VERITEK

Electricity Industry Participation Code Audit Report

For

TWS Energy Controls Limited

Class A
Approved Test House

Prepared by Brett Piskulic – Veritek Limited

Date of Audit: 2/02/17

Date Audit Report Complete: 13/02/17

Executive Summary

TWS Energy Controls Limited (TWS) is a Class A Approved ATH (ATH) and this audit was performed at their request, to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with Clause 2 of schedule 10.3.

This is the second ATH audit conducted under "new Part 10" for TWS. TWS has continued with their sound record of compliance. There is no non-compliance identified and no recommendations made.

TWS's ATH has operated in a stable environment for a considerable number of years. The personnel involved continue to demonstrate a strong technical knowledge and a sound understanding of the Code.

Table of Non Compliance

Subject	Section	Clause	Non compliance	Indicative Impact	Audit History	Procedures	Remedial Action
			Nil				

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Remedial Action
Nil				

Persons Involved in This Audit

Auditor:

Brett Piskulic
Veritek Limited
Electricity Authority Approved Auditor

TWS ATH personnel assisting in this audit were.

Name	Title
John Dodgshun	Design Engineer

Contents

1. Scope of Audit

TWS is a Class A Approved ATH and this audit was performed at their request, to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with clause 2 of schedule 10.3.

The audit was conducted in accordance with the Draft ATH Audit Guideline Version 0.2 provided by the Authority.

TWS wishes its ATH approval to include the following functions of Clauses 3(2) of Schedule 10.3:

Class A Approval:
(a) calibration of—
    (i) working standards:
    (ii) metering components (other than calibration on-site):
(b) issuing calibration reports:

TWS requires approval to calibrate metering components and issue calibration reports. The calibrations will be conducted in the laboratory, not in the field.

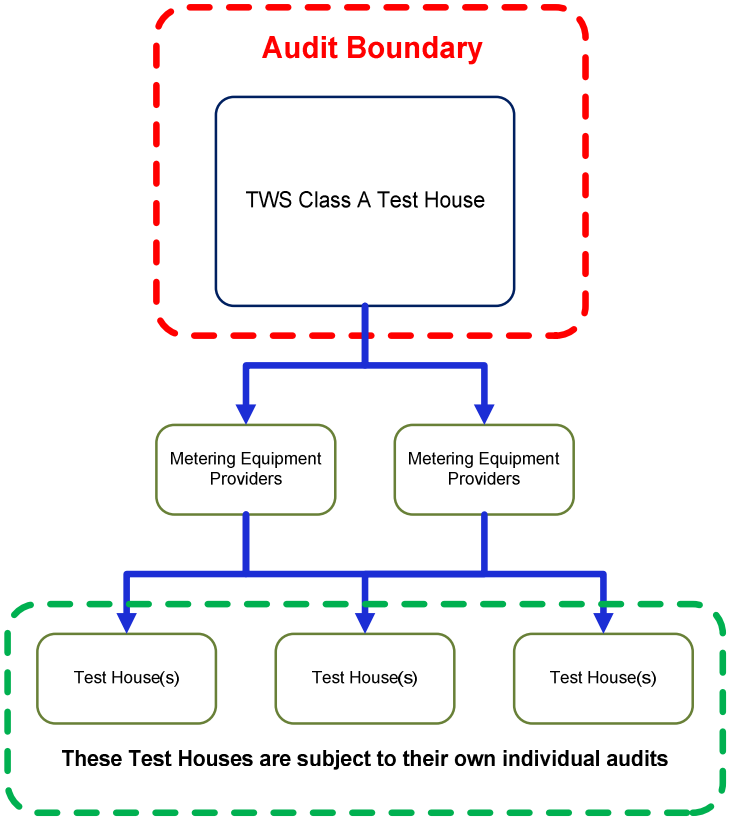
TWS also requires approval to certify metering components. I note that the Class A functions listed in Clause 4(2) of Schedule 10.3 do not include certification of metering components.

TWS has a Class A laboratory which exists predominantly for the purpose of calibrating and certifying the measuring transformers they manufacture.

TWS does not perform any field installation or certification work, although the calibration reports provided to metering equipment owners and other Test Houses form part of the site certification documentation for the relevant installations.

Most audit requirements of the Class A Test House are covered in their external ISO 17025 audit, conducted annually by IANZ.

The boundaries of this audit are shown below for greater clarity.


Audit Boundary
TWS Class A Test House
Metering Equipment Providers
Metering Equipment Providers
Test House(s)
Test House(s)
Test House(s)
These Test Houses are subject to their own individual audits

2. Previous Audit Results

The previous audit was conducted in February 2014 by Steve Woods of Veritek Limited. The audit report contained one recommendation which has been resolved as shown in the table below.

