

**ELECTRICITY INDUSTRY PARTICIPATION CODE
DISPATCHABLE LOAD PURCHASER AUDIT REPORT**

For

NORSKE SKOG TASMAN

Prepared by: Ewa Glowacka

Date audit commenced: 11 December 2017

Date audit report completed: 19 December 2017

Audit report due date: 19-Dec-17

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EXECUTIVE SUMMARY

This dispatchable load purchaser audit was performed at the request of Norske Skog. It is the annual audit as required by clause 15.37A, of Part 15, of the Electricity Industry Participation Code 2010.

The relevant clauses audited are as required by the Guidelines for the Dispatchable Load Purchaser Audits V2.1, issued by the Electricity Authority.

Since the last audit, Norske Skog sold TOPP1 to NTEL (Ngati Tuwharetoa Electricity Ltd) and a subsidiary of NTGA. Norske Skog acts as their agent for TOPP1 volumes.

Norske Skog's compliance is reliant on the compliance of EMS, as its agent, to carry out reads, validation of meters' readings, substitution of reading when actual reading can't be obtained, and provision of these to the pricing manager. The most recent EMS audit, dated 10th March 2017, is attached as appendices. Whilst the EMS audit is older than seven months, we have received assurance from EMS that there has been no change in their services provided to Norske Skog, therefore we are confident in using the report as part of this audit.

Compliance was confirmed for all relevant parts of the Code. The audit risk rating recommends the next audit in 36 months. We agree with this recommendation.

We thank the Norske Skog Tasman 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
			Nil				
Future Risk Rating						0	

Future risk rating	1-2	3-6	7-9	10-19	20-24	25+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Description	Recommendation
		Nil	

ISSUES

Subject	Section	Description	Issue
		Nil	

1. ADMINISTRATIVE

1.1. Exemptions from Obligations to Comply with Code (Section 11)

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit observation

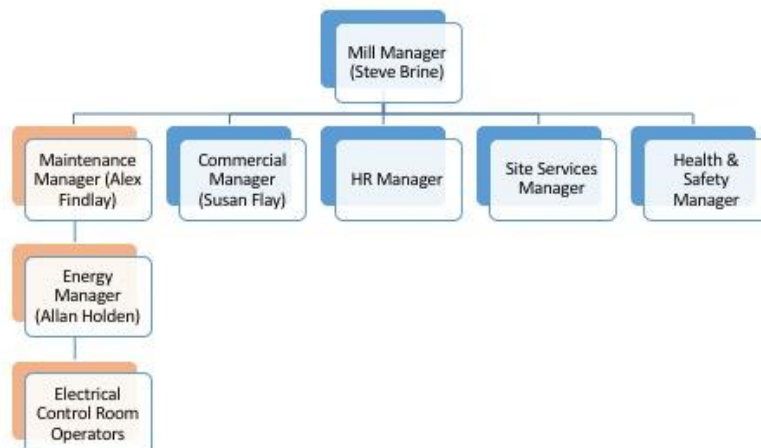
Norske Skog does not have any exemptions granted to exempt them from compliance with all or any of the clauses.

Audit commentary

Norske Skog did not apply for any exemptions. We checked the Electricity Authority website and confirm that there are no exemptions in place

1.2. Structure of Organisation

Norske Skog Tasman Ltd – Organisation Structure



1.3. Persons involved in this audit

Name	Title	Company
Allan Holden	Energy Manager	Norske Skog Tasman
Susan Flay	Commercial Manager	Norske Skog Tasman
Ian Martin	Metering Services Manager	EMS
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates

1.4. Use of Agents (Clause 15.34)

Code reference

Clause 15.34

Code related audit information

A dispatchable load purchaser who uses an agent

- *remains responsible for the contractor's fulfilment of the participant's Code obligations*
- *cannot assert that it is not responsible or liable for the obligation due to something the agent has or has not done*

Audit observation

Norske Skog uses EMS as its agent for reading meters and submission of data on their behalf.

