Electricity Industry Participation Code Reconciliation Participant Audit Report

for

Prepared by Ewa Glowacka

Date of Audit: 10/11 May 2017

Date Audit Report Complete: 25 August 2017

Date Audit Report Due: 30 August 2017

TEG & Associates Ltd

Executive summary

This reconciliation participant audit was performed at the request of King Country Energy (KCE) to encompass the Authority's request for annual audits as required by clause 4, of Schedule 15.1, of the Electricity Industry Participation Code 2010.

The relevant rules audited are as required by the Guidelines for Reconciliation Participants Audits V 6.2 issued by the Electricity Authority.

While it is physically difficult to determine the compliance status of every element of data in the entire system, we have a high level of confidence that the key issues that drive overall compliance within King Country Energy have been addressed by this audit.

Whilst 12 non-compliances and 2 recommendations have been found during the audit, in our view they are minor and none of the matters have resulted in significant material reconciliation issues. From our point of view, the compliance of KCE has again improved. The company has put in place many measures to monitor their compliance. The implementation of the Operational Score Card and the DA operation score card is of great assistance.

We thank the King Country Energy staff for their full and complete cooperation in this audit.

Audit summary

Non-compliances

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Relevant information	2	11.2	In some areas information provided was not complete or accurate. Each area is described separately	Moderate	Low	2	
Inform registry of switch request for ICPs – standard switch	3	2 of Schedule 11.3	3 NTTR notifications were send later than 2 BD after an arrangement with a customer came into effect. NT files were late by 4 BD	Moderate	Low	2	
Losing traders must provide final information	3.3	5 of Schedule 11.3	Sampled 6 CS files, 3 of them had incorrect date of last actual read or the switch event read for	None	Low	8	

			the wrong date; 3 CS files were sent late by 5 days				
Gaining trader changes to switch event meter reading	3.11	12 of Schedule 11.3	Readings from 4 RR files provided by the gaining trader were not recorded in Gentrack therefore were not passed to the KEGS database for reconciliation.	None	Low	5	
Changes to registry information	4.3	10 of Schedule 11.1	Registry update of status and trader uploaded outside of 5 BD. Some updates were late up to 255 days	None	Low	5	
Provision of information to the registry	4.5	9 of Schedule 11.1	Incorrect type of reconciliation for ICP 0001112128WM5C3 and incorrect details for unmetered load for 4 ICPs (security cameras)	Weak		3	
NHH meters interrogated annually	6.10	8 (1) of Schedule 15.2	For OKN0111 1 ICP was not read within 12 months	Strong	Low	1	
NHH meters 90% rate	6.11	9 (1) of Schedule 15.2	For 3 NSPs target of 90% was not achieved	Strong	Low	1	
Permanence of volume information	11.8	4 of Schedule 15.2	Submission for March'16 did not reach target of 100% HE for one NSP.	Strong	Low	1	
Creation of submission information	11.9	2 of Schedule 15.3/15.2	Inaccurate information submitted to 2 UML ICPs	Weak	Low	3	

Forward Estimation Process	11.12	6 of Schedule 15.3	Forward estimates do not meet +/- 15% threshold for 1 balancing area	Strong	Low	1	
Historical estimates reporting to RM	12.3	10 of Schedule 15.3	Historic estimates did not achieved targets for March'16 for 3 NSPs	Strong	Low	1	

Recommendations

Subject	Section	Recommendation	Description
Notification to EMS	10.4	We recommend to map and review how information about gained and lost HHR ICPs is communicated to EMS	
Inaccurate submission for UML ICP due to human error	11.9	Graph UML volume before submission	

Issues

Subject	Section	Recommendation	Description
CS file generated by Gentrack and manual entry using registry web interface	3.3	Conduct thorough testing of CS files generated by Gentrack, document the manual process of creating CS file using the registry web interface	

Persons involved in this audit

Name	Title	Company	Comment
Sande Jansen	Compliance Administrator	King Country Energy	Contact person
Chris Finchan	Energy Supply Manager	King Country Energy	
Paul Jansen	Customer Services Manager	King Country Energy	
Matt Van Rooyen	Meter Reader Manager	King Country Energy	
Alex Polaschek	General Manager Sales & Marketing	King Country Energy	
Gwen Hansen	Compliance & Reporting Specialist	King Country Energy	
Jade Bai	Retail System Specialist	King Country Energy	
Jana Reynolds	Customer Service	King Country Energy	
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates	

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1. Administrative

1.1 Summary of previous audit

King Country Energy provided a copy of their previous Data Administration audit conducted in May 2016 by Ewa Glowacka (TEG & Associates Ltd). The findings of this audit were as follows:

Subject	Clause	Non-compliance	Cleared
Event date for a switch	4(1)(a) of Schedule 11.3	Event date later than 10 BDs for 3 ICPs	Cleared, no occurrences during period covered by this audit
Gaining trader disputes reading	6A of Schedule 11.3	RR file for 1 ICP was sent later than 4 months after the event date	Cleared
Withdrawal of switch request	17 of Schedule 11.3	NW sent for 5 ICPs after 2 months	Cleared
Traders to provide information to registry	9(k)(g) of Schedule 11.1	Incorrect ANZSIC code for 43 ICPs and incorrect "Daily kWh" for ICP 0001060300WMD10	On-going
Traders to change ICP information provided to registry	10 of Schedule 11.1	Registry update of status and trader filed outside of 5 BD	Ongoing
Inactive status	19(a) of Schedule 11.1	1 ICP had incorrectly assigned status of "inactive"	Cleared, no occurrences during period covered by this audit
Distributed unmetered load database	11 of Schedule 15.3	7 LED lights are not recorded and ICPs are not populated in ODC database	Now covered by a separate audit
NNH readings on 12-month basis	8 of Schedule 15.2	Non half hour reading on 12-month basis target not met for 7 NSPs	On-going

NHH meter readings	9 of Schedule 15.2	Non half hour reading on 4-month basis target not met for 3 NSPs	On-going
Submission information for RM	15.2 & 15.4 of Part 15	NHH data not submitted for 5 NSPs	Self-breach
Replacement of estimates	4(2) of Schedule 15.2	Estimates are not replaced by a validated meter reading or permanent estimate by 14-month revision cycle for 11 NSPs	On-going
Reconciliation participants to prepare reconciliation information	2(1)(c) of Schedule 15.3 and 15.2 of Part 15	Incorrect volumes submitted for 1 unmetered load ICP	Cleared
Forward estimates	6 of Schedule 15.3	Forward estimates do not meet +/- 15% threshold for 2 balancing areas	On-going
Historic Estimates reporting	10(3) of Schedule 15.3	Historical estimate does not meet the target for 3,7, and 14 month revision cycle	On-going

Subject	Clause	Recommendation	Cleared
Traders to change ICP information provided to registry	10 of Schedule 11.1	Review registry update process to restrict number of updates outside of 5 BDs	On-going
Traders to change ICP information provided to registry		Restrict frequency of the registry updates via web interface	Cleared, only a few people have right to update registry updated
De-energised installations	19 of Schedule 11.1	Change the process of how installations are de-energised	Cleared, installations are de-energised by pulling a fuse pole or a fuse from a pillar box

The non-compliances and recommendations from the last year were discussed with King Country Energy. The comments are to be found in “Cleared “ column.

1.2 Scope of audit

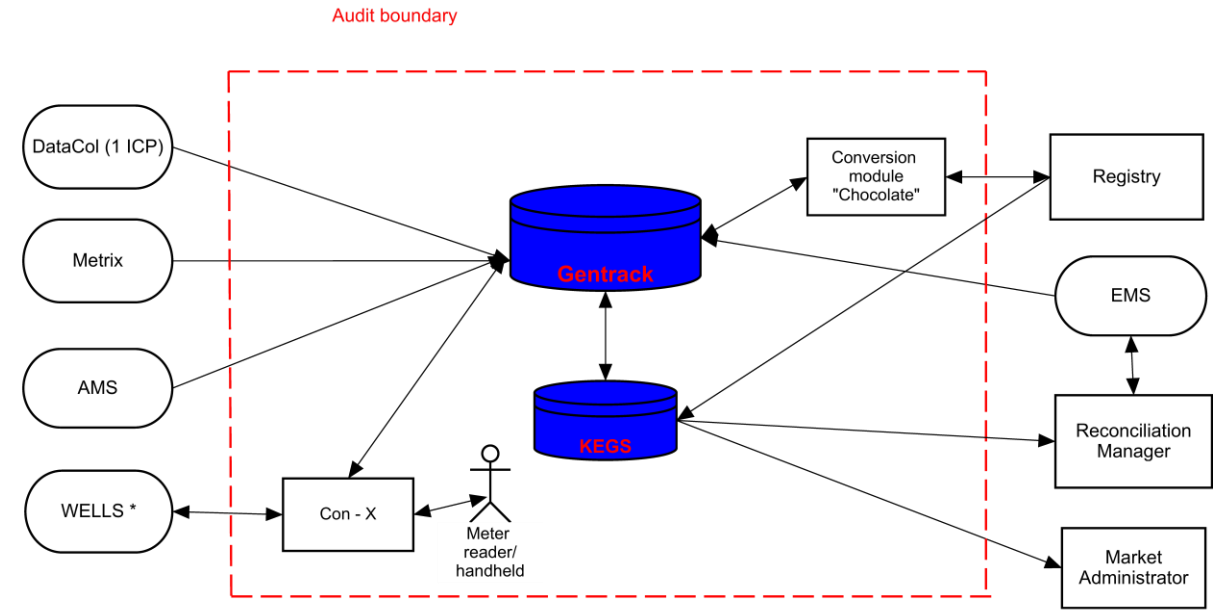
Audit Observation

This reconciliation participant audit was performed at the request of King Country Energy to encompass the Authority’s’ request for annual audits as required by clause 4, of Schedule 15.1, of the Code to assure compliance with the Electricity Industry Participation Code 2010.

The audit was carried out on the King Country Energy premises at 14 Manuaute Street in Taumarunui, on the 10/11th May, 2017.

At the time of audit, we were asked by King Country Energy to identify any processes that, whilst meeting the basic requirements of the rules, had room for improvement or were identified as areas that, while outside of the scope of King Country Energy as a reconciliation participant to directly influence, may require highlighting.

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

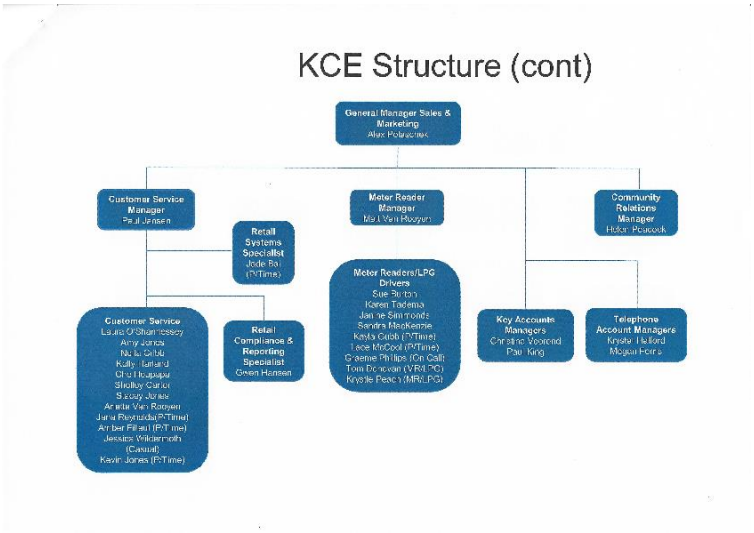


* WELLS does not provide reads, only a "mechanism" to upload readings round to handhelds and than upload meter readings back to KCE after rounds are complete by meter readers

The table below shows the tasks under 15.38 of Part 15 for which KCE requires a renewal of certification. It also shows agents who assist King Country Energy.

Tasks requiring certification under clause 15.38(1) of Part 15	Agents providing services
(a) - Maintaining registry information and performing customer switching	
(b) - Gathering and storing raw meter data	EMS – HHR data collection Wells - NHH data collection DataCol - 1 ICP
(c)(iii) - Creation and management (including validating, estimating, storing, correcting and archiving) half hour non and half hour volume information	EMS – HHR data
(1)(d) - Calculation of ICP days, monthly kWh information of half hour metered ICPs, and electricity supplied	EMS – calculation of ICP days and monthly kWh of hour metered ICPs
(1)(e) - Provision of submission information for reconciliation	EMS for HHR ICPs
(1)(f) – Provision of metering information to the pricing manager in accordance with subpart 4 of Part 13.	EMS – provision of metering information for Mangahao power station

1.3 Structure of Organisation



1.4 Hardware and Software

Audit Observation

The key infrastructure required for the audited process comprises of:

- DIALOG hand-held data loggers used by meter readers
- E-merge data collection system
- Gentrack
- KEGS database
- “Chocolate” tool – files transformation between Gentrack and the registry

1.5 Use of agents (clause 15.34 of the Part 15)

(1) A reconciliation participant who has obligations under this Part may discharge those obligations by way of an agent.

(2) A reconciliation participant who utilises an agent to discharge an obligation under this Code remains responsible and liable for, and is not in any way released from, that obligation.

(3) A reconciliation participant must not assert, against anyone, that it is not responsible or liable for its obligations because the reconciliation participant's agent has done or not done something or has failed to meet a relevant standard.

Audit Observation

King Country Energy uses EMS to provide half-hour data collection, submission of consumption information to the reconciliation manager, and submission of consumption to the pricing manager for Mangahao Power Station. They also use DataCol (1 ICPs) to provide special NHH reads.

Audit Commentary

KCE uses EMS to provide half-hour data collection and submission of volume information to the reconciliation manager, and submission of consumption to the pricing manager for Mangahao Power Station

1.6 Breaches or Breach Allegations

Audit Observation

King Country Energy filed one breach on 24/01/2017. Alleged breach occurred on 8/01/17, when the gaining trader (MEEN) breeched by requesting amended start readings outside of the four month time frame for ICP 0001130620WM258.

On 4 May 2017, the Authority's Compliance Committee (Committee) considered the breach of clause 12(3) of Schedule 11.3 of the Electricity Industry Participation Code 2010 by Mercury NZ Limited on 18 January 2017.

In this case Mercury breached by requesting amended start readings outside of the four month time frame.

Audit Commentary

The Committee noted the breach caused no market impact. The Committee decided to take no further action on the breach under regulation 11(1)(c) of the Electricity Industry (Enforcement) Regulations 2010 (Regulations).

1.7 Authorisation Received

Audit Observation

King Country Energy provided a letter of authorisation to TEG & Associates permitting the collection of data from other parties for matters directly related to the audit.

1.8 Service Providers (subcontractors)

There are three subcontractors who assist with, or are used in, King Country Energy processes which are covered by this audit:

- Brian Rayner (DBR Consultants) - supplier of the KEGS non half-hourly data processing system
- Con-X Data Solutions– handling the meter walks and meter reading data to and from readers to system.
- Gentrack – supplier of billing system

1.9 Exemption from obligations to comply with the Code (section 11 of Electricity Industry Act 2010)

Audit Observation

King Country Energy did not apply for and was not granted any exemptions.

1.10 ICP list

Audit Observation

King Country Energy provided a list of all ICP's as of the 28th April 2017. The total number of ICPs in the registry was 19,405.

