whilst there is only one process for HHR estimation, there are two relevant parts to the Code, Section 8.2, correction and Section 9.4 estimates.

As recorded in the previous audit report, if data is missing for one or more trading periods, estimation occurs for the entire day (48 trading periods) rather than just to populate the missing trading periods. The functionality of ETS does not enable estimation and identification of estimates at a trading period level. This does not achieve compliance with several clauses, as follows:

Clause 4(1) of Schedule 15.2 states that *“only volume information created using validated meter readings, or if such values are unavailable, permanent estimates has permanence within the reconciliation process (unless subsequently found to be in error).”* *Because validated meter readings are available for the trading periods in question; they must be used to create the volume information.*

Clause 19(2) of Schedule 15.2 states that:

(2) If errors are detected during the validation of half-hour meter readings, the meter readings must be corrected as follows:

(a) if a check meter or data storage device is installed at the metering installation, data from the check meter or data storage device may be substituted:

(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 a meter, if available, and the pattern of consumption is considered to be materially similar to the period in error.

This requires that the meter readings that fail validation must be corrected. It does not allow meter readings that do not fail validation to be corrected.

Clause 3(3) of Schedule 15.2 states that *“An estimated reading and a permanent estimate must be clearly identified as an estimate at source and in an exchange of metering data or volume information between participants ...”* *This requires the identification of estimates to be at a trading period level not at the daily level.*

The estimation process is based on data from ICPs with the same price category; therefore the pattern of consumption is considered to be materially similar.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 8.2 With: Clause 19(2) Schedule 15.2 From: 01-Jul-17 To: 21-Mar-18	Correction process for HHR data includes substitution of “actual” data with estimated data. Potential impact: Medium Actual impact: Low Audit history: Once Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as weak. The correction process complies with the requirement to ensure the substituted data is from a period with a similar pattern but there are no controls to prevent substitution of actual data with estimated data. The impact on settlement is minor due to the small number of ICPs and because most substituted data is replaced with actual data; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Software system changes are to be investigated and implemented to ensure only missing data points are replaced with estimates.		31/10/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above.			

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

Error and loss compensation arrangements were discussed.

Audit commentary

NextGen confirmed there are currently no error or loss compensation arrangements in place.

Audit outcome

Compliant

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

Code reference

Clause 22(1) and (2) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

Corrections are discussed in **sections 8.1** and **8.2**. Audit trails are discussed in **section 2.4**.

Raw meter data retention for MEPs was reviewed as part of their MEP audits.

Audit commentary

The raw meter data files are not edited. The data that is edited is considered metering data and the audit trail is appropriate. As recorded in Section 8.1, an ICP was identified where an estimated reading at the time of a profile change needs to be replaced with an actual reading. This change was conducted and submission was re-run to confirm it flowed through to the submission file.

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

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

Correct identification of estimated reads and review of the estimation process was completed in **section 8.1**.

Audit commentary

As mentioned in Section 8.2, estimated HHR data is identified at a daily level not at an interval level, which does not achieve compliance with this clause.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 9.1 With: Clause 3(3) Schedule 15.2 From: 01-Jul-17 To: 21-Mar-18	HHR estimates identified at a daily level rather than an interval level. Potential impact: Low Actual impact: Low Audit history: Once Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	Estimated data is identified but not at a trading period level, therefore the controls are recorded as weak. The impact on settlement is minor due to the small number of ICPs; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
This is a duplicate non-compliance (see 8.2), As only daily records can be flagged as Actual or Estimated (e.g. CS reads in the registry and HERM files), we feel this is not an additional breach, but part of 8.2 which will be addressed.		31/10/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above.			

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

Code reference

Clause 3(4) Schedule 15.2

Code related audit information

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

3(4)(a) - validated meter readings

3(4)(b) - estimated readings

3(4)(c) - permanent estimates.

Audit observation

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

Audit commentary

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 for derive volume information must not be rounded or truncated from the stored data from the metering installation.