Audit commentary

The EMS audit report is attached to this document

1.5. Hardware and Software

There is no specific software used to meet the obligations under the Code. Software used by EMS is covered in the EMS audit report.

1.6. Breaches or Breach Allegations

There have been no breaches related to processes covered by the scope of this audit since the last audit.

1.7. Authorisation Received

Norske Skog provided a letter of authorisation to TEG & Associates permitting the collection of data from other parties, for matters directly related to the audit.

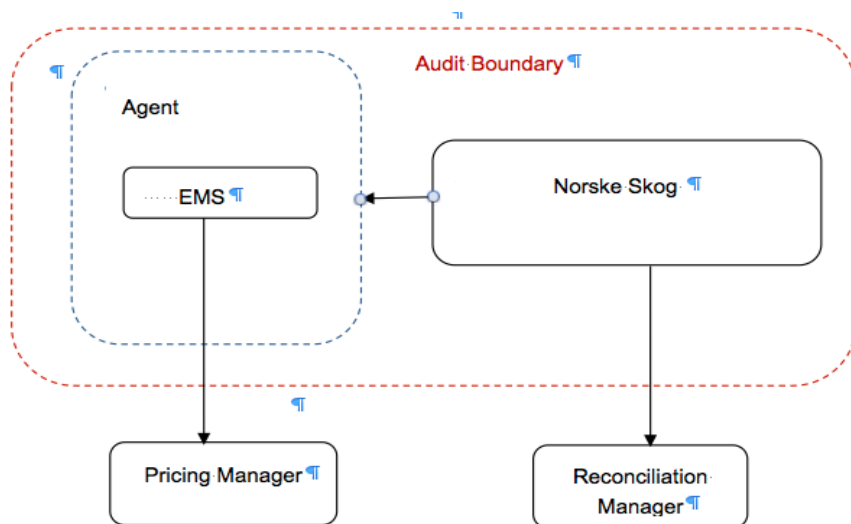
1.8. Scope of Audit

This DCLS audit was performed at the request of Norske Skog to encompass the Authority's request for an annual audit as required by clause 15.37A, of Part 15 of the Code, to assure compliance with the Electricity Industry Participation Code 2010. The audit was conducted on 11th of December 2017.

The audit covers the following processes under clause 15.38(1A) of Part 15, performed by Norske Skog:

- (a) Gathering and storing raw meter data

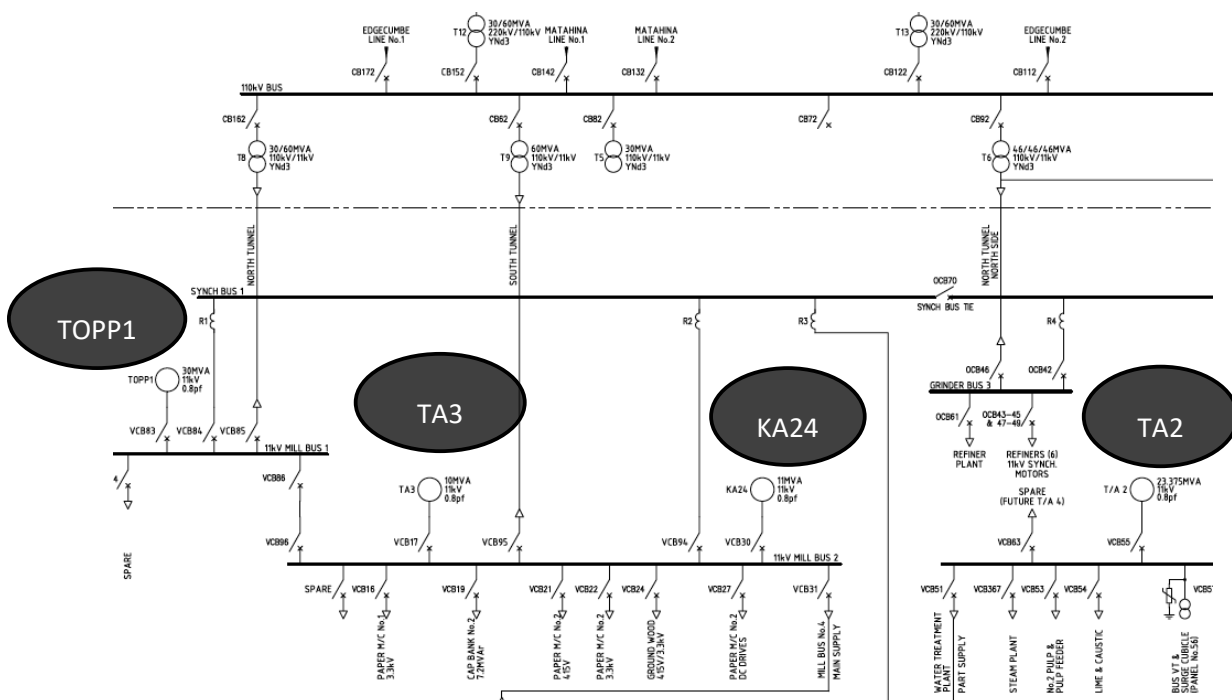
- (b) Creation and management (including validating, estimating, storing, correcting and archiving)
 - (i) half hour volume information
 - (iv) Dispatchable load information
- (c) –Providing dispatchable load information