Audit Commentary

The tables below show ICP data summary, Meter Category summary, and Summary of profile used

ICP status	Number of ICPs (2017)	Number of ICPs (2016)	Number of ICPs (2015)	Notes
INACTIVE (1,6)	96	47	55	Ready for decommissioning
INACTIVE (1,0)	0	3	3	No reason
INACTIVE (1,4)	399	629	689	De-energised vacant
INACTIVE (1,5)	0	1	0	Reconciled elsewhere
INACTIVE (1,7)	1	0	0	De-energised remotely
INACTIVE (1,9)	1	1	0	De-energised – meter disconnected
INACTIVE (1,11)	10	70	236	De-energised at meter box switch
INACTIVE (1,8)	38	50	90	De-energised at pole fuse
INACTIVE (1,12)	25	12	61	New connection in progress
ACTIVE (2)	16,488	17,397	17,538	
DECOMMISIONED (3)	2,347	2,128	1,954	

Meter category	Number of ICPs (2017)	Number of ICPs (2016)	Number of ICPs (2015)	Comment
1	16,704	17,113	18,232	
2	178	230	237	
3	18	20	22	
4	4	4	6	
5	4	4	4	
No meter	13	13	44	

Profiles	Number of ICPs (2017)
HHR	36
KSL	12
RPS	16,877

2. Operational infrastructure

2.1 Relevant information (clause 15.2 of Part 15 & clause 10.6 of Part 10 & clause 11.2 of Part 11)

A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under Part 15 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

Meter reads are performed by KCE employees or are provided by AMS and Metrix. The readings are uploaded to Gentrack. Once readings are validated they are uploaded to the KEGS database. King Country Energy uses the KEGS database to manage submission of information to the reconciliation manager. Any new readings or correction to readings are uploaded to the KEGS database, which includes them in consecutive revisions. The company takes all practicable steps to ensure that information provided to others is complete and accurate.

Audit commentary:

During the audit we closely reviewed the validation of meter readings and the creation of reconciliation files. Each of these activities is described in more detail in relevant sections of this document. Based on our review and observation we found that in some areas information provided is not complete and accurate.

Audit Outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: 2 of Schedule 11.3 From: 1/5/16. To: 26/4/17	In some areas information provided were not complete or accurate. Each area is described separately Potential impact: None Actual impact: None Audit history: Once previously Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**

Actions taken to resolve the issue	Completion date	Remedial action status
Where possible KCE has corrected each instance		Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Preventative actions have been taken and are detailed under each specific non-compliance		

2.2 Provision of information (clause 15.35 of Part 15)

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

This is discussed in a number of sections in this report. We asked King Country Energy if they were requested to provide any information by the Authority or participants. The requests from other participants were related to switching. There was the request, dated 13 October 2016 from the Authority to provide information as a follow up after the previous audit.

Audit commentary

During the audit we closely reviewed the validation of meter readings and the creation of reconciliation files. Each of these activities is described in more detail in relevant sections of this document. Based on our review and observation we confirm compliance.

Audit Outcome

Compliant

This area is discussed in a number of sections in this report and we confirm compliance.

2.3 Data transmission (clause 20 of Schedule 15.2)

Transmissions and transfers of data related to metering 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

All data transmissions to and from participants is conducted in a secure manner. AMS, DataCol, and Metrix provide data via FTP. WELLS does not provide any meter reads but KCE uses Con-X Data Solutions and Dialog to upload meter walks to handhelds and once the meter reader is finished meter reads are uploaded to the KCE server.

Audit commentary

Compliance is confirmed based on observation of how data is provided to KCE by AMS and Metrix and “shadowing” personnel during the process of downloading data from Con-X Data Solutions via Dialog.

Audit Outcome

Compliant

2.4 Audit trails (clause 21 of Schedule 15.2)

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*

•provided to and received from the reconciliation manager

•provided and received from other reconciliation participants their agents.

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

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, and must include (at a minimum) the following:

(a) an activity identifier:

(b) the date and time of the activity:

(c) the operator identifier

Audit Observation

A complete audit trail in KEGS, the gathering of NHH data and Gentrack was viewed for all data gathering, validation and processing functions. The logs of these activities which are performed electronically include the activity identifier, date and time and an operator identifier.

Audit commentary

Compliance was confirmed based on evidence presented by King Country Energy of an audit trail of the KEGS database. Data to the reconciliation manager is sent via the RM portal and the audit trail is built in. All data gathering, validation, and processing is done electronically. Some of the functions are automated.

Audit Outcome

Compliant

2.5 Retailer responsibility for electricity conveyed - participant obligations (clause 10.4 of Part 10)

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

During the audit King Country Energy provided Terms for Energy supply dated 26 September 2014. The document clearly states that it covers standard terms for the supply of energy. It covers to the full extent of the agreement. The agreement also covers metering providers and other parties which may require reliance on that consent.

Audit commentary

Compliance confirmed based on a review of the Terms of Energy Supply 26 September 2014.

Audit Outcome

Compliant

2.6 Retailer responsibility for electricity conveyed - access to metering [clause 10.7(2)(4)(5)(6) of Part 10]

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 meter 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

One part of the Terms for Energy Supply is dedicated to "Access to your property". It gives KCE and their representatives the right to access to the property for the purpose of accessing metering installation, connecting or disconnections or any other related purposes. KCE plans to give at least 10 working days notice prior to entry for scheduled work or inspection.

Audit commentary

Compliance confirmed based on review of the Terms of Energy Supply 26 September 2014.

Audit Outcome

Compliant

2.7 Physical location of metering installations [clause 10.35(1)(2) of Part 10]

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

King Country Energy relies on the MEPs expertise and existing practices in the electricity industry. The company trades cat 1 or 2 installations which are located in customer premises, close to a point of connection. No compensation factor needs to be applied. Some installations of a higher category are located within substations or small generation plants which means they are close to the point of connection.

King Country Energy does not have any ICPs where a compensation factor is required because there are no metering installations which are not located at the point of connection.

Audit commentary

We discussed this with KCE as to whether such a possibility exists but they do not have the knowledge. They rely on ATHs, who certify the metering installation to include additional compensation factors if required. We followed up with EMS. According to their audit report section 1.12.3 “there are no current examples where loss compensation is required.”

Based on gathered information we confirm compliance

Audit Outcome

Compliant

2.8 Trader contracts with customers to permit assignments by Authority (clause 11.15B of Part 11)

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

- the Authority to assign the rights and obligations of the trader under the contract to another trader if the trader commits an event of default under paragraph (a) or (b) or (f) or (h) of clause 14.41 (clause 11.15B(1)(a)); and

- the terms of the assigned contract to be amended on such an assignment to—

- the standard terms that the recipient trader would normally have offered to the customer immediately before the event of default occurred (clause 11.15B(1)(b)(i)); or

- such other terms that are more advantageous to the customer than the standard terms, as the recipient trader and the Authority agree (clause 11.15B(1)(b)(ii); and

- the terms of the assigned contract to be amended on such an assignment to include a

minimum term in respect of which the customer must pay an amount for cancelling the contract before the expiry of the minimum term (clause 11.15B(1)(c)); and

- the trader to provide information about the customer to the Authority and for the Authority to provide the information to another trader if required under Schedule 11.5 (clause 11.15B(1)(d)); and

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

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

Audit Observation

As described in the previous sections, KCE provided the Terms of Supply 26 September 2014 to assist in the assessment of compliance.

Audit Commentary

In the document, under the header General, KCE reserve the right to transfer to someone else all, or any part of, their rights or obligations under these terms. In the event that that may occur, KCE will advise a customer.

Audit Outcome

Compliant

2.9 Electrical connection of an ICP (clause 10.32 of Part 10)

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

- accept responsibility for the ICP and the obligations under Parts 10 and 11, and, under Part 15; and

- have an arrangement with an MEP to provide metering at the point of connection under Part 15.

Audit Observation

Since the last audit KCE had 67 new connections. The majority of the new connections were on The Line Company network (62). King Country has arrangements with all MEPs to provide

metering services. On the Line Company network, they use FCLM, on other networks AMS. The ICP is provided by a customer or for new connections on The Line Company network KCE asks for an ICP. KCE accept an ICP in the registry, changes status to “New connection in progress”, and nominates an MEP.

Audit Commentary

We analysed the LIS file dated 28/4/17, followed 11 new connections in the registry and walked through the new connection process with the person responsible. The process description for new connections is very detailed. There is an issue with the Gentrack version used by KCE that it does not allow the nomination of a MEP. It must be done using the registry web interface. The table below shows sampled new connections, showing ICPs acceptance and arrangement with MEPs

ICP	ICP created	Status changed to "new connection in progress"	MEP nomination	Meter installed
1099576086CND2A	21/03/17	22/03/17	22/03/17	23/03/17
0001112454WM685	21/07/16	22/07/16	22/07/16	11/11/16
0001112456WM600	22/07/16	22/07/16	22/07/16	18/08/16
0001112460WM077	9/08/16	9/08/16	9/08/16	10/03/17
0001112546WM5A9	26/01/17	27/01/17	30/01/17	2/02/17
0001112484WMBC7	21/09/16	30/09/16	4/10/16	7/10/16
0001112558WMC9F	27/02/17	2/03/17	2/03/17	9/03/07
1000565169PC0C1	8/02/17	13/02/17	13/02/17	16/02/17
0001112457WMA45	22/07/16	22/07/16	22/07/16	3/08/16
0001112544WM52C	26/01/17	27/01/17	27/01/17	2/02/17
0001112536WM0F4	9/07/17	11/01/17	11/01/17	18/01/17

Audit Outcome

Compliant

2.10 Metering certification [clause 10.33(2) of Part 10]

A reconciliation participant may energise or authorise the energisation of a connection only if: the reconciliation participant has accepted responsibility for the point of connection if 1 or more certified metering installations are in place.

Audit Observation

As described in the section above, the process for a new connection is to request an ICP according to the network requirement, change the status in the registry to “New connection in progress”, nominate an MEP and send a service request asking for meter installation and livening.

Audit Commentary

We analysed the LIS file dated 28/4/17, followed 5 connections. Acceptance of an ICP, nomination of an MEP and sending request happens at the same time. None of the networks on which KCE trades allows the connection of a new installation without a certified metering installation. Compliance confirmed.

Audit Outcome

Compliant

2.11 Arrangements for line function services [clause 11.16 of Part 11]

Before notifying the registry of 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 ICP. Before notifying the registry of 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 with an MEP to be responsible for each metering installations for the ICP

Audit Observation

Customers located on The Line Company network have a separate agreement with the network to ensure the supply. Customers receive a separate invoice from the company. Customers located on other networks are charged for network services by KCE on behalf of respective networks.

Audit Commentary

Compliance confirmed based on evidence presented such as arrangements with other networks than The Line Company. The Terms of Supply 26 September 2014 stated that it is a customers' obligation to make an arrangement with the local network.

Audit Outcome

Compliant

2.12 Arrangements for metering equipment provision [clause 10.36 of Part 10]

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

Audit Observation

As was described in previous sections, KCE has arrangements with all MEPs which provide metering services. For any new connection KCE uses MEPs which already provides services to them.

Audit Commentary

Compliance confirmed based on a review of the LIS file and review of the new connection process.

Audit Outcome

Compliant

3. Performing customer and embedded generator switching

3.1 Inform registry of switch request for ICPs – standard switch (clause 2 of Schedule 11.3)

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

Audit Observation

The switching process has not changed since the last audit. When a customer phones into the King Country Energy office he/she is set up in Gentrack straight away, unless she/he was previously a customer. At the same time, a credit check is performed if the customer is not already recorded in the system. The process runs on an on-going basis which ensures that the registry is notified within 2 business days after entering into an agreement with a customer. The NT file is automatically sent to the registry by Gentrack.

The Event Listing file was analysed for the period 1/05/16 to 26/04/17. A total of 1107 NT files were uploaded to the registry. From all NT files, 323 were TR switches and 783 MI switches. We identified that 4 NTTR files were sent to the registry later than 2 business days after an arrangement with a customer came into effect. There were 3 ICPs (0000041726UN70B, 0000041727UNB4E, and 0000669009UNF28) so called contract customers (businesses), which are approached and signed up by KCE's representatives. The late registry notifications were caused by a hold up of passing information to Taumaranui's office from the field. We identified another ICP (0074098350WM467) for which the registry was notified after 4 BD instead of 2 BD. It was done upon customer request. The contract was signed on 27/7/16 but the customer requested a switch date of 22/7/16

Audit Commentary

Based on the EDA file provided by King Country Energy for the period 1/05/16 to 26/04/17 we identified 3 NTTR notifications sent later than 2 BD. It was caused by the inefficient process of passing information from the field to the office.

KCEs switching processes are very well documented and the sending of the NT file is automated. As soon as a customer's sign up is finalised, Gentrack creates a notification file which is uploaded to the registry overnight. The weak link of this process is the so called contracted customers, for whom a signed contract is passed to the office using email from representatives in field offices. KCE is looking for ways to transfer information more effectively to prevent sending notification later than 2 business days.
Our assessment of adequacy of controls is Moderate because for all customers who phone in the KCE office, the process of the registry notification is efficient and fully automated. For contracted customers there is a factor of delay in the passing of information to trigger the automated process. The company has a process weekly running of the EDA monitor compliance. This process covers all switching activities. The analyse is recorded in "Operational Score Card – Switching.xls. We would class this process as detective control, which identify issue and give feedback to the personnel.

Audit Outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: 2 of Schedule 11.3 From: 28/07/16. To: 18/10/16.	3 NTTR notifications were send later than 2 BD after an arrangement with a customer came into effect. NT files were late by 4 BD Potential impact: None Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The late notification was sent for only 3 ICPs out of 323. The notification was late by only 4 business days

Actions taken to resolve the issue	Completion date	Remedial action status
No action to be taken to correct past events as it is not possible to correct the files that have been submitted		Identified.
Preventative actions taken to ensure no further issues will occur	**Completion date**	

There are 2 preventative actions for this issue: 1. There is a Billing system issue that is causing a small number of NTs to be sent late. The fix for this issue is currently being tested prior to implementation. The fix will be tested in our UAT system prior to being released to production. 2. Key Account (Contract) sign ups At this stage the Contract teams go to site, sells the product and then posts the contract to the customer for signing, who then posts it back to the office. Or if dollar values have been discussed they take the contract, it is signed and the KAM posts the contract to the office. We are in the process of developing a system where by sign-ups will be added to the billing system much quicker	31/10/2017 30/9/2017	

3.2 Losing trader response to switch request and event dates – standard switch (clause 3 & 4 of Schedule 11.3)

Within 3 business days after receipt of notification of a switch from the registry, the losing trader must establish a proposed event date. The event date must be no more than 10 business days after the date of receipt of such notification, and in any 12 month period, at least 50% of the event dates must be no more than 5 business days after the date of notification. The losing trader must then:
- provide acknowledgement of the switch request by (clause 3(a) of Schedule 11.3):
- providing the proposed event date to the registry 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 2 calendar months (clause 4(2) of Schedule 11.3).

Audit Observation

King Country Energy's business rule, which is part of the Gentrack setup, is to send the AN file the same day. The AN file is created by Gentrack automatically. Since the last audit 692 AN files were sent to the registry for standard switches. We analysed the Switch Breach History Details file for the period 1/05/16 to 26/04/17, no breaches of late AN file were noted.