Audit observation

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

Audit commentary

Data provided by the MEPs and agents is not rounded or truncated. Compliance is confirmed.

Audit outcome

Compliant

9.4. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

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

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

Audit observation

The HHR data estimate processes were examined along with an example from ETS.

Audit commentary

The estimation methodology was sound, and was conducted in accordance with the documented process. As mentioned in Section 8.2, I have differentiated between “substitution” which is considered correction, and estimation, where the estimated data is replaced with actual data.

The estimation process is based on data from ICPs with the same price category; therefore the pattern of consumption is considered to be materially similar. NextGen uses reasonable endeavours to ensure the estimated consumption is within 10%.

Audit outcome

Compliant

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

Code reference

Clause 16 Schedule 15.2

Code related audit information

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

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

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

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

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

Audit observation

I conducted a walk through of the NHH data validation process.

Audit commentary

NextGen has the following checks in place:

1. Consumption is within expected bands

2. zero consumption
3. negative consumption
4. missing meter readings

Any exceptions are addressed, and action is taken depending on the type of exception.

Meter readings are manually entered and part of the process is to ensure the correct ICP is selected.

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 0 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 validation steps by conducting a walk-through of the process. I observed the AMI event logs where they were available.

Audit commentary

The NHH validation checks are also in place for electronically interrogated meters, as follows:

1. Consumption is within expected bands
2. zero consumption
3. negative consumption
4. missing meter readings

AMI event information is provided by AMS, SMCO and FCLM. Event logs are not sent by ARC Innovations. Some MEPs send associated notifications where they consider the matter needs immediate attention, for example phase failure or reverse power. No examples were identified during the audit. ARC innovations do not send event logs but their most recent MEP audit records compliance and records that if any relevant events are identified they are sent to retailers.

I specifically checked all event related correspondence from AMS and EDMI to confirm no issues were present.

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

NextGen does not have responsibilities for the provision of information to the grid owner.

Audit Commentary

NextGen does not have responsibilities for the provision of information to the grid owner.

Audit outcome

Not applicable

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

Code reference

Clause 13.137

Code related audit information

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

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

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

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

Audit observation

NextGen does not have responsibilities for the provision of information to the grid owner.

Audit Commentary

NextGen does not have responsibilities for the provision of information to the grid owner.

Audit outcome

Not applicable

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

Code reference

Clause 13.138

Code related audit information

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

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

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

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

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

Audit observation

NextGen does not have responsibilities for the provision of information to the grid owner.

Audit Commentary

NextGen does not have responsibilities for the provision of information to the grid owner.

Audit outcome

Not applicable

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

Code reference

Clause 13.140

Code related audit information

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

Audit observation

NextGen does not have responsibilities for the provision of information to the grid owner.

Audit commentary

NextGen does not have responsibilities for the provision of information to the grid owner.

Audit outcome

Not applicable

11. PROVISION OF SUBMISSION INFORMATION FOR RECONCILIATION

11.1. Buying and selling notifications (Clause 15.3)

Code reference

Clause 15.3

Code related audit information

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

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

Audit observation

A registry list was reviewed for the audit period to confirm which profiles were used.

Audit commentary

As NextGen is only using the RPS, PV1 and HHR profiles, trading notifications were not required.

Audit outcome

Compliant

11.2. Calculation of ICP days (Clause 15.6)

Code reference

Clause 15.6

Code related audit information

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

15.6(1)(a) - submission information for the immediately preceding consumption period, by 1600 hours on the 4th business day of each reconciliation period

15.6(1)(b) - revised submission information provided in accordance with clause 15.4(2), by 1600 hours on the 13th business day of each reconciliation period.

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

Audit observation

The process for the calculation of ICP days was examined by manually calculating the ICP days for all ICPs at STK0661 for December 2017.

I reviewed variances for five months of GR100 reports and investigated any large discrepancies.