The diagram below shows the boundaries of this audit.

The Norske Skog operation consists of two mills which are connected to KAW112 (Main Mill) and KAW113 (Thermomechanical Pulp Mill), as represented in Fig 1. The Thermomechanical Pulp Mill does not have any embedded generation; its max load is 80 MW. The Main Mill’s load is 45 MW. It has 4 embedded generators which can inject into the national grid, in total, 50 MW. Both loads connected to KAW112 and KAW113 form Norske Skog DCLS bids at each GXP separately.

Fig 2 shows a single line diagram of the mill wide overview. Four embedded generators, TA2, TA3, KA24, and TOPP1 are marked



1.9. Summary of previous audit

The previous audit for Norske Skog Tasman as a Dispatchable load purchaser (DCLS) was conducted in December 2016 by Ewa Glowacka of TEG & Associates. No non-compliances were identified.

2. OPERATIONAL INFRASTRUCTURE

2.1. Relevant information (Clause 15.2)

Code reference

Clause 15.2

Code related audit information

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

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

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

Audit observation

Norske Skog appointed EMS as its agent to interrogate meters, validate data, correct if necessary and prepare volumes to be submitted to the pricing manager and the reconciliation manager.

Audit commentary

Both companies strive to provide complete and accurate information. A thorough check of volumes is conducted before they are submitted to the market.

Audit outcome

Compliant

2.2. Provision of information (Clause 15.35)

Code reference

Clause 15.35

Code related audit information

If an obligation exists to provide information in accordance with Part 15, a participant must deliver that information to the required person within the timeframe specified in the Code, or, in the absence of any such timeframe, within any timeframe notified by the Authority. Such information must be delivered in the format determined from time to time by the Authority.

Audit observation

Information created in accordance with Part 15 is prepared by EMS on behalf of Norske Skog. Reconciliation files are submitted by Norske Skog.

Audit commentary

We examined data delivery in accordance with Part 15 and confirm compliance.

Audit outcome

Compliant

2.3. Data transmission (Clause 20 Schedule 15.2)

Code reference

Clause 20 Schedule 15.2

Code related audit information

Transmissions and transfers of data related to metering information between dispatchable load purchaser's 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

Norske Skog exchanges information with their agent (EMS) via email. EMS communicates with the reconciliation manager via RM portal.

Audit commentary

We reviewed the EMS audit report dated 10th March 2017 as part of this audit and confirm compliance.

Audit outcome

Compliant

2.4. Audit trails (Clause 21 Schedule 15.2)

Code reference

Clause 21 Schedule 15.2

Code related audit information

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

The audit trail must include details of information:

- *provided to and received from the reconciliation manager*
- *provided and received from other dispatchable load purchasers and their agents.*

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

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

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

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

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

Audit observation

The meters are read, and metering data is validated by EMS. The EMS system has an audit trail for all data gathering, validation and processing functions as described in the EMS audit report. The logs of these activities include the activity identifier, date and time and an operator identifier.