There were 622 TR switches away since the last audit as per the EDA file for the period 1/05/16 to 26/04/17. Gentrack has a default setup so that the event date in the AN file is 5 business days. Analysis of the EDA file information shows that for 600 switches KCE nominated the event day for no more than 5 business days.

Event date specified by KCE to finalise switch	Count of event days
-10	1
-9	2
-7	7
-6	12
-5	23
-4	21
-3	91
-2	229
-1	2
1	234
Total	**622**

King Country Energy monitors their compliance with this clause very closely using "Operational Score Card – Switching.xls". The EDA file is downloaded from the registry and analysed weekly. If any irregularities are found, they are identified and discussed with management. A document describing the timeline for each type of switch is part of the Operation Manual.

Audit Commentary

After analysis of the EDA file for the period 1/05/16 to 26/04/17 and the Switch Breach report detail for the same period we confirm compliance. For 600 AN files of 622, KCE nominated the event day for no more than 5 business days. This is 96.5 %, well above 50%.

Audit Outcome

Compliant

3.3 Losing trader must provision final information- standard switch (clause 5 of Schedule 11.3)

If the losing trader provides information to the registry in accordance with clause 3(a) and (4), then within three business days after the actual event date, the losing trader must:

(a) the event date; and

(b) 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; and

(c) if the switch event meter reading is not a validated meter reading, the date of the last meter reading of the meter or data storage device described in paragraph (b)

Audit Observation

According to the Switch Breach report for the period 1/05/16 to 26/04/17 provided by KCE, CS file for 3 ICPs was sent later than 3 BD after the actual event date. Overall KCE sent 622 CS files therefore it is a very good result. Below is a table showing 3 ICPs, which did not meet compliance.

ICP	Actual Event date	Date of CS file	BD
0006116610WM08D	20/01/17	1/02/17	-8
0061166121WM891	20/01/17	1/02/17	-8
0004313540WM90C	30/12/16	12/01/17	-8

King Country Energy provides traders with a validated meter reading or estimate generated by Gentrack based on previous readings history. As a part of checking compliance we sampled 37 ICPs to check if the information provided to the gaining retailer in the CS file was correct. Unfortunately, we found a problem with 10 CS files. The table below shows more detail. 9 of them were Gentrack generated, one CS file was created using the registry web interface. A few examples are shown below to demonstrate the type of issues.

ICP	CS file	Issue	Comment
0000006361UNB90	CS20160830150555.TXT	The switch read date is the same as last Read date (24/08/16)	
0000023187WE80E	CS20160921132512.TXT	Correct	
0000045062TR7FE	CS20161213092321.TXT	Correct	
0000056206UN3DA	CS20160613091549.TXT	Last Read date was on 03/12/16 but KCE says that reading of 65593 for Actual transfer Date is Actual	
0000063134TRB70	CS20161122073947.TXT	Correct	

0000125552TR337	CS20161215134326.TXT	The file says Last Read Date was 13/12/16, when check with Gentrack it was 9/8/16	
0004313540WM90C	RSACK20170113000959.txt	Actual transfer Date is 30/12/16, Last Read Date is 29/12/16, Read type E instead A	manual entry

Audit Commentary

3 CS files out of 622 were sent to the registry later than 5 business days.

A small sampling of 37 ICPs was conducted to validate information contained in the CS files against metering information stored in Gentrack. The sampling process identified issues with the accuracy of information in the CS files provided to the gaining retailer. It appears that the switch event reads are exactly the same as in Gentrack but there is an issue with dates and the type of flag. One CS file generated using the registry web interface had an incorrect read flag.

We have two recommendations, the first one is to thoroughly test the accuracy of the CS files generated by Gentrack, the second is to avoid the generation of the CS file using the registry web interface unless absolutely necessary. Create a detailed instruction of such process.

It is hard to determine how many CS files could be affected. This issue must be addressed with Gentrack.

Our assessment of adequacy of controls is None. There is no process to check Gentrack output on regular basis. Sampling of a small number of ICPs would probably discover the problem. It should be the responsibility of Gentrack to provide compliant software but unfortunately this is not always the case.

Audit Outcome

Non compliant

Non-compliance	Description
Audit Ref: 3.3 With: 5 of Schedule 11.3 From: 01/05/16. To: 26/04/17.	Sampled 6 CS files, 3 of them had incorrect date of last actual read or the switch event read for the wrong date; 3 CS files were sent late by 5 days Potential impact: Low Actual impact: Low Audit history: None Controls: None Breach risk rating: 8
Audit risk rating	**Rationale for audit risk rating**
Low	We assigned Audit Risk ratings as low because the switch event read in CS file are correct. Problem is with a date of Last Read Date and a type of flag. There would negligible impact on settlement outcomes.

Actions taken to resolve the issue	Completion date	Remedial action status
KCE is pleased to see that there has been improvement since the last audit. Due to the change in process and staff training there is no longer an issue of backdating switches without the gaining traders request. No action to be taken to correct past events as it is not possible to correct the files that have been submitted	n/a	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Issue 1: Incorrect last read date A system issue has been identified that caused an incorrect last read date in the CS file. A change request has been sent to our billing system provider to correct this issue. The change will be tested in our UAT system prior to release to production	31/10/2017	
Issue 2: CS files sent late Up until now we have relied on the EA Breach report to identify and prevent potential breaches. We are in the process of developing our own preventative breach reporting system. We understand that the EA is updating the registry switch breach report. We will review the new registry report and look at when it will be available, if it will cover all scenarios and will be available within 4 months then we will solely use this new report. Otherwise we will have our own report available for use by 30 November 2017.	30/11/2017	

Recommendation	Description	Audited party comment	Remedial action
Conduct thorough testing of CS files generated by Gentrack, document manual process of creating CS file using the registry web interface	CS file generated by Gentrack and manual entry using registry web interface	Issue 1 The change to the CS file for last read date will be thoroughly tested in our UAT system prior to release to production Issue 2 As part of the development of our own breach reporting system we are documenting (using flow charts) switching timelines Updates via the registry web interface – this manual process will be added to the KCE switching process manual by 31/8/17	

3.4 Traders must use same reading – standard switch (clause 6 & 6A of Schedule 11.3)

The losing trader and the gaining trader must both use the same switch event meter reading as determined by the following procedure:
- if the switch event meter reading provided by the losing trader differs by less than 200 kWh from a value established by the gaining trader, the gaining trader must use the losing trader's validated meter reading or permanent estimate (clause 6(a)); or
- the gaining trader may dispute the switch meter reading if the validated meter reading or permanent estimate provided by the losing trader differs by 200 kWh or more. (clause 6(b)). If the gaining trader disputes a switch meter reading because the switch event meter reading provided by the losing trader differs by 200 kWh or more, the gaining trader must, within 4 calendar months of the actual event date, provide to the losing trader a changed switch event meter reading supported by 2 validated meter readings.
- the losing trader can choose not to accept the reading, however must advise the gaining trader no later than 5 business days after receiving the switch event meter reading from the gaining trader (clause 6A(a)); or
- if the losing trader notifies its acceptance or does not provide any response, the losing trader must use the switch event meter reading supplied by the gaining trader. (clause 6A(b)).

Audit Observation

The EDA file for the period 1/05/16 to 26/04/17 was analysed to asses compliance. KCE received 49 RR files from the gaining traders. KCE sent 131 RR files to the losing traders when the reading provided by the losing trader had differed by more than 200 kWh to the value established by King Country Energy

All RR files were sent by KCE within 4 months after the event date. The latest RR file was sent after 113 BD. According to the Switch Breach report for the period 1/05/16 to 26/04/17, KCE met compliance to send the AC file within 5 BD. Below there are two tables which shows examples of differences of readings between two traders during a standard switch.

KCE as the gaining trader

ICP	Losing trader	CS file read-	KCE read	Difference [kWh]
0000007454UNF85	GENE	47926/215065	46450/212888	1476/2177
0000007488UN1D9	MEEN	668074	667962	112
0000260833WAB3F	MERI	21741/8683	17837/7797	3904/886

KCE as the losing trader

ICP	Gaining trader	CS file read (KCE)	Gaining trader read	Difference [kWh]
0000012012CPBFC	CTCT	73081/90679	72781/90279	300/400
0000203355UN29A	FLICK	24548	24678	-130
0001160050WM277	GENE	26548/6743	26195/6662	353/81

Audit Commentary

Compliance is confirmed based on analysis of the EDA file provided by KCE for the period covered by this audit. We also viewed the documentation of the switch process related to RR files received from the gaining trader. The validation process of the first actual read after a switch identifies that the switch event read can be too high or too low. Once it is identified that is above 200 kWh, RR file is sent to the losing trader.

Audit Outcome

Compliant

3.5 Non-half hour switch event meter reading – standard switch [clause 6 (2) (3) of Schedule 11.3]

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 on the registry: and
- the gaining trader will trade electricity from a meter with a half hour submission type in the registry (clause 6(2)(b);
- the gaining trader within 5 business days after receiving final information from the registry, 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

King Country Energy trades metering installations of category 1 and 2 as NHH. All metering installations of category 3 and above are traded as HHR. There are 10 ICPs of category 2, for which the old type of TOU meters are installed. They are reconciled as HHR. KCE does change the type of reconciliation from NHH to HHR for installations of cat 1 and 2 metered by smart meters. They are reconciled as NHH.

Audit Commentary

KCE does change the type of reconciliation from NHH to HHR for installations of cat 1 and 2 metered by smart meters. They are reconciled as NHH.

Audit Outcome

Not applicable

3.6 Disputes -standard switch [clause 7 of Schedule 11.3]

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

Audit Observation

We discussed this with KCE during the audit and any disputes related to the switch event read were resolved successfully using RR files.

Audit Commentary

There were no situations where it was not possible to resolve any dispute related to meter readings using the RR files process.

Audit Outcome

Compliant

3.7 Gaining trader informs registry of switch request – switch move (clause 9 of Schedule 11.3)

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 of a switch and the proposed event date no later than 2 business days after the arrangement comes into effect.
In its advice to the registry 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

Move In switches account for 70.1% of all complete switches by King Country Energy. The analysis of the EDA file for the period 1/05/16 to 26/04/17 showed that 783 NT files were sent to the registry as MI (Move In). The event date is set for the date when a customer moved in, as per a customer notification, or was planning to move in. NT file for MI switch is sent to the registry the same day in Gentrack's overnight processing.
MI switches are mostly initiated by people who shift between rental properties in Taumarunui or new people shifting to the area.

Audit Commentary

We confirm compliance based on analysis of the Event File (EDA) for the period 1/05/16 to 26/04/17 and Switch Breach History Details file. Randomly we chose 20 Move In switches, which looked like late notifications of a switch. We validated in Gentrack a date when KCE was contacted asking to supply energy to their premises. In all instances King Country Energy was contacted late. It is quite a common occurrence in the area where most of KCE's customers are.

Audit Outcome

Compliant.

3.8 Losing trader provides information – switch move [clause 10(1) of Schedule 11.3]

10(1) Within 5 business days after receipt of notification of the switch move from the registry, 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:
- confirmation of the switch event date; and
- a valid switch response code; and
- final information as required under clause 1; 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. Determine an event date that is not earlier than the gaining traders proposed date and that date can be no later than 10 business days after the date of the notification. Alternatively, the losing trader may provide a request for a withdrawal of the switch in accordance with clause 17.

Audit Observation

1095 AN files were sent by KCE related to Move In switch. The AN files for Move In switches sent by KCE were analysed. Randomly 12 AN files were checked whether they were sent within 2 business days after the receipt of notification from the gaining trader. The process is automated; it works the same way as for a standard switch in that the AN file is generated by Gentrack. Move In switches are processed very quickly.

Audit Commentary

We confirm compliance based on analysis of the Switch Breach report for the period covered by this audit. The EDA file for the period 1/05/16 to 26/04/17 was evaluated from the point of view of compliance. We did not identify any CS files sent later than 5 business days. The fact that the process is fully automated gives even more assurance of compliance.

Audit Outcome

Compliant

3.9 Losing trader determines a different date – switch move [clause 10(2) of Schedule 11.3]

If the losing trader determines a different date, the losing trader must also complete the switch by providing to the registry as described in subclause (1)(a):
- the event date proposed by the losing trader; and
- a valid switch response code; and
- final information as required under clause 1.

Audit Observation

We discussed this with KCE. The process it that when the losing trader does not agree with the data provided by KCE and suggests another one, a lot of conversation is conducted via emails. Quite often KCE requests a copy of the Tenancy Agreement to have confirmation of a date of move in. There were no situations when it was not possible to resolve it to the satisfaction of both traders and customers. It is very rare that the losing trader proposes another date of switch for Move In.

Audit Commentary

Compliance was confirmed based on the process presented by King Country Energy.

Audit Outcome

Compliant

3.10 Losing trader must provide final information – switch move [clause 11 of Schedule 11.3]

If the losing trader has provided information to the registry in accordance with clause 10(a), within 3 business days after the later of the actual event date or date of receipt of the switch request, the losing trader must:

- provide the event date (clause 11(a)); and

- provide the switch event meter reading as at the event date for each meter or data storage device noted on the registry (clause 11(b)); and

- if switch event meter reading is not a validated meter reading, provide the date of the last reading of the meter or storage device. (clause (11(c)).

Audit Observation

Move In switches are finalised very quickly. In most cases the CS file is sent the same day or the following day. King Country Energy prefers to finalise it quickly because there are vacant properties. The final reads are already in Gentrack therefore the CS file is generated. 1,051 CS files were generated.

We checked the Switch Breach report for a period 01/05/16 to 26/4/17 to see if any non-compliance occurred. We have not found evidence of it.

Audit Commentary

Analysis of the Switch Breach report and the EDA file for the period 1/05/16 to 26/04/17 did not show cases of non-compliance. It is a well-documented process in KCE switching and Registry Manual describing each step.

Audit Outcome

Compliant

3.11 Gaining trader changes to switch event meter reading - switch move (clause 12 of Schedule 11.3)

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 notify 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)):
- notify 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 on 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 5 business days after receiving final information from the registry, may provide the losing trader with a switch event meter reading from that meter. The losing trader must use that switch event meter reading. (clause 12(2B))

Audit Observation

The possibility of a dispute of switch read for Move In is low in comparison to a standard switch because whenever the customer vacates a premise a final read on the final day is recorded by King Country Energy meter readers or subcontractors. In a case where no actual meter reading is available the estimation process is used which is an integral part of the billing system, Gentrack.

KCE sent 134 RR files and received 37 files. As a part of assessing compliance we randomly chose 23 RR files (62.2%) sent to KCE by the gaining trader to see if once the RR file was accepted, meter reads were uploaded to Gentrack. It is not an automated process; it is done manually by an operator. Out of 23 RR files we identified 4 ICPs (17%) for which meter readings were not entered into Gentrack. The table below shows the effected ICPs

ICP	Reading received from the gaining trader	Readings in Gentrack
0001131730WM051	11436 / 3851	14543 / 4776
0000323246WA43E	5739 / 1013 / 3072	5184 / 953 / 2742
0000201615WA216	3681 / 2370 / 1914	2458 / 1713 / 1288
0007600051WM6F8	1621 / 161	1866 / 161

Audit Commentary

Non compliance was identified because KCE was not using the switch event read for 4 ICPs (17%) out of 23, which were sampled. Overall KCE received 37 RR files since the last audit. Analyses of the EDA file showed that the company sends more RR files than it receives. It indicates that accuracy of the switch event read provided to the gaining trader is high. The fact that the process of entering reads from RR files is manual and it is not monitored does not give us much assurance

Our assessment of strength of control is “None”. It is important that this finding is quickly addressed.