Table of Non Compliance

Subject	Section	Clause	Non compliance	Status
			None	

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Status
Measuring transformer certification	8.3	3(c)(ii) & 8(ii) of schedule 10.8	Change certification expiry date to certification validity period	Cleared

3. ATH Requirements

3.1 Use of Contractors (Clause 10.4(1) of Part 10)

A participant may perform its obligations and exercise its rights under this Part by using a contractor. A participant who uses a contractor to perform the participant's obligation under this Part remains responsible and liable for, and is not released from, the obligation, or any other obligation under this Part.

TWS does not use any contractors in any part of their operation.

3.2 Provision of Accurate Information (Clause 10.6 of Part 10)

A participant must take all practicable steps to ensure that information that it provides under this Part is:

- Complete and accurate
- Not misleading or deceptive
- Not likely to mislead or deceive

If a participant, having provided information under this Part, becomes aware that the participant has not complied with these requirements, the participant must, except if clause 10.43 applies, as soon as practicable provide such further information, or corrected information, as is necessary to ensure that the participant complies.

TWS has complied with this requirement. I did not find any information that was incorrect.

3.3 Dispute Resolution (Clause 10.50(1) to (3) of Part 10)

Participants must in good faith use best endeavours to resolve any disputes related to Part 10 of the Code. Disputes that are unable to be resolved may be referred to the Authority for determination. Complaints that are not resolved by the parties or the Authority may be referred to the Rulings Panel by the Authority or participant.

TWS confirms there have not been any disputes resolved under this clause.

3.4 ATH Approval (Clause 10.40 of Part 10)

A person wishing to be approved as an ATH, or an ATH wishing to renew its approval, must apply to the Authority:

- At least 2 months before the intended effective date of the approval or renewal
- In writing
- In the prescribed form
- In accordance with Schedule 10.3

A person making an application must satisfy the Authority (providing, where appropriate, suitable evidence) that the person:

- Has the facilities and procedures to reliably meet, for the requested term of the approval, the minimum requirements of this Code for the class or classes of ATH for which it is seeking approval
- Has had an audit under Schedule 10.3
- Is a fit and proper person for approval

TWS has appropriate approval and appropriate facilities and procedures to meet the minimum requirements of the Code. TWS has consistently achieved compliant audit reports and they also have positive IANZ reports each year.

3.5 ATH Requirements (Clause 10.41 of Part 10)

An ATH must, when carrying out activities under this Part:

- Only carry out activities for which it has been approved by the Authority
- Exercise a degree of skill, diligence, prudence, foresight, and economic management, taking into account the technological complexity of the metering components and metering installations being tested:
    - Determined by reference to good industry practice
    - That would reasonably be expected from a skilled and experienced ATH engaged in the management and operation of an approved ATH
- Comply with all applicable safety, employment, environmental, and other enactments.
- Exercise any discretion given to it under this Part by:
    - Taking into account the relevant circumstances of the particular instance
    - Acting professionally
- Recording the manner in which it carried out its activities and its reasons for carrying the activities out in that manner.

TWS has only conducted activities that fall within the scope of their approval. I have concluded from this audit that TWS has met the requirements of this clause. I checked compliance with other enactments, specifically the electricity regulations with regard to safety practices and I confirm the following critical points are managed in a robust manner:

- General safety practices in the laboratory are in place and enforced. Improvements have been made to the laboratory procedures to minimise the risk of contact with live equipment.
- A H&S committee is in place and regular meetings occur. Changes to H&S legislation have been adopted and included in procedures.
- There are no hazardous products dealt with in the laboratory or factory.

3.6 Quality Management Systems (Clauses 3(1) & 4(1) of Schedule 10.3 & Clause 16 of Schedule 10.4

TWS provided a copy of their most recent ISO/IEC 17025:2005 audit report, dated March 2016, which was conducted by IANZ.

The scope of their ISO 17025 certification is appropriate and is noted as:

Programme: Metrology and Calibration Laboratory
Testing Services Summary: 5.85 Inductors and Transformers

Signatories are noted as:
Steve Coster
John Dodgshun
Paul Infante
Marty Rowe

The most recent audit report contained two Corrective Action Requests and eight recommendations as shown in the table below.

Corrective Action Request	Status
Equipment On the day of the assessment the most recent calibration report for the in-house burdens was dated 19 March 2014. There appeared to be a problem with the output of one of the burden arrangements when demonstrated at the assessment, which was not resolved on the day. The procedure (QOP 511-6) did not contain enough information for laboratory staff to determine exactly if the calibration check had been set up correctly. a) Please recalibrate the burdens and forward the relevant reports to IANZ. b) The laboratory will need to assess any changes in the values of the burdens, and whether those changes have had any impact on transformer calibrations performed since the last calibration of the burdens. Please forward to IANZ the results of this assessment of changes in burden values. c) The procedure QOP 511-6 needs to be reviewed and enhanced to ensure it contains all necessary information so that laboratory staff can perform these periodic burden calibrations. Please forward to IANZ the reviewed procedure.	The CAR has been cleared. TWS has purchased new burden arrays which will be installed soon. There was no issue with any CTs that were calibrated previously.