Audit commentary

We reviewed the EMS audit report and confirm that the company meets this clause obligations.

Audit outcome

Compliant

3. GATHERING RAW METER DATA

3.1. Conditions on any approval

Code reference

Clause 7 of Schedule 13.8

Code related audit information

The system operation may impose conditions on any approval it grants a dispatchable load purchaser

Audit observation

As a part of this audit we confirmed with the System Operator that no conditions were imposed when Norske Skog Tasman applied to be certified as Dispatchable Load Purchaser.

Audit commentary

No conditions were imposed on the approval. The operation has not changed since the last audit. The change of ownership of TOPP1 has not changed how volumes are dispatched.

Audit outcome

Compliant

3.2. Certified metering installation for each dispatch-capable load station

Code reference

Clause 15.5B (3)

Code related audit information

The dispatchable load purchaser must ensure there is a certified metering installation for each dispatch capable load station.

Audit observation

Norske Skog provided copies of metering installations for all generators. The details are shown below:

TA2 - Revenue Metering Installation CERT-2016-519, expires 11-Jul-2019, metering installation cat 5

TA3 - Revenue Metering Installation CERT-2016-520, expires 11-Jul-2019, metering installation cat 5

TOPP1 - Revenue Metering Installation CERT-2016-521, expires 11-Jul-2019, metering installation cat 5

KA24 - Revenue Metering Installation CERT-2015-214 expires 22-Apr-2018, metering installation cat 5

Audit commentary

All metering installations are certified. Compliance confirmed.

Audit outcome

Compliant

3.3. Collection of information by dispatchable load purchaser (Clause 2 Schedule 15.2)

Code reference

Clause 2 Schedule 15.2

Code related audit information

Only a certified dispatchable load purchaser may collect raw meter data:

2(2) - The dispatchable load purchaser must collect raw meter data used to determine volume information from the services interface or the metering installation.

2(3) - The dispatchable load purchaser must ensure the interrogation cycle is such that it does not exceed the maximum interrogation cycle in the registry.

2(4) - The dispatchable load purchaser 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

Meters for Norske Skog are read by EMS. There is a Data Service Agreement, signed on 25th August 2014, between the two companies which describes the scope of the service.

Audit commentary

The EMS audit report, dated 10th March 2017, was reviewed. According to the report EMS meets compliance with this clause.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

All validated meter readings must be derived from meter readings.

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

During the manual interrogation of each NHH metering installation the dispatchable load purchaser 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

Norske Skog does not manually read NHH meters therefore clause 5 of Schedule 15.2 is not applicable.

Audit commentary

The EMS report, dated 10th March 2017, was reviewed. These clauses were assessed during their audit. EMS was found compliant.

Audit outcome

Compliant

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

Code reference

Clause 11(1) Schedule 15.2

Code related audit information

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

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

Audit observation

EMS collect data electronically on behalf of Norske Skog. All meters are read remotely on behalf of Norske Skog.

Audit commentary

The EMS report is attached. In the report it is stated by the auditor that an example was checked during the audit to confirm compliance.

Audit outcome

Compliant

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

Code reference

Clause 11(2) Schedule 15.2

Code related audit information

The following information is collected during each interrogation:

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

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

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

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

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

The interrogation log must be examined by the dispatchable load purchaser 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 collect data electronically via cell phone on behalf of Norske Skog.

Audit commentary

According to the EMS report, readings are fully automated. During interrogation of HHR metering the following information is collected.

1. The unique identifier of the data storage device
2. The time from the data storage at the commencement of download
3. The half-hour metering information for each trading period
4. Events log, which may be limited to event information accumulated since the last interrogation

The auditor commented that the event information contained is more than required by this clause.

Audit outcome

Compliant

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

Code reference

Clause 11(3) Schedule 15.2

Code related audit information

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

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

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

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

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

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

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

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

Audit observation

EMS collect data electronically on behalf of Norske Skog.