Audit Outcome

Non compliant

Non-compliance	Description
Audit Ref: 3.11 With: 12 of Schedule 11.3 From: 25/08/16. To: 04/01/17	Readings from 4 RR files provided by the gaining trader were not recorded in Gentrack therefore were not passed to the KEGS database for reconciliation. Potential impact: Low Actual impact: Low Audit history: None Controls: None Breach risk rating: 5
Audit risk rating	**Rationale for audit risk rating**
Low	We assigned Audit Risk ratings as low because the number of RR files received by KCE is small but it could be increased as soon as number of non processed RR files increases. At present there would negligible impact on settlement outcomes.

Actions taken to resolve the issue	Completion date	Remedial action status
KCE is pleased with progress since the last audit - The last audit report showed that we had an issue with submitting late RR's, we put in place a reporting mechanism to identify this issue. Since that reporting has been put in place there have been no late RR's As a result of this audit action every RR file that was accepted for the previous 12 months was reviewed and if necessary updated in our billing system. Our standard process ensures that the billing system reads are then updated into our DA system and flow through to corrected submissions.	26/7/17	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
A step has been added to our AC weekly checking process (using an EDA report) to prompt the user to check that any accepted revised read has been entered into the billing system. Evidence of the checking will be added to the copy of the EDA report that we save and keep.	26/7/17	

3.12 Gaining trader informs registry of switch request – gaining trader switch (clause 14 of Schedule 11.3)

The gaining trader 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 to trade electricity through or assume responsibility for:
- a half hour metering installation that is not a category 1 or 2 metering installation, that has an ICP with a submission type half hour on the registry and an AMI flag of "N"; or
- a half hour metering installation that has a submission flag of half hour 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 with the losing trader trades 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 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:
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, 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, if:
14(4)(a) – the proposed event date is in the same month as the date on which the gaining trader advised the registry; 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 and this date is agreed between the losing and gaining traders.

Audit Observation

According to the EDA file King Country Energy sent 1 NT file to gain ICP 0008801230WM80A on 29/12/16 but it was rejected by Genesis on the basis of the wrong switch type. It was a vacant property in Manunui. It was the only transaction related to this clause.

Audit Commentary

KCE used the process to gain an ICP but it was rejected in the end because of the wrong switch type. The process is documented.

Audit Outcome

Compliant

3.13 Losing trader provision of information – gaining trader switch (clause 15 of Schedule 11.3)

Within 3 business days after the losing trader is informed about the switch by the registry, and if relevant for that ICP, the losing trader must:

- *15(a)- provide to the registry 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

No such switches were initiated since the last audit.

Audit Commentary

No such switches were initiated since the last audit.

Audit Outcome

Not applicable

3.14 Gaining trader to notify registry - gaining trader switch (clause 16 of Schedule 11.3)

The gaining trader must complete the switch no later than 3 business days, after receiving the valid switch response code, by advising the registry of the event date.
If the ICP is being de-energised 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 de-energised or the metering equipment is removed; or

16(b)- carry out an interrogation and, no later than 5 business days after the metering installation is de-energised or removed, advise the losing trader of the results and metering component numbers for each data channel in the metering installation.

Audit Observation

No such switches were initiated since the last audit. A process for these type of switches is in place. It was reviewed.

Audit Commentary

No such switches were initiated since the last audit.

Audit Outcome

Not applicable

3.15 Withdrawal of switch requests (clause 17 and 18 of Schedule 11.3)

A losing trader or gaining trader may request that a switch request be withdrawn at any time until the expiry of 2 calendar months after the event date of the switch.
If a trader requests the withdrawal of a switch, the following provisions apply:
- for each ICP, the trader withdrawing the switch request must provide the registry with (clause 18(c)):
- the participant identifier of the trader making the withdrawal request (clause 18(c)(i)); and
- the withdrawal advisory code published by the Authority. (clause 18(c)(ii))
- within 5 business days after receiving a notification from the registry of a switch, the trader receiving the withdrawal must notify the registry 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 notification from the registry, 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 receipt of notification from the registry 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

196 NW files were sent to the registry by King Country Energy since the last audit. The most often used withdrawal code was CX (a customer cancels), 104 cases. We examined the Switch Breach History Details file and the EDA for the period 1/05/16 to 26/04/17 and we confirm the AW files (113), as a reply to NW, were sent no later than 5 BD to the other trader. All NW files were sent within a 2 month period, no later than 55 BD. The Switch Breach report did not show any AW response being late.

Audit Commentary

Compliance was confirmed based on analysis of the EDA file for the period 1/05/16 to 26/04/17 and the Switch Breach report.

Audit Outcome

Compliant

3.16 Switch saving protection (clause 11.15AA to 11.15AD of Part 11)

(3) If the protected trader enters into an arrangement with a customer of another trader (the "losing trader") to commence trading electricity with the customer, the losing trader must comply with subclause (4).

(4) A losing trader referred to in subclause (2) or a protected trader referred to in subclause (3) must not, by any means, initiate contact with the customer to attempt to persuade the customer to terminate the arrangement referred to in subclause (2) or subclause (3) (as the case may be) during the period specified in subclause (5), including by—

- *(a) making a counter-offer to the customer; or*
- *(b) offering an enticement to the customer.*

Audit Observation

King Country Energy is a part of the program. We discussed this with KCE, the company confirmed that their policy is, where possible, that they contact their customers and attempt to stop the switch, or depending on whether the other trader is part of the switch protection scheme they wait until the switch has been completed.

Audit Commentary

Compliance confirmed on the basis of the company's policy. There is a list of traders who are part of the program and staff are instructed not to contact their customers when NT file is received.

Audit Outcome

Compliant

3.17 Metering information (clause 21 of Schedule 11.3)

For each interrogation or switch event meter reading carried out in accordance with this Schedule,—

(a) the trader who carries out the interrogation or 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 (as the case may be); and

(b) the cost of each interrogation or switch event meter reading must be met as follows:

(i) for each interrogation or switch event meter reading carried out in accordance with clauses 5(b) or 11(b) or (c), the cost must be met by the losing trader; and

(ii) in every other case, the cost must be met by the gaining trader.

Audit Observation

King Country Energy switches on estimates or actual reads. To avoid possible disputes, the preferred option is an actual read. Since the last audit the number of reads received from AMS and Metrix increased (700 ICPs) therefore more of the switch event reads are actual. KCE pays for all the switch event reads as a part of the switching process.

Audit Commentary

Compliance confirmed based on the company's policy in relation to the management of meter reading expenses.

Audit Outcome

Compliant

4. Maintaining registry information

4.1 Obtaining ICP identifiers (clause 11.3 of Part 11)

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

King Country Energy had 67 new connections since the last audit. This was described in section 2.9. New connections were in The Line Company, PowerCo, Waikato, Waipa, and Counties Power network. For some of these networks a customer requests an ICP for a new connection and next approaches KCE to buy energy from them or KCE needs to request an ICP. The Line Company requests both, an application from a customer and request from a trader. It is not an easy task to have an ICP identifier issued by the Line Company, it can take weeks.

All King Country Energy customers have unique ICPs assigned. Gentrack does not allow the assigning of duplicate ICPs.

Audit Commentary

Compliance is confirmed based on a review of the new connection process. More details were described in section 2.9. We also checked that Gentrack does not allow for multiple ICPs for the same connection.

Audit Outcome

Compliant

4.2 Providing registry information [clause 11.7(2) of Part 11]

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

Audit Observation

King Country Energy provided the LIS file dated 28/4/2017. It was a snapshot of KCE's ICPs on the day including addresses. This file is used in many sections of this report to assess compliance.

Audit Commentary

Based on the file provided, we confirm compliance. All fields were populated to the company's' best knowledge. More details will be given in other sections.

Audit Outcome

Compliant

4.3 Changes to registry information (clause 10 of Schedule 11.1)

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

Audit Observation

The process is, when information held in Gentrack, that is relevant to the registry, is changed then the NOT file is created and sent to the registry overnight. Analysis of the Event Details Listing file for the period 01/05/16 to 26/4/17 showed that since the last audit there were 913 transactions to update ICPs' status and 468 updates to the trader's section of the registry. As was recommended in the last audit, KCE restricted the number of personnel who can make changes directly in the registry.

Audit Commentary

The table below shows a breakdown of status updates and how many of them were uploaded later than 5 business days. The results noted in the last audit were similar. Late changes of the status of an ICP to "de-energised – at meter box" decreased by half. Updates to Active status decreased from 45.5% to 31.8% but it is still high. Traders fields updates outside of 5 BD increased from 26.5% to 65.2% which is of concern.

Status	Reason code	No of updates	No of updates later than 5BD	Date range of updates [BD]
1(inactive)	8 (de-energised at pole fuse)	104	23 (22.1%)	7 to 176
1(inactive)	4 (de-energised vacant)	18	7(0.4%)	11 to 103
1(inactive)	6 (ready for decommissioning)	157	31 (19.8%)	7 to 149
1(inactive)	7 (de-energised remotely)	1	1	18
1(inactive)	12 (new connection in progress)	87	7 (8.0%)	7 to 39
2 (active)	0	342	109 (31.8%)	10 to 162
Trader		468	305 (65.2%)	1 to 255

The table below shows 10 ICPs for which update in the registry is the most backdated. It shows that in April this year KCE was reviewing ANZSIC codes and correcting if necessary.

ICP	Effective Date	Input Date	Days	Change
0000047502UN493	8/06/16	23/04/17	-228	change of ANZSIC code from 0 to A016
0000280267TU3CD	1/07/16	23/04/17	-211	change of ANZSIC code from A014 to D281
0001112411WM96F	3/05/16	24/04/17	-255	change of ANZSIC code from E301 to 0
0001429295HRE88	1/06/16	24/04/17	-234	change of ANZSIC code from 0 to D281
0004010450WM4F1	4/07/16	27/01/17	-150	change of ANZSIC code from O771 to D263
0000052607UN51E	9/10/16	23/04/17	-140	change of ANZSIC code from 0 to A017
0000360603TU827	10/10/16	23/04/17	-140	change of ANZSIC code from K641 to D281
0000360604TU5ED	10/10/16	23/04/17	-140	change of ANZSIC code from K641 to 0
0000661702UN3FE	8/10/16	24/04/17	-141	change of ANZSIC code from N72 to A017
0001017981WA0B4	6/10/16	23/04/17	-142	change of ANZSIC code from ND281 to N729

Switching activities are monitored on weekly basis using Event Detail file. The results are very good. During this audit we identified non-compliances related to switching but they are minor. As far it was observed during the audit, there was no process to monitor timeliness of registry updated. Backdating updates of status “active” (31.8%) impacts King Country Energy submissions to the reconciliation manager. Our assessment of adequacy of controls is None because they are not in place.

Audit Outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.3 With: 10 of Schedule 11.1 From: 01/05/16. To: 26/04/17	Registry update of status and trader uploaded outside of 5 BD. Some updates were late up to 255 days Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: None Breach risk rating:5
Audit risk rating	**Rationale for audit risk rating**
Low	We assigned Audit Risk ratings as low because most backdated registry updates are related to correcting ANZSIC code in the registry. It will not have impact on settlement outcomes.

Actions taken to resolve the issue	Completion date	Remedial action status
Following the EA review of last years audit we identified 2 fixes for issues that were causing late status changes 1. Final accounts earlier after DNP to ensure that 5 BD is met 2. Actively chase paperwork when DC's/New Connections are completed by an external contractor The result of this focus has shown an improvement from last year – however further focus and changes are required. See below for the actions we will take this year	Aug 2017 Feb 2017	Choose an item.
Preventative actions taken to ensure no further issues will occur	**Completion date**	

Status change to 1 4 (DC Vacant) KCE will work with TLC to ensure they confirm DC's – these will be processed when received KCE will review the final process to ensure that when a site is confirmed DC as part of a final, KCE will update the status as part of the final process	Feb 2018	
Status change to 1 6 (Ready for Decom) Our review found that TLC is notifying KCE late. In each case we checked KCE had updated the registry within 2 days of notification. KCE will work with TLC to ensure that notifications are completed in time to meet timelines.	Feb 2018	
Status change to 1 7 (Remote DC) KCE will review the process of receiving and updating status following confirmation of a remote DC	Nov 2017	
Status change to 1 8 (DC at pole) KCE will focus on ensuring timely update of status change following credit disconnections	Nov 2017	
Status change to 1 12 (New Con in progress) KCE will review the process to ensure that this status is updated at first possible opportunity (Chocolate notification) – this does not appear to be happening in most instances	Nov 2017	
Status change to 2 0 (Active) A number of these changes were due to status check clean-up work. This work is now completed monthly and by September will be done twice a month, this will reduce the number of late changes.	July 2017	
A review will be performed of the new connection process as this process is causing significant late changes.	Nov 2017	
Status Change – Trader All the late trader changes that we investigated were ANZSIC code changes – the majority of these were late. This was a project to clean-up ANZSIC and is the first time this has been done since 2008. KCE has now put a process in place to review ANZSIC codes each month. As a result there should be a substantial reduction in late Trader changes next audit. The EDA report will be used as a detective check each week to check the above preventative actions are	July 2017	

working. Any issues will be followed up to see why the corrective action was not effective.		

4.4 Trader responsibility for an ICP (clause 11.18 of Part 11)

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:

- *11.18(2)(a)- another trader is recorded in the registry as accepting responsibility for the ICP; or*
- *11.18(2)(b)- the ICP is decommissioned in accordance with clause 20 of Schedule 11.1.*

11.18(3)- If an ICP is to be decommissioned, the trader who is responsible for the ICP must:

- *arrange for a final interrogation to take place prior to or upon meter removal*
- *advise the MEP of the decommissioning.*

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

11.18(5) Must not trade at an ICP (excluding UML) unless an MEP is recorded in the registry.

Audit Observation

A trader who is responsible for an ICP (excluding UML) must ensure that a MEP is recorded in the registry and must not trade at an ICP unless a MEP is recorded in the registry. Using the LIS dated 29/04/17 we checked and confirm that a MEP is recorded for all ICPs that KCE is currently responsible for.

The majority of installations marked for decommissioning are on the network of The Line Company. The final read is taken when an installation is decommissioned and these reads are used to finalise the account and submit data to the reconciliation manager. At a later date, The Line Company reads the meter again and dismantles the installation.

Audit Commentary

Compliance confirmed after review of the process presented by KCE.

Audit Outcome

Compliant

4.5 Provision of information to the registry (clause 9 of Schedule 11.1)

Each trader must provide the following information to the registry 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 market administrator (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:
f) 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
g) in all other cases, the daily average kWh of unmetered load at the ICP (clause 9(1)(f)(ii)).
h) the type and capacity of any unmetered load at each ICP (clause 9(1)(g))
i) the status of the ICP, as defined in clauses 12 to 20 (clause 9(1)(j))
j) except if the ICP exists for the purposes of reconciling an embedded network or the ICP has distributor status, the trader must provide the relevant business classification code applicable to the customer (clause 9(1)(k)).
The trader must provide information specified in (a) to (j) above within 5 business days of trading (clause 9(2)).
The trader must provide information specified in 9(1)(k) no later than 20 business days of trading (clause 9(3))

Audit Observation

The LIS file dated 29/4/2017 was examined. Almost all information in the registry is correct except ICP 0001112128WM5C3 – installation category 3 had a submission type of NHH, which is incorrect. It must be reconciled as HHR.