Audit commentary

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

The process for the calculation of ICP days was examined by manually calculating the ICP days for all ICPs at STK0661 for December 2017. The ICP days file contained 174 days and this matched the manual calculation.

The following table shows the NHH ICP days difference between NextGen files and the RM return file (GR100) for all available revisions for 18 months. Negative percentage figures indicate that the NextGen ICP days are higher than those on the registry.

Month	Ri	R1	R3	R7	R14
Oct 2017	0.00%	0.00%	0.00%	-	-
Nov 2017	0.00%	0.01%	-0.19%	-	-
Dec 2017	-0.33%	-0.33%	-0.22%	-	-
Jan 2018	-0.39%	0.81%	-	-	-
Feb 2018	0.00%	-0.28%			

The HHR ICPMISS reports were also checked and the only issues found were where backdated events had occurred. The calculations were correct.

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

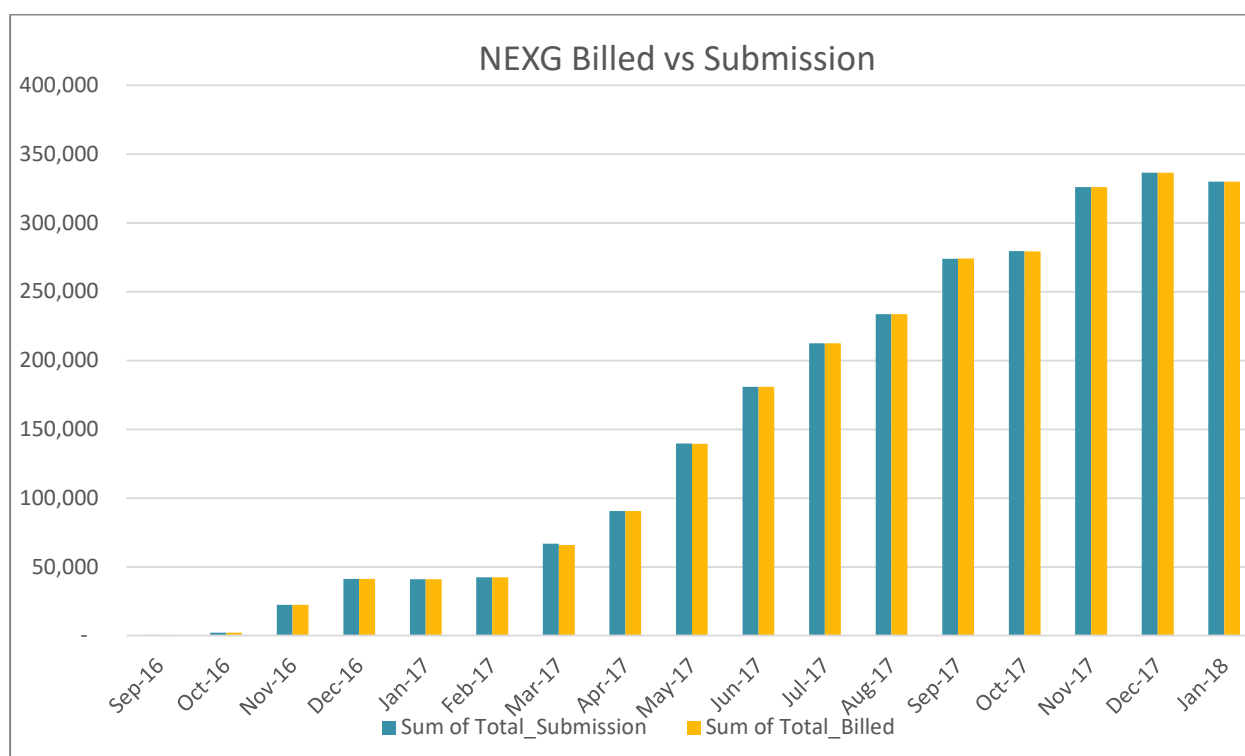
GR130 reports for September 2016 to January 2018 were reviewed to confirm whether the relationship between billed and submitted data appears reasonable.