Audit commentary

The EMS audit report was reviewed. According to the report an interrogation log is generated to record details of all interrogations and appropriate action is taken where problems are apparent. The interrogation log contains all information required by this clause.

Audit outcome

Compliant

4. STORING RAW METER DATA

4.1. Trading period duration (Clause 13 Schedule 15.2)

Code reference

Clause 13 Schedule 15.2

Code related audit information

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

Audit observation

This function is performed by EMS (agent) and according to this year's audit report, attached as appendices, it confirms that it meets the Code requirements.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 18 Schedule 15.2

Code related audit information

A dispatchable load purchaser 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

Metering data collection is conducted by EMS on behalf of Norske Skog. According to the EMS audit report all data is archived for a period well in excess of 48 months.

Audit commentary

Norske Skog does not collect data themselves, it is done by their agent, EMS. According to the Code the participant is responsible for the action of their agent. The EMS audit report confirms compliance.

Audit outcome

Compliant

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

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

Code reference

Clause 19(2) Schedule 15.2

Code related audit information

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

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

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

Audit observation

Any correction of half-hour meter readings, if required, is conducted by EMS, as the agent for Norske Skog. Since the last audit metering data has not been corrected.

Audit commentary

We talked to EMS and they stated that since the last audit metering data has not been corrected.

Audit outcome

Compliant

5.2. Error and loss compensation arrangements (Clause 19(3) Schedule 15.2)

Code reference

Clause 19(3) Schedule 15.2

Code related audit information

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

Audit observation

We reviewed all metering installation certification issued by AccuCal and no error and loss compensations are required to be applied by EMS to metering data read on behalf of Norske Skog.

Audit commentary

Compliance confirmed based on a review of metering installations certification and the EMS report, which lists only one ICP for which a compensation factor is applied. It is none of the installations under the responsibility of Norske Skog.

Audit outcome

Compliant

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

Code reference

Clause 22(1) and (2) Schedule 15.2

Code related audit information

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

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

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

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

22(2)(c) - the operator identifier of the dispatchable load purchaser

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

EMS reads meters and corrects data, if necessary, but raw data is never overwritten.

Audit commentary

The EMS report stated that raw meter data is not overwritten in any situation.

Audit outcome

Compliant

6. ESTIMATING AND VALIDATING VOLUME INFORMATION

6.1. Identification of readings (Clause 3(3) Schedule 15.2)

Code reference

Clause 3(3) Schedule 15.2

Code related audit information

All estimated readings and permanent estimates must be clearly identified as an estimate at source and in any exchange of metering data or volume information between participants.

Audit observation

Estimation and validation of volumes is conducted by EMS as the agent.

Audit commentary

Since the last audit no readings required estimation. If such situation occurs, EMS confirmed that readings will be flagged accordingly in MV90. Estimated data in daily pricing data would be flagged in the delivery notice.

Audit outcome

Compliant

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

Code reference

Clause 3(4) Schedule 15.2

Code related audit information

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

3(4)(a) - validated meter readings

3(4)(b) - estimated readings

3(4)(c) - permanent estimates.

Audit observation

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

Audit commentary

All EMS data output comes from validated meter readings. If data is unavailable for a period, it will be estimated temporary or permanently.

Audit outcome

Compliant

6.3. Half hour estimates (Clause 15 Schedule 15.2)

Code reference

Clause 15 Schedule 15.2

Code related audit information

If a dispatchable load purchaser 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 dispatchable load purchaser'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 dispatchable load purchaser must use reasonable endeavours to ensure that estimated submission information is within the percentage specified by the Authority.

Audit observation

If half hour meter readings could not be obtained EMS will advise Norske Skog. According to the Data Services Agreement, EMS will propose to use Substituted Data and the basis for producing or obtaining the Substituted Data. Where Substituted Data is used, EMS will make a record of it and the basis for producing or obtaining the Substituted Data and notify of these details in writing.

Audit commentary

No HHR data was estimated since the last audit.