There was an incorrect entry of unmetered load details for 4 security cameras. They are 10 W each operating for 24 hours it means 0.24 kWh per day. The registry entry was “1;12; security camera…” It was corrected before the report was finalised.

Audit Commentary

Non compliance identified. There are minor inaccuracies in the LIS file. These are much better results than last year. There was an incorrect type of reconciliation for 0001112128WM5C3 and incorrect details of unmetered security cameras. The last one was corrected before the report was finalised.

Our assessment of adequacy of controls is Weak because the process in place is not fully effective. The quality of information is registry is very good, only 3 inaccurate information for UML. It is important is to have a correct type of reconciliation for each ICP. If incorrect it effects submission information, not volumes as such but profile.

Audit Outcome

Non compliant

Non-compliance	Description
Audit Ref: 4.5 With: 10 of Schedule 11.1 From: 01/05/16. To: 26/04/17.	Incorrect type of reconciliation for ICP 0001112128WM5C3 and incorrect details for unmetered load for 4 ICPs (security cameras) Potential impact: Medium Actual impact: Low Audit history: Once previously Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**
Low	We assigned Audit Risk ratings as low. For almost all ICPs information are correct. One ICP has incorrect type of reconciliation will not have impact on settlement outcomes but potential impact could increase to medium if not addressed and number of ICPs with such error increase

Actions taken to resolve the issue	Completion date	Remedial action status
As mentioned above, the 4 security camera ICP's were corrected during the audit. ICP 0001112128WM5C3 will be billed as HHR from 1 April	Aug 2017	Choose an item.
Preventative actions taken to ensure no further issues will occur	**Completion date**	
KCE has put in place a daily process to check for discrepancies in Registry data. This daily process checks: • HHR – 4 checks • Profile – 7 checks • ANZSIC codes • Solar • Shared ICPs Discrepancies are resolved as they are found	1/8/17	

4.6 ANZSIC codes [clause 9(k) of Schedule 11.1]

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

Audit Observation

The LIS file dated 28/4/2017 was examined and we noted that all ICPs with a status of Active had ANZSIC code assigned. There were 4 ICPs with the status of "New connection in

progress" with ANZSIC code of T994. It is a standard process to assign T994 to new connections. It is changed after the installation is made Active.

Audit Commentary

Compliance confirmed base on analysis of the LIS file dated 28/4/17. We did not analyse to great depth. We look for ICPs where ANZSIC code = blank or T994, T994000, T99, T999, T999999, T995, T995000, T997, T997000, T998, T998000 and Highest Metering Category >2 with residential ANZSIC code assigned (000000).

Audit Outcome

Compliant

4.7 Changes to unmetered load [clause 9(1)(f) of schedule 11.1]

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

If the settlement type UNM is assigned to the ICP

(i)If the load is profiled through an engineering profile in accordance with profile class 2.1, the code ENG; or

(ii)In all other cases, the daily average unmetered load in kWh at the ICP.

Audit Observation

According to the LIS file dated 28/4/17, KCE traded 22 ICPs. 12 ICPs (street lights) had KSL profile assigned and 10 of them were standard unmetered load. All of them had daily unmetered load kWh recorded in the registry.

Audit Commentary

Compliance confirmed based on analysis of the LIS file dated 28/4/17.

Audit Outcome

Compliant

4.8 Management of "active" status [clause 17 of Schedule 11.1]

Before an ICP is given the "active" status, the trader must ensure that:
• 17(2)(a)- The ICP has only 1 customer, embedded generator, or direct purchaser

• 17(2)(b)- The electricity consumed is quantified by a metering installation or a method of calculation approved by the Authority.

Audit Observation

We confirm there is only one customer per ICP. All installations, except unmetered installations, have a MEP assigned in the registry and fully certified meters installed to measure consumption which is later on submitted to the reconciliation manager. The ICP status is updated to ACTIVE, as required, as an installation is connected to the network and energised. The date of initial energisation for new installations is sourced from a MEP or an inspector authorised to electrically connect.

Audit Commentary

Compliance is confirmed based on analysis of the LIS file dated 28/4/16 and observation that Gentrack only allows one customer per ICP.

Audit Outcome

Compliant

4.9 Management of "inactive" status [clause 19 of Schedule 11.1]

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

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

Audit Observation

When a customer moves out, a site is de-energised and a meter is read and recorded in Gentrack. The Line Company pulls the pole fuse or pulls the fuse from the pillar box. The ICP's status is changed to "Inactive-deenergised at pole fuse" or "Inactive-vacant" in the registry. In the last audit we describe a process of "flicking" a main switch in a meter box as a way of disconnecting, this process is not used anymore because it was unreliable.

An ICP's status is changed to "Inactive-ready for decommissioning" after The Line Company (TLC) sends through a meter sheet acknowledging that there is no metering, but TLC will not update the site to decommissioned on the registry until the customer has signed the paper work for a total dismantle. This process is probably caused by the fact that TLC bills customers for line charges separately.

Inactive ICPs are excluded from the Meter Frequency Report and from reconciliation files.

Audit Commentary

Compliance was assessed by discussions with KCE about the way in which an installation is made inactive. The most common process used is to pull a pole fuse or a fuse from a pillar box. It is done by the Line Company. We reviewed paper work for 5 ICPs to show communication with TLC. When notification is received the ICP status is changed from Active to De-energised. KCE does not use remote disconnections functionality of smart meters.

Audit Outcome

Compliant

4.10 ICP at new or ready status for 24 months [clause 15 of Schedule 11.1]

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

We discussed this with KCE. As far as they are aware, they do not have ICPs for which they have been a proposed trader for longer than 24 months. They do not have a process documented to deal with such an enquiry. KCE have another issue in that it takes a long time to have an ICP issued for a new connection by The Line Company.

Audit Commentary

We discussed it with KCE. As far as they are aware, they do not have ICPs for which they have been a proposed trader for longer than 24 months.

Audit Outcome

Compliant

4.11 Change of MEP [clause 10.22(1)(a) of Part 10]

If the MEP for an ICP, which is not also an NSP changes, the trader must notify the registry of the gaining MEP in accordance with part 11.

Audit Observation

It is company policy not to change a MEP when an ICP is gained. The LIS file was checked and we confirm that all ICPs, except unmetered load, have a MEP assigned. The majority of ICPs traded by KCE are metered and the MEP is FCLM. The is a very small number of unmetered load connections.

Audit Commentary

Audit Outcome

Compliant

5. Maintenance of unmetered load

5.1 Maintaining shared unmetered load (clause 11.14 of Part 11)

The trader must adhere to the process for maintaining shared unmetered load as outlined in clause 11.14:
11.14(2) - The distributor must notify 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 notify 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 notify the registry 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 notify 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 notify the distributor of the change. The amount of electricity attributable to that ICP becomes UFE.

Audit Observation

KCE does not trade any ICP which has shared unmetered load attached to it.

Audit Commentary

KCE does not trade any ICP which has shared unmetered load attached to it.

Audit Outcome

Not applicable

5.2 Unmetered load threshold [clause 10.14(2)(b) of Part 10]

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

KCE does not have ICPs where annual usage is in excess 6,000 kWh.

Audit Commentary

KCE does not have ICPs, where annual usage is in excess 6,000 kWh.

Audit Outcome

Not applicable

5.3 Unmetered load threshold exceeded [clause 10.14(5)) of Part 10]

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

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

Audit Observation

KCE does not have ICPs which exceed unmetered load limit.

Audit Commentary

KCE does not have ICPs which exceed unmetered load limit.

Audit Outcome

Not applicable

5.4 Distributed unmetered load (clause 11 of Schedule 15.3 & clause 15.37B of Part 15)

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

Ruapehu Street lights database was audited by Veritek on 15 March 2017. Waikato District Council street light has not been audited by the time this audit was finalised. Audit is due by 1 June 2018

Audit Commentary

Ruapehu District Council Distributed Unmetered Load were audited on 15 March 2017 in agreement with a new audit regime.

Audit Outcome

Compliant

6. Gathering raw meter data

6.1 Electricity conveyed & notification by embedded generators [clause 10.13 & 10.24 of Part 10 and 15.13 of Part 15]

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 1 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

King Country Energy uses the quantity of electricity measured by a metering installation, which is provided by their own meter readers. No subtraction is used to determine submission information for the purpose of Part 15. At the time of audit KCE had 14 installations, where solar panels were installed. 12 installations had export/import meters installed, 2 ICP not (0053158640WM725 and 0010129661WMCCB). King Country Energy notified the reconciliation manager that both customers chosen not to have an import/export meters installed. They do not receive any compensation for generation. Profile used for submissions was RPS PV1.

KCE traders 6 installation (fresh water), which are reconciled by EMS using HHR profile.

Audit Commentary

Compliance is confirmed based on analysis the LIS file for the period of 1/5/16 to 26/4/17 and correspondence provided by KCE. All installations reconciled profile HHR (embedded generation) are reconciled as HHR. The EMS audit report stated that no subtraction method is used to derive submission information.

Audit Outcome

Complaint

6.2 Responsibility for metering GIP [clause 10.26(6)(7)(8) of Part 10]

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 3 months for the grid owner to review and comment on the design
- respond within 3 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 Outcome

Not applicable

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

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

King Country Energy uses RPS, HHR, and KSL providing submission data to the reconciliation manager. None of these profiles required a control device.

Audit Commentary

King Country Energy uses RPS, HHR, and KSL providing submission data to the reconciliation manager. None of these profile required control device. KCE understands the intent of these clauses and will act accordingly when a situation arises. Compliance confirmed.

Audit Outcome

Compliant

6.4 Reporting of defective metering installations [clause 10.43(2)(3) of Part 10]

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

When meter readings are imported into Gentrack, they are thoroughly validated. We "shadowed" importing data into Gentrack during the audit in Taumarunui. Any "suspicious" readings are referred first to meter readers asking for confirmation then to a MEP responsible for an installation. KCE sends a Maintenance form asking for a site visit.

Audit Commentary

Compliance is confirmed based on process review and review of all documents related to ICP 0000024641WE50C (2 meters). The billing team reported that both meters stopped recording consumption at different times. After a site visit meters were replaced on 22/9/16.

Audit Outcome

Compliant

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

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

2(2) - The reconciliation participant must collect raw meter data used to determine volume information from the services interface or the metering installation or from the MEP.

2(3) - The reconciliation participant must ensure the interrogation cycle is such that is does not exceed the maximum interrogation cycle 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

All information used to determine volume information is either collected by King Country Energy employees or its subcontractors (around 16,000 ICPs) or its agents EMS (36), DataCol (1 ICP) or MEPs (AMS 656 and Metrix 44). The King Country Energy's subcontractors use the same equipment and process for meter reading as the company's employees

Audit Commentary

Compliance confirmed based on a review of the EMS audit report and the fact that some NHH readings are provided by AMS and Metrix.

Audit Outcome

Compliant

6.6 Derivation of meter readings [clause 3(1) and 3(2) of Schedule 15.2]

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.

Audit Observation

NHH readings are completed by staff members and contractors of King Country Energy on a monthly basis, for urban areas. Every two months, for rural areas. Con-X/Dialog run by WELLS provides hand-held devices and the management of the process of setting up meter walks in reading devices. Once readings are completed Con-X/Dialog manages the process of transferring data from the hand-held to their platform, from which it is pulled daily by the King Country Energy's operator and saved in a secured directory

Customer reads are also accepted and they are flagged (CR) in Gentrack. The customer reads are accepted over the phone, recorded on the card or customers send a photo of their meters showing the reading and meter serial number by email. Each customer read entered into Gentrack goes through a validation process which validates this read, against reads already stored in the database. Customer reads are not validated against customers reads.
The reconciliation files are created in the KEGS database to which all reads are exported from Gentrack. All reads are again validated. King Country Energy decided that customer reads are not treated as actual reads for reconciliation purposes.

Audit Commentary

During the audit we observed the import of meter readings and validation. At the end of each month an extract of Gentrack data is exported to the KEGS database. Compliance confirmed.

Audit Outcome

Compliant

6.7 NHH metering information (clause 5 of Schedule 15.2)

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

All NHH meter register readings are collected by King Country Energy meter readers and subcontractors. Meter readers are instructed to pass on to the office, any observations which could indicate signs of tampering, damage or if seals are broken.

Audit Commentary

Each meters reader goes through rigid training. They use a hand held to record meter readings. If they notice any tampering, seal broken, unsafe situation, it is recorded in a handheld. Any notes recorded are transferred to the office and acted upon. Compliance confirmed.

Audit Outcome

Compliant

6.8 NHH metering reading application (clause 6 of Schedule 15.2)

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

Gentrack records meter readings in real time and these readings are used for billing. The KEGS database "shifts" meter readings to the next day when applicable. It was checked during testing scenarios described in other section of this report.

Audit Commentary

Compliance confirmed based on a review of readings in Gentrack and results of test scenarios (HE/FE)

Audit Outcome

Compliant

6.9 Interrogate meter once [clause 7(1)(2) of Schedule 15.2]

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

King Country Energy appointed a Meter Reader Team Leader, whose sole responsibility it is to look after meter readers, creating schedule of meter walks, assuring the quality of reads. Since the new appointment the success of getting meter reads has increased significantly, which has a flow on effect on billing and reconciliation. KCE has strict processes in place to monitor any no-reads, which are resolved promptly if possible. There are no ICPs which have not been read at least once during their period of supply.

King Country Energy implemented a reporting system, Operational Score Card, run weekly which tracks any ICPs not read for the last 4,8, 10, and 12 months. It was confirmed that each

site is read during their period of supply even though some of these sites are very challenging and costly to read.

Audit Commentary

Compliance confirmed based on the review of the Operation Score card, which tracks, on weekly basis, the number of ICPs which are not read. It is excellent tool to monitor compliance.

Audit Outcome

Compliant

6.10 Non half-hour meters interrogated annually [clause 8(1)(2) of Schedule 15.2]

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. This report must be submitted no later than 20 BD 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 8(1).

Audit Observation

King Country Energy has supplied a report (April 2017) that indicates their degree of compliance with this clause.

NSP	Number of ICPs	ICPs not interrogated (12 Months)	Percentage interrogated [%]	Target [%]
OKN0111	127	1	99.2%	100%

The exceptional circumstances sites were excluded from the report which is submitted to the Market Administrator on a monthly basis.

Audit Commentary

King Country Energy achieved excellent compliance with this clause. We recorded non compliance because of 1 ICP. Last year audit identified 7 NSPs for which KCE did not meet compliance.

From our observation KCE has very good controls in place to monitor compliance. As previously mentioned KCE uses the Operation Score card, to monitor meter readings on weekly basis. We determined control as strength of controls as Strong. The results speak for themselves. We class them as detective controls. As soon as targets are not reached, appropriate action is implemented.