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

Audit commentary

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

I checked the difference between submission and electricity supplied information and the results are shown in the chart below. NextGen invoices for complete calendar months using the same kWh figures as those used for submission, which explains why the monthly figures are the same. I checked the aggregation of the electricity supplied file for STK0661 for December 2017 and I confirm it is accurate, however this clause requires the information to be aggregated by invoice month not consumption month. Invoicing occurs in the first few days of the following month, therefore if consumption occurs in say January, invoicing occurs in February and the February invoices should be aggregated and provided in the file sent in March.



Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.3 With: Clause 15.7 From: 01-May-17 To: 28-Feb-18	Electricity supplied files aggregated by consumption month not invoice month Potential impact: None Actual impact: None 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 the content of the files is accurate, it's just that they are submitted for the incorrect month. This data is used as an indicator and there is no impact on settlement; therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
System to be changed to delay submission file by one month to ensure files represent the correct month.	Complete	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
As above.	Complete	

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 checked variances between revisions for the aggregates file and I checked the ICPMISS report to identify any potential errors. All variances were evaluated. I checked HHR data in source files against totals in the aggregates file to confirm the process for file creation.

Audit commentary

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

The HHR database is designed to prepare a HHR Aggregates file at ICP level based on submission information.

Clause 15.8 states that the aggregates file should contain electricity supplied information rather than submission information and electricity supplied information is defined as shown below:

electricity supplied means, for any particular period, the information relating to the quantities of **electricity** supplied by **retailers** across **points of connection** to **consumers**, sourced directly from the **retailer's** financial records, including quantities—

- (a) that are metered or unmetered; and
- (b) supplied through normal **customer** supply and billing arrangements; and
- (c) supplied under sponsorship arrangements; and
- (d) supplied under any other arrangement

This differs from the Reconciliation Manager Functional Specification. In Section 3 of the Reconciliation Manager Functional Specification, HHR Aggregates information is described as: “...HHR submission information that is aggregated per ICP for the whole month (not half-hourly)”, which suggests an intention that this information should be sourced from submission information not electricity supplied information, which is covered by clause 15.7.

Type of information that is submission information	Description	Source	Classification in this document
information	electricity supplied information.		supplied
Monthly half-hour ICP aggregates	This is equivalent to the HHR submission information that is aggregated per ICP for the whole month (not half-hourly).	Purchasers (excluding direct consumers)	Monthly half-hour ICP aggregates

Data from the aggregates file is used to support other reporting by the Reconciliation Manager and will be of little value if it is based on Electricity Supplied data rather than submission data. Electricity Supplied data has a one month offset and invoicing is not required to occur within any specific timeframes.

Whilst the Code clearly states this file should be derived from financial records, I recommend NextGen liaises with the Authority regarding a Code change which will allow for the aggregates files used in the industry to remain unchanged.

The check of source data against totals in the aggregates file did not find any discrepancies.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 11.4 With: Clause 15.8 From: 01-Jul-17 To: 31-Mar-18	Aggregates file contains submission information. 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 there are no improvements required. There would be a negative impact on RM reporting if the file contained electricity supplied information; therefore I've used the lowest audit risk rating of low.		
Actions taken to resolve the issue		Completion date	Remedial action status
New system programming to resolve issue		31/10/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

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

The daylight saving process was observed and HHR vols files for the change to and from NZDT were examined.

Audit commentary

The process is operating as intended and compliance is confirmed.

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

This clause relates to the timeliness of files and whether they include all ICPs. I checked the ICPMISS reports for the audit period to confirm the completeness of HHR files. I checked the validation processes for NHH submissions and I checked that all ICPs were included.

A list of breaches was obtained from the Electricity Authority. There were no breaches for late provision of submission information.

Audit commentary

I checked the aggregation of the NHH vols file for STK0661 for December 2017 and confirm it contains all ICPs. I also checked the ICPMISS reporting to confirm submission was correct for all HHR ICPs. The vols file matches the aggregates file.