According to the EMS report dated 10th March 2017

“Estimation is conducted in GMMS. When estimation is required, GMMS selects a period of historic data, at least three months where available. GMMS calculates an average of the data for each interval for each date over that period and uses that for the estimation. The process employed is robust and meets the “reasonable endeavours” requirement.”

Audit outcome

Compliant

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

Code reference

Clause 17 Schedule 15.2

Code related audit information

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

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

17(4)(a) - checks for missing data

17(4)(b) - checks for invalid dates and times

17(4)(c) - checks of unexpected 0 values

17(4)(d) - comparison with expected or previous flow patterns

17(4)(e) - comparisons of meter readings with data on any data storage device registers that are available

17(4)(f) - a review of meter and data storage device event list. Any event that could have affected the integrity of metering data must be investigated.

Audit observation

HHR readings and validation of readings is conducted by EMS. According to the Data Services Agreement between parties, EMS will check all Validation Data for potential data errors and anomalies.

Audit commentary

The EMS audit report describes that interrogation occurs daily therefore there is no possibility for data to be overwritten. EMS thoroughly validates interrogated data. Compliance with this clause is confirmed.

Audit outcome

Compliant

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

7.1. Loss adjustment of HHR metering information (Clause 13.138A)

Code reference

Clause 13.138A

Code related audit information

The dispatchable load purchaser must provide half-hour metering information to the relevant grid owner for each of its DCL. The information must be provided:

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

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

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

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

Audit observation

EMS, as the agent, collects the data from Norske Skog's generators.

Audit commentary

EMS prepares HHR information for the grid owner.

SKOG has four embedded generators within the Dispatchable Load Station 0 (DLS0), so the volume information is the GXP (KAW0112) total plus the embedded generation total. Two of the embedded generators are remote from the GXP so this data is loss adjusted as part of the calculation. Steve Woods, during his audit the calculation and confirmed it was correct. We accept his findings. The Dispatchable Load Station 1 (DLS1) does not have any embedded generation so the GXP (KAW0113) total is the DLS total. EMS has this data by 0500 each day.

Audit outcome

Compliant

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

Code reference

Clause 13.140

Code related audit information

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

Audit observation

EMS delivers data daily a grid owner.

Audit commentary

EMS is the agent to the grid owner and Norske Skog and they have the data by 0500, therefore notification is not required.

Audit outcome

Compliant

8. PROVISION OF DISPATCHABLE LOAD INFORMATION

8.1. Dispatchable load information (Clause 15.5D)

Code reference

Clause 15.5D

Code related audit information

Each dispatchable load purchaser must provide to the reconciliation manager dispatchable load information for each GXP at which the dispatchable load purchaser has purchased electricity for a DCLS during the consumption period immediately before each reconciliation period.

If the dispatchable load purchaser has previously provided dispatchable load information and that information has changed, revised information must be provided.

Audit observation

Every month, Norske Skog provides dispatchable load information for each GXP (KAW0112 and KAW0113) of what was purchased to the reconciliation manager. Files are prepared by EMS and provided to Norske Skog.

Audit commentary

The files were reviewed, and we confirm compliance. There were no instances, since the last audit, where EMS needed to resend wash-up data to SKOG to be submitted to the reconciliation manager.

Audit outcome

Compliant

9. SUBMISSION COMPUTATION

9.1. Daylight saving adjustment (Clause 15.36)

Code reference

Clause 15.36

Code related audit information

The dispatchable load purchaser 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

The EMS audit report states that metering data provided to Norske Skog is adjusted for NZDT

Audit commentary

EMS uses the “reading period run on” techniques for daylight saving adjustment. During the EMS audit a small sample taken. We checked DHHVLS for September’17 and confirmed that data was shifted.

Audit outcome

Compliant

9.2. Accuracy of submission information (Clause 15.12)

Code reference

Clause 15.12

Code related audit information

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

Audit observation

The information is prepared by EMS and passed to Norske Skog for submissions to the reconciliation manager.

Audit commentary

The Data Service Agreement with EMS states that if EMS obtains more accurate data it will submit a new DHHRVOLS file and send to SKOG. We talked to EMS and they stated that there has not been necessary to submit revisions files, but they would if necessary.