Audit Outcome

Non compliant

Non-compliance	Description		
Audit Ref: 6.10 With: 8(1) of Schedule 15.2 From: 01/05/16. To: 26/04/17.	For OKN0111 1 ICP was not read within 12 months Potential impact: Low Actual impact: None Audit history: Twice previously Controls: Strong Breach risk rating: 1		
Audit risk rating	**Rationale for audit risk rating**		
Low	KCE has excellent handle on meter reading, full compliance achieved except 1 ICP connected to OKN0111.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**
ICP 0062020160WM783 was identified as unread on the 2/3/17 and resolved on the 20/4/17 DA run		20/04/17	Choose an item.
Preventative actions taken to ensure no further issues will occur		**Completion date**	
KCE has preventative controls in place via the Customer Service and DA Scorecards. These score cards give us the information to alert us to ICPs that are approaching 12 months unread. Action is taken to obtain a read well ahead of the 12 month timeframe.		n/a	

6.11 NHH meters 90% rate [clause 9(1)(2) of Schedule 15.2]

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

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

King Country Energy has supplied a report (April 2017) that indicates their degree of compliance with this clause.

NSP	Number of ICPs	ICPs not interrogated (4 Months)	Percentage interrogated [%]	Target [%]
ALB0331	1	1	0%	90.0%
HOB1101	1	1	0%	90.0%
PN0331	1	1	0%	90.0%

The exceptional circumstances sites were excluded from the report which is submitted to the Market Administrator every month.

Audit Commentary

King Country Energy achieved excellent compliance with this clause. We recorded non compliance because of 3 ICPs. In each case it was a single ICP connected to a NSP, it is the most difficult situation to reach 90% target.

From our observation KCE has very good controls in place to monitor compliance. We asses them as Strong. The results speak for themselves.

Audit Outcome

Non compliant

Non-compliance	Description
Audit Ref: 6.11 With: 9(1) of Schedule 15.2 From: 01/05/16. To: 26/04/17.	For 3 NSPs target of 90% was not achieved Potential impact: Low Actual impact: None Audit history: Twice previously Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	KCE has excellent handle on meter reading, full compliance achieved except 1 ICP connected to OKN0111.

Actions taken to resolve the issue	Completion date	Remedial action status
Overall KCE is happy with the result this audit. The preventative controls in place via the Customer Service and DA Scorecard are producing good results. No action to be taken to correct past events as it is not possible to correct the files that have been submitted for the 4 month submissions		Choose an item.
Preventative actions taken to ensure no further issues will occur	**Completion date**	
KCE has implemented a new control that will be performed weekly. This control is an addition to our existing scorecards checks. The additional check is to target NSP's that have less than 10 ICPs – these will be followed up if they have not had a read within 3 months.	14/8/17	

6.12 NHH meter interrogation log (clause 10 of Schedule 15.2)

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

- *the means to establish the identity of the individual meter reader*
- *the ICP identifier of the ICP, and the meter and register identification*
- *the method being used for the interrogation and the device ID of equipment being used for interrogation of the meter*
- *the date and time of the meter interrogation.*

Audit Observation

Meter readers record register reading in hand helds. KCE provided metering files for review.

Audit Commentary

Compliance confirmed based on a review of files from hand helds used by KCE's meter readers.

Audit Outcome

Complaint

6.13 HHR data collection [clause 11(1) of Schedule 15.2]

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

EMS collects data electronically on behalf of KCE. This year's audit reports for EMS are attached as 16.

Audit Commentary

Compliance confirmed based on review of the EMS audit report.

Audit Outcome

Compliant

6.14 HHR interrogation data requirements [clause 11(2) of Schedule 15.2]

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

EMS collects data electronically on behalf of KCE. This year's audit reports for EMS are attached as 16.

Audit Commentary

Compliance confirmed based on a review of the EMS audit report.

Audit Outcome

Compliant

6.15 HHR interrogation log requirements [clause 11(3) of Schedule 15.2]

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

EMS collects data electronically on behalf of KCE. This year's audit reports for EMS are attached as 16.

Audit Commentary

Compliance confirmed based on a review of the EMS audit report.

Audit Outcome

Compliant

7. Storing raw metering data

7.1 Trading period duration (clause 13 of Schedule 15.2)

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

Audit Observation

EMS collects data electronically on behalf of KCE. This year's audit reports for EMS are attached as 16.

Audit Commentary

Compliance confirmed based on a review of the EMS audit report.

Audit Outcome

Compliant

7.2 Archiving and storage of raw meter data [clause 18 of Schedule 15.2]

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

KCE employs its own meter readers. They read meters register and data is recorded by KCE's meter readers on handheld devices and is transferred to the Con-X platform wirelessly. Then

data is recorded in an SQL database, which is backed up according to a strict regime. All incoming readings are archived by King Country Energy, by a continuous system using off-site storage with daily updates of all data stored by the company.

AMS and Metrix provides daily register data for NHH meters. Raw data is stored by AMS and Metrix.

Audit Commentary

Strictly speaking KCE does not hold raw meter data. Metrix and AMS store raw meter data for electronically interrogated meters.

Compliance is confirmed based on the fact that King Country Energy archives NHH meter reads performed by their meter readers, by a continuous system using off-site storage with daily updates of all data stored by the company

Audit Outcome

Compliant

7.3 Non metering information collected/archived [clause 21(5) Schedule 15.2]

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
King Country Energy submits data using HHR, RPS, and KSL profiles only. EMS is responsible for reading loggers which records on/off time for streetlights.

Audit Commentary
Compliance is based on the fact that KCE is uses ESM as their agent to read loggers used to determine the profile for KSL.

Audit Outcome

Compliant

8. Creation and management (including validating, estimating, storing, correcting and archiving) of volume information

8.1 Correction of NHH meter readings [clause 19(1) of Schedule 15.2]

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

Every time metering data is imported into Gentrack, Gentrack goes through a validation process. If an original meter reading cannot be confirmed by another reading then an estimated reading created by Gentrack is used for billing, this reading is not used for reconciliation purposes. Each time a reading is changed manually, Gentrack records the time and initials of the operator who instigates the change. Meter readings as such are not changed, only a flag beside it. When a meter reading is considered inaccurate, the flag against this read is changed from “Actual” to “Misread”. It is a clear indication.

There are other flags used in Gentrack to describe meter readings such as AE “Automated Estimate”, CR “Customer Read”, GE “Gained Estimate”, GR “Gained Read”, SP “Special Read”, PE “Permanent Estimate”.

Audit Commentary

As already described in previous sections, KCE adopted a strict regime of meter readings for how to achieve the highest rate of successful reads. During the audit we were shown the process for if a meter read needs to be changed for some reason. The “incorrect” read is always clearly marked as “Misread”. Compliance confirmed.

Audit Outcome

Compliant

8.2 Correction of HHR metering information [clause 19(2) of Schedule 15.2]

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

This function for half hour meters is performed by EMS (agent). Each time a correction of HHR data is performed, KCE is notified.

Audit Commentary

Compliance is confirmed based on a review of this year's EMS audit report, which is attached as 16.

Audit Outcome

Compliant

8.3 Error and loss compensation arrangements [clause 19(3) of Schedule 15.2]

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

This function for half hour meters is performed by EMS (agent).

Audit Commentary

Compliance is confirmed based on a review of this year's EMS audit report, which is attached as 16. The report states that no error and loss compensation is required for any ICP.

Audit Outcome

Compliant

8.4 Correction of HHR and NHH raw meter data [clause 22(1) and (2) of Schedule 15.2]

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

As described previously, raw meter data provided by AMS or Metrix cannot be altered because KCE does not have access to it.

The data from Metrix and AMS and meter readers is imported into Gentrack and could be altered after the validation routine is finalised and the validation outcome is reviewed. When Gentrack has completed the data validation it creates a report outlining which reads do not meet the criteria. The report is assessed by an operator. When data is changed in Gentrack the information is recorded as required. When a read needs to be changed to an estimate (ME - Manual Estimate), a Gentrack operator cannot change it without entering a note (reason). This auto-memo note in Gentrack is accessible on the main screen as a future reference. When data is altered the operator notes the old meter reading or difference between old and new meter reading.

KCE does not have access to raw meter data for HHR ICPs. This function is performed, if need arises by EMS.

Audit Commentary

During the audit we watched the process of data validation of reads imported from a few meter walks. Some readings were accepted but some of them had to be marked as misreads because they did not pass validation. Compliance is confirmed based on a “shadowing’ of validation activities.

Audit Outcome

Compliant

9. Estimate and validation of volume information

9.1 Identification of readings [clause 3(3) of Schedule 15.2]

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

All estimated readings and permanent estimates are clearly marked by Gentrack using flags of ME, GE, AE, PE as described in previous sections. The flag "E" (estimate) or "A" (actual) attached to meter readings is carried to the CS file and sent to the gaining trader.

Audit Commentary

We conducted a sampling of CS files, as described in other sections. We confirm compliance based of observation that the switch meter reads were marked "A" or "E".

Audit Outcome

Compliant

9.2 Derivation of volume information [clause 3(4) of Schedule 15.2]

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

This function for half hour meters is performed by EMS (agent). In a situation when volume data must be estimated, EMS sends KCE a file and asks for approval.

Non-AMI NHH meters are read on a monthly or bi-monthly basis, depending on whether it is in a rural area or close to town. An estimated reading is only used when a validated meter reading is not available. Estimated reading is calculated by Gentrack based on a previous consumption pattern. Meter reads provided by AMS and Metrix for sites where AMI meters are installed are Actual.

Audit Commentary

Compliance confirmed. EMS agent report and review of process of exporting data from Gentrack to the KEGS database. KEGS uses only validated meter readings or estimated and permanent estimated. It is hardcoded in the software, which readings are used for reconciliation file creation.

Audit Outcome

Compliant

9.3 Meter data used to derive volume information [clause 3(5) of Schedule 15.2]

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

This function for half hour meters is performed by EMS (agent). NHH reads are always whole numbers.

Audit Commentary

Compliance is based on a review of the EMS audit report.

Audit Outcome

Compliant

9.4 Half hour estimates (clause 15 of Schedule 15.2)

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

This function for half hour meters is performed by EMS (agent). KCE is always notified if estimation has to be done.

Audit Commentary

Compliance is based on a review of the EMS audit report.

Audit Outcome

Compliant

9.5 NHH meter metering information data validation (clause 16 of Schedule 15.2)

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

- *16(2)(a)-confirmation that the meter reading or estimated reading relates to the correct ICP, meter, and register*
- *16(2)(b)-checks for invalid dates and times*
- *16(2)(c)-confirmation that the meter reading or estimated reading lies within an acceptable range compared with the expected pattern, previous pattern, or trend*
- *16(2)(d)-confirmation that there is no obvious corruption of the data, including unexpected 0 values.*

Audit Observation

NHH register reads received from MEPs, agents and meter readers are validated by the following two-step process.

1. Read validation is at the source, the handheld device performs on site validation to ensure that the reading is within the expected high-low parameters. Readings outside these parameters have to be re-entered and acknowledged by a meter reader.
2. Validation based on the installations history are performed. Gentrack performs extended validations which are evaluated and the exceptional report is created at the end of the import session and it is analysed by an experienced staff member who decides if any further action needs to be taken. KCE understands is the importance of correct meter readings validation. Each validation is done by two people. One of them is a “trainer”, the second one is “apprentice”. There is a schedule of validation training to assure that all KCE’s staff are well train in this area and can perform their work to a high standard.

Audit Commentary

Compliance is confirmed based on being present during the validation of 8 meter walks. The review of the Validation Training Schedule emphasised the quality of training and the company’s dedication to quality information gathering.

Audit Outcome

Compliant

9.6 Electronic meter readings and estimated readings (clause 17 of Schedule 15.2)

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

This function for half-hour meters is performed by EMS (agent).

Audit Commentary

Compliance is based on a review of the EMS audit report.

Audit Outcome

Compliant

10. Provision of submission information for reconciliation

10.1 Buying and selling notifications (clause 15.3 of Part 15)

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

The LIS file and reconciliation files were analysed and we confirm that the profile codes used by King Country Energy are RPS, KSL, and HHR only. KSL is a new profile for King Country Energy. The profile was registered with the Market Administrator as a class 2.3 profile for unmetered streetlight loads. The profile shape is produced using a recertified data storage device that monitors the streetlight switching that is controlled by a distributor's ripple control system. The shape applies to all streetlight ICPs that are controlled by the same control signal. The profile came into effect on 1st January 2017.

Audit Commentary

Compliance is confirmed based on review of the LIS file dated 28/4/17. KCE also provided the KSL profile application and approval of the new profile.

Audit Outcome

Compliant

10.2 Calculation of ICP days (clause 15.6 of Part 15)

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

We confirmed that King Country submitted ICP days file (AV-100) every month for the previous month and relevant revisions. For the purpose of this audit, KCE provided all RM files submitted to the RM for the month of March and April'17.

The process of the calculation of ICP days in the KEGS database was examined using scenarios described in section 11.10. We also analysed GR-100 files provided by the reconciliation manager to analyse discrepancies, if any, between ICP days calculated by the registry and ICPs days calculated by the KEGS dbase.

Before each submission cycle of reconciliation files, the most recent LIS file is downloaded from the registry and loaded into the KEGS dbase. Once it is done a report is run which identifies differences between information stored in KEGS and the registry, as was described in other sections of this report. Data is uploaded regularly from Gentrack to KEGS.

As was described in last years audit report, there were some issues around how ICPs were calculated, which resulted in small but consistent discrepancies of ICPs days between the registry and the KEGS database. The code in the KEGS database was reviewed and corrected. The table below shows a comparison between the registry ICP days and ICP days submitted by King Country Energy going back to Aug'15.

Month	Ri	R1	R3	R7	R14
April'15	0.53%	0.52%	0.68%	0.84%	0.18%
May'15	0.49%	0.66%	0.05%	0.73%	0.18%
June'15	0.52%	0.52%	0.57%	0.36%	0.13%
July'15	0.37%	0.33%	0.45%	0.33%	-0.11%
Aug'15	0.38%	0.42%	0.46%	0.33%	0.02%
Sept'15	0.47%	0.46%	0.42%	0.38%	0.03%
Oct'15	0.43%	0.45%	0.39%	0.42%	0.02%
Nov'15	0.39%	0.35%	0.35%	0.25%	0.02%
Dec'15	0.45%	0.37%	0.37%	0.24%	0.00%
Jan'16	0.36%	0.37%	0.36%	0.18%	0.04%
Feb'16	0.42%	0.39%	0.18%	0.09%	0.27%
Mar'16	0.45%	0.42%	0.22%	0.03%	
Apr'16	0.44%	0.19%	0.23%	0.02%	
May'16	0.15%	0.20%	0.13%	0.01%	
June'16	0.30%	0.28%	-0.12%	0.00%	
July'16	0.21%	0.17%	0.22%	0.22%	
Aug'16	-0.13%	-0.11%	0.15%	0.15%	
Sept'16	-0.14%	0.00%	0.00%	0.06%	
Oct'16	-0.01%	0.00%	-0.01%		
Nov'16	-0.03%	0.00%	0.00%		
Dec'16	-0.02%	-0.02%	0.00%		
Jan'17	-0.02%	0.04%	0.03%		
Feb'17	0.07%	0.15%			
Mar'17	0.06%	0.04%			
Apr'17	-0.04%	0.04%			

Audit Commentary

We confirm compliance with this clause. ICP days files is provided to the reconciliation manager. KCE provided evidence for 3 months. EMS provides a set of data which is sent to the RM on their behalf.