Audit outcome

Compliant

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 by 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 are consistent with the registry were reviewed and registry validation includes all relevant fields.

The process to ensure that AV080 submissions are accurate was discussed and observed. The process for aggregating the AV080 was examined by checking aggregation for individual NSPs.

Audit commentary

The NSP level aggregation check confirmed the accuracy of the factors. A walk-through of the validation process confirmed that all factors are included.

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

NextGen has not supplied any GIPs.

Audit commentary

NextGen is not required to report any grid owner volume information.

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

NextGen is not a local or embedded network owner.

Audit commentary

NextGen is not a local or embedded network owner, and is not required to provide NSP submission information.

Audit outcome

Not applicable

12.6. Grid connected generation (Clause 15.11)

Code reference

Clause 15.11

Code related audit information

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

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

Audit observation

NextGen does not have any grid connected generation.

Audit commentary

NextGen does not have any grid connected generation.

Audit outcome

Not applicable

12.7. Accuracy of submission information (Clause 15.12)

Code reference

Clause 15.12

Code related audit information

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

Audit observation

I checked the NHH and HHR revision processes and a sample of revision files to confirm compliance.

Audit commentary

NextGen has a HHR revision process so that when estimated data is replaced by actual data, the most accurate data is submitted.

There is no NHH revision process in place, the only NHH submission files are “day 4” files. This leads to one actual inaccuracy and one potential inaccuracy. The actual issue is that revisions are not conducted when shape files become available which results in inaccurate apportionment between months. The potential issue is that if backdated events occur, revisions will not account for these. I checked all of the profile changes to and from NHH and none of these spanned any given month, so there is no actual inaccuracy.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.7 With: Clause 15.12 From: 01-Jul-17 To: 31-Mar-18	No NHH revision process in place Potential impact: Medium Actual impact: Low Audit history: Once Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as weak because whilst there is a HHR revision process there is no NHH revision process in place. There is a minor impact on settlement because the apportionment between months is inaccurate; therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
System changes will ensure NHH revision process uses shape files.		31/10/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

As above.		
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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 vols files were reviewed to identify any forward estimate still existing.

Audit commentary

The proportion of HE is 100% for every submission.

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 on 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

The registry list was reviewed for the audit period to confirm that NextGen should supply:

- NHH information
- HHR information
- Generation information under the PV1 profile
- Unmetered load.

The accuracy of submission information was checked in numerous sections, and I checked the accuracy of generation and unmetered submissions.

Audit commentary

The following issues were found with the accuracy of submission information:

5. ICP 0000039796NTC88 has unmetered load. It switched in on March 20th but NextGen does not have an unmetered load submission process, therefore submission has not occurred. The daily unmetered kWh is 2.093 so the under submission for March 2018 is 13 kWh.
6. Submission of generation volumes did not occur for one ICP for February 2018. The revision process is expected to correct this.
7. Generation volume was submitted as load for one ICP for February 2018. The revision process is expected to correct this.
8. Submission of generation volumes has not occurred for six NHH ICPs since they switched in or since generation was installed. The total number of days where submission did not occur is 1,046 across the six ICPs. One ICP is not generating but the other ICPs are.
9. Minor errors are present when profile changes occur on estimates.
10. Minor errors are present when switch event meter readings from losing traders are not used

All compensation factors were reviewed to ensure they were correct. Compensation factors are applied manually at the time of meter reading population. This process could result in errors and I recommend automation occurs where the compensation factor is populated in a field and multiplication occurs automatically.