Audit outcome

Compliant

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

Code reference

Clause 4 Schedule 15.2

Code related audit information

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

Volume information created using estimated readings must be subsequently replaced at the earliest opportunity by the dispatchable load purchaser 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 dispatchable load purchaser has been unable to obtain a validated meter reading.

Audit observation

EMS provides to Norske Skog only validated meter readings. If a situation arises where the reading can't be obtained it will be discussed between parties as to what steps should be taken and how volumes should be estimated.

Audit commentary

The Agreement between EMS and Norske Skog has a provision for the use of Substituted Data. EMS will use reasonable endeavours to obtain a validated data. If it is not possible Norske Skog will be informed and Substituted Data used. The data will be marked accordingly. Such a situation has not occurred since the last audit.

Audit outcome

Compliant

9.4. Dispatch capable load station (Clause 15.5A)

Code reference

Clause 15.5A

Code related audit information

Each dispatchable load purchaser must prepare dispatchable load information.

For each DCLS that has a metering installation at a point of connection (i.e. it does not fall within the scope of clause 15.5B), the dispatchable load purchaser must use volume information prepared under Schedule 15.2.

Audit observation

Dispatchable load information is prepared and calculated by EMS.

Audit commentary

The EMS report dated 10th March 2017 states that DLS loaded information in prepared and calculated accordance with Schedule 15.2 by EMS (the agent) of Norske Skog. The volumes for KAW0112 were calculated as per clause 13.141(1)(b) Part 13.

Audit outcome

Compliant

9.5. Dispatchable load information preparation (Clause 15.5B (1) and 15.5B(2)(a))

Code reference

Clause 15.5B (1) and 15.5B(2)(a)

Code related audit information

Each dispatchable load purchaser (apart from those that are at a point of connection) must prepare dispatchable load information in accordance with clause 15.5B.

If 15.5B (1) applies, then the dispatchable load information must be prepared using volume information derived from raw meter data.

Audit observation

The two DCLS are considered to be located at the point of connection, although volume information for one DCL0 is not obtained from metering information but calculated from the GXP meter taking into account some embedded generation.

Audit commentary

The EMS audit report confirmed that calculations were correct.

Audit outcome

Compliant

9.6. Dispatchable load volume information adjustment (Clause 15.5B(2)(b))

Code reference

Clause 15.5B(2)(b)

Code related audit information

The dispatchable load purchaser must adjust the dispatchable load volume information derived from raw meter data using an accurate compensation factor to compensate for internal site losses between the meter installation and:

- i) the grid (if the premises is directly connected to the grid)*
- ii) the local network (if the premises is directly connected to the local network)*
- iii) the embedded network (if the premises are directly connected to the embedded network).*

Audit observation

We confirm that the dispatchable load station metering installations are at a point of connection.

Audit commentary

No additional compensation has to be applied to raw data because the dispatchable load metering installations are at the point of supply.

Audit outcome

Compliant

9.7. Aggregating and rounding dispatchable load information (Clause 15.5C)

Code reference

Clause 15.5C

Code related audit information

A dispatchable load purchaser must aggregate dispatchable load information to the following aggregation criteria:

- i) NSP code*

- ii) *dispatch-capable load station identifier*
- iii) *loss category code; and*
- iv) *trading period.*

The dispatch-capable load station identifier must be the identifier that has been assigned by the system operator to the DCLS.

In the case of ICP connected customer premises, the NSP code and loss category code must be sourced from the registry records for that ICP.

Dispatchable load information must be rounded to 2 decimal places.

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 dispatchable load purchaser, only if it ensures that the accuracy is within the percentage of error specified by the Authority.

Audit observation

The September and November 2017 reconciliation files submitted to the reconciliation manager were reviewed. The aggregated volume is rounded to 2 decimal places. Every month the files are prepared by EMS and passed to Norske Skog for submission to the reconciliation manager.

Audit commentary

DHHRVOLS are prepared by EMS and submitted by Norske SKOG.

Audit outcome

Compliant

CONCLUSION

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