It is noticeable that the discrepancies between the ICPs days calculated by the registry and KCE's system became much smaller in the last 12 months as presented in the above table. It is as a result of close monitoring of submission files. The implementation of the DA operation score card is of great assistance.

Audit Outcome

Compliant

10.3 Electricity supplied information provision to the reconciliation manager (clause 15.7 of Part 15)

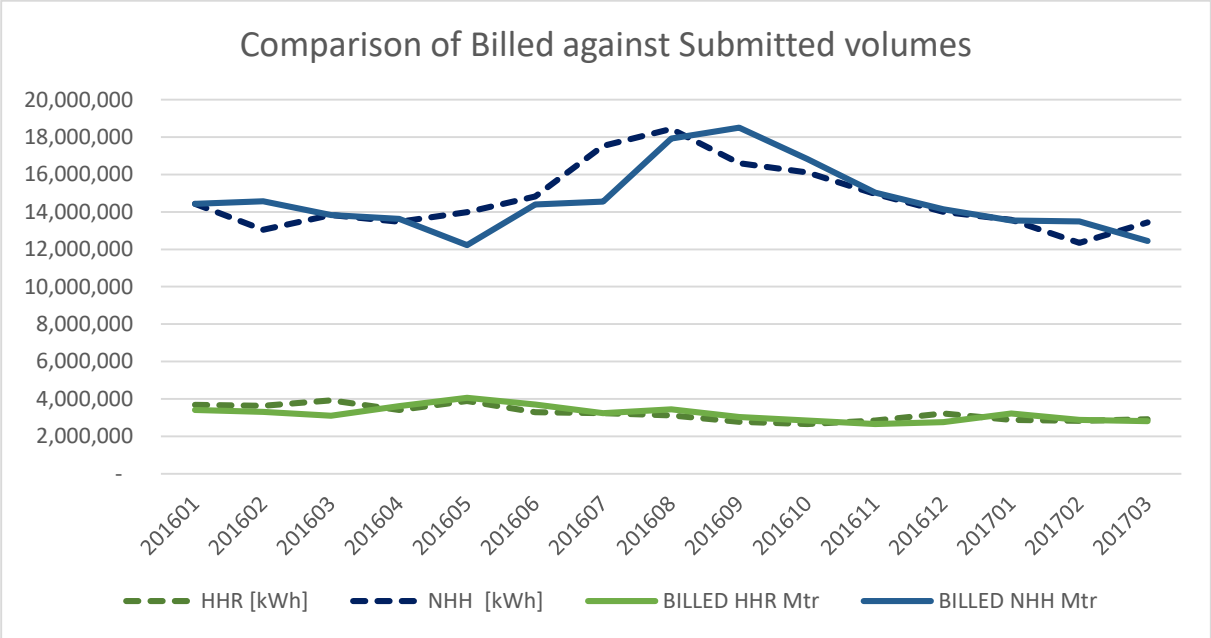
A retailer must deliver to the reconciliation manager its total monthly quantity of electricity supplied for each NSP, aggregated by invoice month, for which it has provided submission information to the reconciliation manager, including revised submission information for that period as non- loss adjusted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

It was demonstrated by King Country Energy, that it provides its total monthly quantity of electricity supplied for each NSP, aggregated by invoice months, to the reconciliation manager every month. The data is extracted from Gentrack and loaded into KEGS from which information is submitted to the reconciliation manager as AV-120 file. Revised billed volumes are sent every month for a relevant period.

Below is shown a comparison between submission information and electricity supplied information over a 12-month period.

Month	HHR Volume Submitted [kWh]	NHH Volume Submitted [kWh]	HHR Volume Billed [kWh]	NHH Volume Billed [kWh]
Jan-16	3,680,008	14,438,232	3,413,195	14,434,122
Feb-16	3,624,461	13,052,987	3,301,035	14,574,136
Mar-16	3,912,651	13,838,730	3,104,362	13,837,098
Apr-16	3,406,719	13,477,117	3,610,846	13,628,755
May-16	3,889,066	13,993,133	4,057,583	12,223,212
June-16	3,288,542	14,824,549	3,695,829	14,404,468
July-16	3,238,987	17,534,708	3,235,434	14,558,043
Aug-16	3,109,555	18,432,344	3,445,445	17,922,030
Sept-16	2,770,187	16,598,166	3,036,618	18,511,223
Oct-16	2,652,235	16,101,062	2,846,620	16,833,647
Nov-16	2,847,935	14,953,549	2,649,622	15,024,316
Dec-16	3,214,494	14,008,780	2,757,456	14,140,400
Jan-17	2,874,046	13,577,140	3,223,266	13,548,634
Feb-17	2,818,923	12,351,272	2,870,325	13,493,404
Mar-17	2,906,822	13,430,440	2,816,558	12,445,547
Total	48,234,631	220,612,209	48,064,194	219,579,035



The difference between billing and submission information is 0.45% over a 12-month period.

Audit Commentary

We confirm compliance. We went through files submitted by KCE and files provided by the reconciliation manager (GR files) to assess compliance. The volumes contained in AV120 are billing volumes per invoice month not submission volumes.

Audit Outcome

Complaint

10.4 HHR Aggregates information provision to the reconciliation manager (clause 15.8 of Part 15)

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

At the time of this audit KCE had 36 HHR ICPs. EMS acts as King Country Energy's agent for half-hour data. Their function is to collect the half-hour data and submit it to the reconciliation manager. The latest EMS audit report is attached at the end of this document.

Clause 15.8 states that the aggregates file should contain electricity supplied information rather than submission information and electricity supplied information. This differs from the Reconciliation Manager Functional Specification. In Section 3 of this document, HHR Aggregates information is described as: "…HHR submission information that is aggregated per ICP for the whole month. From our point of view submitting in AV-140 quantity of electricity supplied instead submission volume will be of little value to validate AV-090. It was discussed with EA and it was confirmed that they are aware of this and it is on the list to make changes to the Code.

The EMS audit report recommends its clients to check the GR-090 file each month (report showing missing HHR ICPs). It is a good check to check if the information exchange between these companies is satisfactory and if EMS meets their obligation as an agent. Up to now KCE was not checking this file. After discussion it was decided that checking the GR-090 file will be added to the "KCE Score Card" to be checked after the file is received from the reconciliation manager.

We analysed the GR-090 files for 12 months. The summary is shown below. There is definitely a significant improvement in comparison to last years findings. Using GR-090 as a supporting tool to assess compliance does not always give reliable information because if incorrect information is corrected by submitting consecutive revisions of HHRAGGR, GR-090 still carries original mismatches.

Month	Initial	
	A flag	R flag
April'16	1	2
May'16	0	0
June'16	1	6
July'16	1	5
Aug'16	2	0
Sept'16	1	0
Oct'16	0	0
Nov'16	0	0
Dec'16	0	1
Jan'17	0	2
Feb'17	0	0
Mar'17	0	0
Apr'17	1	2

Legend:

A flag - ICP missing in registry list

R flag - ICP missing in monthly aggregates

Audit Commentary

After discussion with KCE we pointed out that one of the reasons that there are sometimes discrepancies between the registry information and information used by EMS is the fact that KCE does not have a good process in place to pass information to EMS. EMS is not notified in a timely manner when an ICP switches in or out. KCE has a small number of HHR ICPs and

new customers are not gained or lost very often This makes it much harder to manage. 99.78% of ICPs traded by KCE are NHH.

Compliance confirmed based on a review of the EMS audit report.

Audit Outcome

Compliant

Subject	Section	Recommendation	Description
Notification to EMS	10.4	We recommend to map and review how information about gained and lost HHR ICPs is communicated	KCE is happy with the results from this audit. Following the last audit KCE put in place a checklist process for the HHR submission flag, this change has resulted in compliance. KCE will act on the recommendation and map the gain /loss notification process with EMS.

11. Submission computation

11.1 Daylight Time adjustment (clause 15.36 of Part 15)

The reconciliation participant must provide submission information to the reconciliation manager that is adjusted for NZDT using 1 of the techniques set out in clause 15.36(3) specified by the Authority.

Audit Observation

This function for half hour meters is performed by EMS (agent).

Audit Commentary

Compliance is based on a review of the EMS audit report.

Audit Outcome

Compliant

11.2 Creation of submission information (clause 15.4 of Part 15)

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 function for half hour meters is performed by EMS (agent).

The NHH submission files are created using the KEGS database. The process of the creation of submission information is well documented. The King Country Energy's operator follows the "KCE DA Checklist" every month. One of the sections on the list is the settlement files tick box, tracking that all files, including revisions, are created and checked with File Format Checker, and sent to the Reconciliation Manager. Every month the list is approved and signed off by a senior manager.

There were no instances of files not being submitted or set late.

Audit Commentary

Compliance of the creation of submission for HRR ICPs is based on a review of the EMS audit report.

We walked through the process of the creation of NHH submissions. It is the same process which KCE has been using for a number of years. The KCE database has many internal validations built in to make sure that the calculation of volumes is as accurate as possible.

Audit Outcome

Compliant

11.3 Allocation of submission information (clause 15.5 of Part 15)

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

The process of the creation of submission information is well documented.

Before any reconciliation run, the registry file is imported to the KEGS database. Any discrepancies between Gentrack and the registry are evaluated, as required by clause 11(2) of Schedule 11.1, before reconciliation files are created.

The King Country Energy's operator follows the "KCE DA Checklist" every month. The list requires the confirmation that the latest output from Gentrack, LIS file, and GR-030 was imported. It asks for the checking of the NSP table, contract table. It is a very thorough check. Last year KCE filed a self-breach related to some irregularities in NHH submissions due to missing some contracts stored in the KEGS database. After files are created the operator verifies the output data by viewing in graphical form to check for anomalies. The NSP variances greater than 15% were noted and other tasks were complete. Every month the list is approved, signed off by a senior manager.

There are two ICPs 0010129661WMCCB and 0053158640WM725, which have solar panels installed but meters installed on site do not record Import kWh. King Country Energy provided copies of emails sent to the reconciliation manager saying "As per 15.13 of the Code KCE wish to advise that ICP 0010129661WMCCB and 0053158640WM725 have chosen to install solar generation but have also chosen not to have an import/export meter installed. As such any generation is gifted back to the market. They do not receive any compensation for generation."

We checked the calculation of volumes for ROT0331 and CBG0111 for 2017 and confirm they were accurate.

Audit Commentary

The team responsible for submission files to the reconciliation manager has been using the DA Operation Score card since October'15. It is similar to the Score card used by the billing team. It allows them to track estimated volumes, level of discrepancy between Gentrack and the registry, percentage of variance between initial submission and day13 submission.

We confirm compliance based on a review of documentation, "shadowing "a process.

Audit Outcome

Compliant

11.4 Grid owner volume information (clause 15.9 of Part 15)

This matter is noted as not relevant to this audit.

11.5 Provision of NSP submission information (clause 15.10 of Part 15)

This matter is noted as not relevant to this audit.

11.6 Grid connected generator (clause 15.11 of Part 15)

This matter is noted as not relevant to this audit.

11.7 Accuracy of submitted information (clause 15.12 of Part 15)

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

King Country Energy follows a regime of revisions and when more accurate information is available it is included and submitted to the market. The company always submits revision data for all NSPs which it trades on. The schedule of revisions is part of the process, which is described in the "KCE DA check list". This check list is followed every month and signed off by a senior manager. KCE provided a set of files for the month of March and April'17 including revisions.

Audit Commentary

We confirm compliance based on the process of importing meter readings from Gentrack and the process of the creation of submissions files. The process is very closely monitored.

Audit Outcome

Compliant

11.8 Permanence of volume information for reconciliation (clause 4 of Schedule 15.2)

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

Volume information is created using a validated meter reading, or a permanent estimate is used in place of a validated meter reading, when it is impossible to obtain a validated meter reading. During the audit, we reviewed GR170NHH for all revisions 14 submitted since the last audit. The results are shown below. It is very visible that since KCE has achieved a much higher success of actual reads, better management of PE and difficult sites to read, their compliance with the above clause has changed dramatically for the better. The total number of NSPs traded is around 58. For March'16 there was only one NSP and in Feb'16 100% HE was achieved for all NSP.

The range of HE % is 90.85% up to 99.99%. One exception is MLG0111 for which it was 22.57% for July'15.

Month	Number of NSPs where HE for R14 is below 100%
April'15	13
May'15	13
June'15	13
July'15	11
Aug'15	11
Sept'15	10
Oct'15	7
Nov'15	9
Dec'15	1
Jan'16	1

Feb'16	0
Mar'16	1

Audit Commentary

There is a constant improvement in the level of compliance in this area. There are two factors which contribute greatly to it. The first one is the monitoring of meter reads using the Operational Score Card, the second one is the DA Score card. There are both detective and corrective controls, which become preventive controls. Any deviations from targets are discussed at weekly meetings and addressed.

Our assessment of strength of control is" Strong.

Audit Outcome

Non-compliant

Non-compliance	Description
Audit Ref: 11.8 With: 4 of Schedule 15.2 From: 01/05/16. To: 26/04/17.	Submission for March'16 did not reach target of 100% HE for one NSP. Potential impact: Medium Actual impact: Low Audit history: Twice previously Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	We assigned Audit Risk ratings as low because of strong controls on place. There is negligible impact on settlement outcomes.

Actions taken to resolve the issue	Completion date	Remedial action status
Overall this issue has improved significantly as shown in the results achieved. KCE is enhancing its routine check lists as shown below. The fault for Mar 17 R14 revision was on ICP 0000240740WA460. As this was on R14 submission there is no opportunity to correct this error, note the volume associated with this error is 230 units.	26/7/17	Choose an item.
Preventative actions taken to ensure no further issues will occur	**Completion date**	

Since the audit, KCE now tracks the R14 estimated volume by number of ICPs and total volume. This is a measure to ensure that our checks are going through correctly. In addition KCE has updated its submission check sheet (this is a check sheet that is signed off by the various parties for a submission process run). This checklist now includes signoff to say that estimated volume for an R14 has been checked prior to doing a process run, as opposed to post submission checking. As this is a change to our process we are currently training staff, once this training is complete we expect this to be a robust control.	July 2017	

11.9 Creation of submission information (clause 2 of Schedule 15.3)

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)):
- half hour volume information for the ICP; or
- non half hour volumes information calculated under clauses 4 to 6 (as applicable).
- 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):
- for each ICP, the compensation factor that is recorded in the registry (clause 2(3)(a))
- for each NSP the compensation factor that is recorded in the metering installations most recent certification report. (clause 2(3)(b))

Audit Observation

This function for half hour meters is performed by EMS (agent) and according to this year's audit report, which is attached as 16, it meets the Code requirements.

The process of NHH submission was described in detail in section 11.3.

During the last audit we noted that the information for unmetered load (skate park) for 1 ICP 0001060300WMD10 for March'17 was incorrect due to information in the registry being incorrect. Daily kWh was entered as 351.5 kWh instead 35.1 kWh, therefore the volume was over submitted. The issue was rectified before last years report was finalised.

We checked submission of DUML to the reconciliation manager and we confirm that the calculation is correct. It was also confirmed in the DUML audit report for RDC.