Recommendation	Description	Audited party comment	Remedial action
Clause 2(3) of Schedule 15.3	Automate the application of compensation factors	System automation will correct these errors. UNM has been withdrawn.	Identified

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 12.9 With: Clause 2 of Schedule 15.3 From: 01-Jul-17 To: 31-Mar-18	Incorrect submission information. Potential impact: Medium Actual impact: Medium Audit history: Once Controls: Weak Breach risk rating: 6		
Audit risk rating	Rationale for audit risk rating		
Medium	The controls are recorded as weak because they require improvements to ensure issues are identified and resolved at the earliest opportunity. The impact on settlement is moderate; therefore the audit risk rating is medium.		
Actions taken to resolve the issue		Completion date	Remedial action status
The majority of the issues are covered in sections 2.1 & 6.1as related to generation information. Additionally estimation issues covered in 8.2/9.1. Is this double counting the breach?		31/10/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
System automation and advanced system programming will correct the errors and prevent future errors.		31/10/2018	

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

Review processes to confirm that historic estimates are included and identified.

Permanence of meter readings is reviewed in section **12.8**. The methodology to create forward estimates is discussed in section **12.12**.

Audit commentary

NextGen has not been required to calculate forward estimates, all meters have been read within the first four working days of the next month and historic estimates have been calculated.

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 kWhPx 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

The GR170 files showed that no NHH revisions have been conducted. I therefore checked the calculations for historic estimates for initial submissions, without a shape file.

Audit commentary

The initial HE calculations are correct and accurate, using a flat shape for the apportionment between months.

Shape files are not used and the historic estimates are not revised to correct the apportionment between months. This is not compliant and NextGen intends to change ETS to allow for HE calculations and revisions.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 12.11 With: Clause 4 and 5 Schedule 15.3 From: 01-Jul-17 To: 31-Mar-18	HE calculations and revisions not conducted after Day 4 Potential impact: Medium Actual impact: Low Audit history: Once Controls: Weak Breach risk rating: 3
Audit risk rating	Rationale for audit risk rating

Low	The controls are recorded as weak because they exist for Day 4 submissions but not for any subsequent revisions. The impact on settlement is minor due to the incorrect apportionment of consumption between months; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
As noted in 12.7 comments, the system will be upgraded to address this issue. Double counting?			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As above.			

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 whether forward estimates had been used.

Audit commentary

NextGen has not needed to use forward estimates because all NHH ICPs are read within the first four working days of the next month.

The previous audit recorded that forward estimates should be conducted for ICPs where the reading occurred within the first four working days, however the Code appears to be clear on this matter and only allows forward estimates to be used when historic estimates cannot be calculated (Clause 6(2) of Schedule 15.3). Clause 5 of Schedule 15.3 allows for historic estimates to be calculated using a “flat” shape if the shape file is not available.

Audit outcome

Not applicable

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

Code reference

Clause 7 Schedule 15.3

Code related audit information

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

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

Audit observation

A registry list with history was reviewed for the audit period to confirm that NextGen has only used the RPS, HHR and PV1 profiles during the audit period. I checked the event detail report to identify profile changes and checked that actual readings had been used.

Audit commentary

ICP 0000014609NT658, had a profile change to HHR and the end reading for the NHH profile was estimated based on an actual read taken three days later. The actual read was not used to replace the estimate. A check of the system confirmed that if the actual reading was entered the correct consumption would flow through to a NHH vols file. NextGen intends to check all profile changes to ensure actual readings are entered. It appears there are approx. 12 to check.

Non-compliance	Description	
Audit Ref: 12.13 With: Clause 7 Schedule 15.3 From: 01-Jul-17 To: 21-Mar-18	Profile changes not always made with an actual reading Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3	
Audit risk rating	Rationale for audit risk rating	
Low	The controls are recorded as weak because they do not mitigate risk most of the time. The impact on settlement is minor; therefore the audit risk rating is low.	
Actions taken to resolve the issue		Completion date
We will review all instances of non-compliance and revise processes to ensure compliance. System to be changed to facilitate addition of NHH read for HHR profile change.		31/10/2018
Preventative actions taken to ensure no further issues will occur		Completion date
As above.		
		Identified

Audit outcome

Non-compliant

13. SUBMISSION FORMAT AND TIMING

13.1. Market Administrator Meter Reading Reports (Clauses 8 & 9 of Schedule 15.2)

Code reference

Clause 8 Schedule 15.3

Code related audit information

Provision of meter read frequency reports to the Authority, no later than 20 business days after the end of the month.