Audit Commentary

Inaccurate information was submitted for 1 UML ICP. They represent small volumes but it shows that the process of screening data for reconciliation submissions could be improved. The process of volume calculations for UML ICPs is based on manual entries in the registry. The KEGS database takes daily kWh from the registry and multiplies by number of days. Volumes for some UML change every month.

Our recommendation is to graph unmetered load every month to validate calculation.

Our assessment of strength of control is "Weak" because the data entry is manual. Calculations as such are correct but there is no final check before submissions of unmetered load.

Audit Outcome

Non compliance

Non-compliance	Description
Audit Ref: 11.9 With: 2 of Schedule 15.3/15.2 From: 01/05/16. To: 26/04/17.	Inaccurate information submitted to 1 UML ICP Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**
Low	We assigned Audit Risk ratings as low because it was only one ICP. The mistake was one-off due to human error. They entered a value of 351.5 kWh instead 35.1 kWh, therefore the volume was over submitted. There is no impact on settlement outcomes.

Actions taken to resolve the issue	Completion date	Remedial action status
KCE is happy with progress in this area since the last audit. The two DUML audits produced excellent results, with both audits resulting in an audit period of 3 years. From this audit there was an error with 1 ICP for a small volume, this error has been corrected and will have been reflected when the month was next submitted	July 2017 (will have been reflected when the month was next submitted)	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As a final check UML data will be graphed prior to submission	Sep 2017	

Recommendation	Description	Audited party comment	Remedial action
Graph UML volume before submission	Inaccurate submission for UML ICP due to human error	As a final check UML data will be graphed prior to submission	As a final check UML data will be graphed prior to submission

11.10 Historical estimate and forwards estimates (clause 3 of Schedule 15.3)

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

To determine compliance of the historical estimate (HE) processes we supplied King Country Energy with a list of scenarios as below. We walked through each scenario and we can confirm compliance. We note that the information shown was from actual instances in each case, and that this exercise also fulfilled the requirements for ascertaining compliance in other areas of this audit.

Test	Scenario	Test Expectation	Result
1	Switch in during the month with estimated switch read, actual read gained in the next month, full profile data available.	Confirm that HE is calculated for the relevant part of the month, even though the switch in read is an estimate, and calculation begins on correct day	Compliant
2	Switch in during the month with actual switch read, actual read gained in the next month, full profile data available.	Confirm that HE is calculated for the relevant part of the month, and calculation begins on correct day	Compliant
3	Status change to active during the month, read gained in the next month, full profile data available	Confirm that HE is calculated for the relevant part of the month	Compliant
4	Switch out on estimate during the month	Confirm that HE is calculated even though the reading is an estimate Confirm that HE calculation ends on the correct day."	Compliant
5	Switch out on actual during the month	Confirm that HE is calculated for the relevant part of the month, and calculation ends on correct day	Compliant
6	Complete month without a read in the month	Read in the previous month and the month after, confirm correct HE for the month	Compliant
7	Complete month with a read in the month	Confirm the two calculations for the month are correct	Compliant
8	GXP Change in the Month	Confirm submission against one GXP for part month then the other GXP for part month, with	Compliant

		correct HE/FE balance on each	
9	Proportion of HE	Confirm the proportion of HE in the AV080 is correct	Compliant
10	Switch in 2 months ago, first actual read gained in current month, profile data not available for current month	Confirm estimation is shown as forward, not historic	Compliant
11	Complete month without a read in the month	Read in the previous month and the month after, confirm correct HE for the month	Compliant
12	Half-hour meter installed during month	If NHH read is added to meter, and site class is 'DEEMED', then estimation should be calculated for HH meter according to the same rules as NHH meter	KCE has no examples of Half-hour meter installed during month on a NHH ICP.
13	Two reads in the same month	Confirm usage between two reads is 'Historic' even if no profile data is available	Compliant
14	FE based on default value	Confirm the default multiplied by correct number of days	Compliant
15	FE based on daily kWh from CS file	Confirm CS value multiplied by correct number of days.	KCE doesn't use the value from the CS file KCE's Gentrack is pre-part 10
16	FE based on historic consumption	Confirm the default multiplied by correct number of days	Compliant
17	ICP days for all HE scenarios above	Confirm ICP days calculations are correct	Compliant
18	No longer any ICPs with a particular combination of GXP, loss cat code etc.	Confirm that this row is "zeroed" in subsequent submissions	Compliant

19	Consumption submitted for a given revision then changed for a subsequent revision.	Consumption submitted for a given revision then changed for a subsequent revision.	Compliant
20	CS read modified by RR	Confirm that consumption is updated to match RR read replacing CS	Compliant
21	GXP change backdated	Read in the previous month and the month after, confirm correct HE for the month	Compliant
22	Two reads in the same month	Confirm usage between two reads is 'Historic' even if no profile data is available	Compliant

Audit Commentary

Compliance confirmed based of review of examples provided for above scenarios.

Audit Outcome

Compliant

11.11 Historical estimates process (clause 4 and 5 of Schedule 15.3)

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 kWhPx.

Audit Observation

KCE uses their own shape files based on historical information for D4 submissions. It is overwritten as soon as GR030 is available.

Audit Commentary

We reviewed the process used by the KEGS database. It creates its own profile based on many years of historic information for each ICP. Once a seasonal adjustment profile is published by the reconciliation manager it is loaded into the KEGS database and used when submitting revised volumes.

Audit Outcome

Compliant

11.12 Forward estimates process (clause 6 of Schedule 15.3)

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

We reviewed the process of forward estimates and we confirm that King Country Energy's forward estimates are based on either historic readings, historic daily average consumption, and ICP average consumption for ICPs for which an historical estimate cannot be calculated due to a lack of actual reads.

We reviewed the reporting in relation to forward estimate accuracy. We chose February 2016 and examined wash up files. We confirm that KCE does not meet the Code requirements of its initial submission information against subsequent revision cycle submission information for 1 balancing area and is more than the percentage of error specified by the Board (+/- 15%) for 1 balancing area.

Balancing area	initial	R1	R3	R7	R14
NORTHLINEG	6,430,913	6,178,267	6,202,633	6,170,559	6,069,593
CENTRALLINEG	2,352,451	2,230,089	2,275,277	2,188,095	2,121,548
TKU0331GENEG	1,320,263	1,254,797	1,212,407	1,204,940	1,191,579
OKN0111LINEG	673,522	633,604	585,750	576,840	555,486

TAUPROTHAWKG	589,644	570,498	568,460	561,745	572,783
NORTHRNUNETG	531,832	514,455	524,812	520,975	526,232
BA5EASTPOCOG	436,992	437,116	442,132	416,401	414,436
TMU0111WAIPG	383,977	370,669	367,144	369,417	356,461
AUCKLNDVECTG	369,484	362,498	354,343	312,644	319,206
CBG0111WAIPG	291,007	301,852	304,506	305,173	295,592
PEN0331SHPKG	195,868	192,789	204,316	178,645	178,353
WAIKATOWAIKG	124,576	124,875	126,352	124,045	127,101

Balancing area	R1/initial	R3/initial	R7/initial	R14/initial
NORTHLINEG	-3.9%	-3.5%	-4.0%	-5.6%
CENTRALLINEG	-5.2%	-3.3%	-7.0%	-9.8%
TKU0331GENEG	-5.0%	-8.2%	-8.7%	-9.7%
OKN0111LINEG	-5.9%	-13.0%	-14.4%	**-17.5%**
TAUPROTHAWKG	-3.2%	-3.6%	-4.7%	-2.9%
NORTHRNUNETG	-3.3%	-1.3%	-2.0%	-1.1%
BA5EASTPOCOG	0.0%	1.2%	-4.7%	-5.2%
TMU0111WAIPG	-3.5%	-4.4%	-3.8%	-7.2%
AUCKLNDVECTG	-1.9%	-4.1%	-15.4%	-13.6%
CBG0111WAIPG	3.7%	4.6%	4.9%	1.6%
PEN0331SHPKG	-1.6%	4.3%	-8.8%	-8.9%
WAIKATOWAIKG	0.2%	1.4%	-0.4%	2.0%

Audit Commentary

For one balancing area the percentage is 17.5%. This was discussed with King Country Energy. The dynamic of the area has changed. Originally usage was only high in winter time but now there are many activities in the summer time. It is difficult to estimate usage.

Our assessment of control strength is Strong because of the DA Score Card monitoring process.

Audit Outcome

Non compliance identified.

Non-compliance	Description
Audit Ref: 11.12 With: 6 of Schedule 15.3 From: 01/05/16. To: 26/04/17.	Forward estimates do not meet +/- 15% threshold for 1 balancing area Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	We assigned Audit Risk ratings as low because There would negligible impact on settlement outcomes.

Actions taken to resolve the issue	Completion date	Remedial action status
KCE reports into the RM as required when submissions highlight a variation. However we have observed that there is an error in our process. Checks were done against prior submissions (eg R14 checked against R7) and not against the initial. Process notes and training has been completed to do this assessment accurately. As the particular submission highlighted in the audit accumulated to 17.5% variation in R14, the big jump was in R3 where it was 13%. The NSP in particular is OKN0111LINE where the Turoa ski field is situated, the majority of the load is subject to seasonal variation which makes forecasting difficult.	26/7/17	Choose an item.
Preventative actions taken to ensure no further issues will occur	**Completion date**	
As highlighted by the auditor KCE already has good controls. In areas where there is high seasonal load, there is little we can do to prevent subsequent submissions varying significantly from the initial submission.	26/7/17	

11.13 Compulsory meter reading after profile change (clause 7 of Schedule 15.3)

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

King Country Energy is aware of the Code requirements. At the time of audit only HHR, KSL, and RPS profiles were used and it was confirmed that an ICPs meter does not change from RPS to HHR and vice versa for its customers.

Audit Commentary

At the time of audit only HHR, KSL, and RPS profiles were used and it was confirmed that there are plans to use other profiles.

Audit Outcome

Compliant

12. Submission format and timing

12.1 Provision of submission information to the RM (clause 8 of Schedule 15.3)

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

We examined files for the months of December'16, Jan'17, and April'17 provided to the reconciliation manager and confirmed that King Country Energy and its agent EMS provide submission information aggregated to the following level:

- NSP code
- Reconciliation type
- Profile
- Loss category code
- Flow direction
- Dedicated NSP
- Trading period for half hour metered ICPs (EMS) and consumption period or day for all others ICPs (King Country Energy).

Audit Commentary

Based on review of files we confirm compliance.

Audit Outcome

Compliant

12.2 Reporting resolution (clause 9 of Schedule 15.3)

When reporting submission information, the number of decimal places must be rounded to 2 decimal places. If the un-rounded digit to the right of the second decimal place is greater than or equal to 5, the second digit is rounded up, and if the digit to the right of the second decimal place is less than 5, the second digit is unchanged.

Audit Observation

We reviewed the process of how the KEGS database calculates submission information and the rounding to 2 decimal places.

HHR data is handled by EMS on behalf of King Country Energy.

Audit Commentary

Compliance is confirmed based on a review of the EMS report and results of test scenarios for NHH ICPs.

Audit Outcome

Compliant

12.3 Historical estimates reporting to RM (clause 10 of Schedule 15.3)

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:

- *10(3)(a) - at least 80% for revised data provided at the month 3 revision*
- *10(3)(b) - at least 90% for revised data provided at the month 7 revision*
- *10(3)(c) – 100% for revised data provided at the month 14 revision*

Audit Observation

The quantity of HE is contained in the reconciliation submission file (AV-140) and is not a separate report. The table shows that HE threshold was not met for a number of NSPs.

Month	R3	R7	R14
Apr'15	4	2	13
May'15	3	3	13
June'15	2	2	13
July'15	3	2	11
Aug'15	1	1	11
Sept'15	2	0	10
Oct'15	4	0	7
Nov'15	3	0	9
Dec'15	3	1	1
Jan'16	2	1	1
Feb'16	3	1	0
Mar'16	1	1	1
Apr'16	1	2	
May'16	1	0	
June'16	3	0	
Juy'16	4	1	
Aug'16	5	1	

Sept'16	2	2	
Oct'16	3		
Nov'16	2		
Dec'16	2		
Jan'17	2		

Audit Commentary

Every month KCE records in the DA Score card the ratio between initial submission and day 14 submission to monitor the accuracy of the estimation and take appropriate action if required. Looking back, it shows a significant improvement. Submission for April;15 (rev14) had 13 NSPs for which not all forward estimates were replaced by historic estimates. The significant improvement is shown for rev3, which improved from 5 in Aug'16 to 2 for Jan'17.

Our assessment of control strength is Strong because of the DA Score Card monitoring process.

Audit Outcome

Non compliance	Description
Audit Ref: 12.3 With: 10 of Schedule 15.3 From: 01/05/16. To: 26/04/17.	Historic estimates did not achieve targets for March'16 for 3 NSPs Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	We assigned Audit Risk ratings as low because only 3.5% of all NSP traded by KCE are effected. There are noticeable improvements every year.. There would be no impact on settlement outcomes.

Actions taken to resolve the issue	Completion date	Remedial action status
KCE is really pleased with the progress it has made in this area since the last audit, and is still working to further improve the outcome as highlighted below. As a result if the EA review in the last audit (ref 6.1.7), KCE introduced two monitoring measures on its monthly scorecard: 1) R14 submission estimated volume: This measure calculates the number of ICPs that have estimated volume in R14, and the total kWh estimated. Scorecard goal is zero. 2) An R3 measure of the 80% threshold on NSPs of the volume shortfall to reach the relevant thresholds. Again the goal is zero. To address 1), an investigation was carried out to find the major causes which essentially hinges around switching and meter changes and how they are recorded in Gentrack and subsequently passed through to the reconciliation system. This training and monitoring is ongoing as staff move in and out of the roles in the Customer Service team. In addition we have introduced a pre-process run check to confirm that there are no 'issues' before starting the submission run. This check has only been recently introduced to improve the accuracy of a process run. The major impact on the results in 2) is the number of meters read. KCE has reduced the amount of rounds that are read every second month, and has put more attention into reading sites further afield. Previously KCE had used contactors for this, but has found its in house resource more reliable.	26/7/17	Choose an item.

Preventative actions taken to ensure no further issues will occur	Completion date	
The addition of the pre-process check for the R14 estimates is the key preventative measure introduced since the audit. KCE will monitor the impact of the changes through scorecard results.	26/7/17	

13. Provision of metering information to the pricing manager in accordance with subpart 4 of Part 13

The function of providing half hour meters for an embedded generator (Mangahao Power Station) is performed by EMS (agent) and according to this year's audit report, which is attached as 16, it meets the Code requirements.

The Service Agreement between parties was sighted.

14. Conclusion

Whilst 12 non-compliances and 2 recommendations have been found during the audit, in our view they are minor and none of the matters have resulted in significant material reconciliation issues. From our point of view, the compliance of KCE has improved again. The company put in place many measures to monitor their compliance and decrease the number of issues. Auditor Protocol Guideline dated 2 May 2017 was used to calculate breach risk rating for each non-compliance. Total score is 34.

Based on the table 1 from the Guidelines for Reconciliation Participants audits the recommendation is to conduct the next audit in 12 months.

15. King Country Energy Ltd comment/response to audit

16. Supporting Audit reports

- EMS
- WELLS