Audit observation

I checked whether the meter reading reports had been prepared and submitted in accordance with this clause.

Audit commentary

All reports were sent on time during the audit period.

Audit outcome

Compliant

13.2. 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

The process to ensure that AV080 submissions are accurate was evaluated by conducting a walk-through of the validation processes and the submission preparation processes. I also checked the ICPMISS reporting to identify any aggregation issues.

Audit commentary

AV080 and AV090 files are aggregated correctly. Compliance with the requirement to use correct aggregation factors is confirmed. The registry is used as the starting point for submissions. Clause 8(g) of Schedule 15.3 allows NHH submission information to be aggregated to a daily level. NextGen has chosen to aggregate to a daily level, and although this is an unusual practice, the Code allows it to occur.

Audit outcome

Compliant

13.3. 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

Aggregation of the AV080 and AV090 was reviewed and as part of these checks, I verified that the data provided for submission was correctly rounded.

Audit commentary

Submission information is appropriately rounded to no more than two decimal places. Rounding does not occur until the files are prepared.

Audit outcome

Compliant

13.4. 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 reviewed GR170 reports for the entire audit period to confirm that historic estimate requirements were met.

Audit commentary

The quantity of historical estimates is contained in the submission file and is not a separate report.

The percentage of HE is 100% for all submissions due to all NHH meters being read within the first four working days.

Audit outcome

Compliant

CONCLUSION

Some of the non-compliances from the previous audit have been resolved but the submission related issues still remain. Two of the main issues will require changes to the ETS system in order for compliance to be achieved. The first issue is the replacement of actual HHR data with estimated data when data for part of a day is missing. The other matter is that NHH historic estimate revisions are not conducted using the relevant shape files.

Other issues leading to incorrect consumption information are as follows:

1. Submission has not occurred for one month for a switched in ICP with unmetered load. The switch for this ICP was withdrawn following the audit, therefore submission is now not required.
2. Submission of generation volumes did not occur correctly for eight ICPs
3. Minor errors are present when profile changes occur on estimates.
4. Minor errors are present when switch event meter readings from losing traders are not used

Most of the registry and switching related issues were caused because of manual processes, which NextGen intends to resolve through automation.

PARTICIPANT RESPONSE

NextGen Energy would like to thank Steve Woods of Veritek for conducting the audit in a professional and knowledgeable manner.

We acknowledge improvements are required in switch processes and we are currently working on automating many of the Registry/ Switch processes that were the root cause of some non-compliances.

It is noted several non-compliances were due to manual user error and as such, following process improvement and training it is not expected that these issues will reoccur.

Finally, prior to the audit NextGen had already embarked on an ETS system improvement plan that is designed to address the system specific non-compliances such as those related to estimation and NHH revisions (shape files / HE).

As noted by the auditor, we intend to implement and thoroughly test all system changes prior to the next audit and initial planning indicates this process can be completed by the end of November 2018. As such, we anticipate being ready to demonstrate a dramatically improved compliance level early in 2019.

Completion of NextGen Energy's 2018 audit has highlighted some concerns regarding the consistency and competence of EA auditors, namely that having utilised three of the approved EA auditors in recent years, there are significant areas where each auditor believes their interpretation of The Code was correct and that this differed between auditors. In the absence of the EA acting as arbitrator, this resulted in a new entrant retailer incurring significant extra cost to obtain compliance, which surely stands against the EA's stated objective of increasing competition.

Further to meeting the required compliance on a long-term schedule and taking into consideration the different point made by each of the different auditors, NextGen has taken a broader scope of consultants into counsel for the system advances, automation, and necessary upgrades in order to maintain an operation well within the guidelines of the code. This will make for a much better long-term approach and continually seek to allow input from different seasoned EA consultants.