Proficiency Testing The laboratory had been participating in PT activities but did not have an adequate policy on PT. Please write a policy with reference to IANZ technical policy 2 (see clauses above). The policy should include: · Brief descriptions of the main types of PT available to the laboratory (probably mostly interoperator comparisons); · How the activity is recorded and analysed, and how the results are reviewed and used; · A plan or schedule for PT activities (IANZ would normally expect each major area of the scope of accreditation to be covered at least once in a three-year assessment cycle).	The CAR has been cleared. A Proficiency testing policy has been developed and implemented. TWS has arranged a round of proficiency testing with other laboratories.
Recommendation	**Status**
1. Regarding the management review, it is recommended that: a. The list of agenda items is reviewed to ensure it covers relevant items from ISO 17025 4.15 (the list is currently quite long and some items could be removed or combined); b. The procedure (TTM 415) is reviewed to make sure it correctly reflects the agenda template used and is generally clarified.	The agenda has been reviewed and procedures clarified.
2. It is strongly recommended that the laboratory reviews its uncertainty analysis, with particular attention paid to repeatability of the device under calibration. Previously it had been decided this was a negligible component but a review should be periodically conducted, especially since the laboratory is calibrating different types of transformers often. It would be good to involve members of the laboratory team in this review as much as possible.	Review has been conducted and TWS is comfortable with its uncertainty.
3. It is recommended that in endorsed calibration reports, the coverage factor k is quoted to a consistent number of decimal places (in the CT report template five out of the six coverage factors quoted are to two d.p. and one is to zero d.p. which could be seen as a mistake in reporting).	On-going but no impact.
4. It is strongly recommended that the laboratory maintains read-only records of issued endorsed VT calibration reports, for example in pdf format (it is already doing so for CTs).	Resolved, reports are issued in pdf format
5. A recommendation is made to review the procedure QOP 530-7 (VT calibration) as it refers to reference equipment and reporting spreadsheet versions that are no longer used.	Resolved, spreadsheet updated.
6. A strong recommendation is made to include the tester's name in the test data record.	Resolved, there is a traceable record to the tester via the job number.
7. With regard to the application of electronic signatures onto endorsed reports, it is recommended that the laboratory: a. Investigates whether it can apply a higher level of security i.e. signatures can only be applied by those who 'own' them; b. Uses a blank box as default 'signatory' in the current system so that the risk of sending a report with the wrong signatures on it is lessened; c. A policy should be written (or amended) to explain and support the current practice.	Disputed, the software used does not allow this.
8. The laboratory is reminded that a. Now that the Transformer Test House (TTH) manual is a stand-alone document in its compliance with accreditation criteria, it should be the basis of the internal audit and not the organisation's ISO 9001 quality manual; b. A validation should be performed, preferably with a standard data set, if changes are made to the Excel spreadsheet used for producing reports.	Disputed, TWS has an internal audit procedure which meets requirements.

Clause 16 of Schedule 10.4 requires that an ATH must establish, document, implement, maintain, and comply with a quality management system which records its processes and procedures to ensure

compliance with this Part. TWS has demonstrated compliance with this requirement and I reviewed a copy of their quality manual to support this.

3.7 Organisation and Management (Clause 15 of Schedule 10.4)

An ATH must ensure that it has managerial staff who, unless otherwise permitted in the relevant approval, all have the authority and resources needed to discharge their duties; and the responsibilities, authority, and functional relationships of all its personnel are fully and accurately specified and recorded in the ATH's records. Roles and responsibilities are outlined in the organisation chart which forms part of the quality manual. Position descriptions are in place for each role, describing responsibilities. Managerial staff have the authority and resources to ensure the ATH functions as intended.

An ATH must appoint a technical manager (however named) with overall responsibility for technical operations, who must have appropriate engineering qualifications and experience in the operation of an approved ATH; and a quality manager (however named), with responsibility for the quality management certification and the implementation of the quality management system. John Dodgshun is appointed as Technical Manager and as Quality Manager. John has appropriate qualifications and experience.

An ATH must ensure that all staff who perform or supervise work or activities regulated under this Part are technically competent, experienced, qualified, and trained for the functions they perform. I checked training and competency records which are held in the Test House capability chart, the system is in place and up to date. Staff qualifications are recorded in signatory application, also recorded in the ATH approval application.

3.8 Accommodation & Environment (Clause 1 of Schedule 10.4)

An ATH must maintain a list of personnel who are authorised to access and use its laboratory and storage facilities and restrict access to its laboratory and storage facilities to:

(i) The personnel specified

(ii) The Authority

(iii) An auditor conducting an audit

(iv) Any other person who is, at all times, directly supervised by a member of personnel specified

TWS's laboratory is only accessible from the office and the factory; this serves as restriction of access to authorised personnel. The Test House Staff Capability Chart is part of the quality manual and lists all staff who are authorised to enter the laboratory. All other staff are directly supervised by the laboratory staff, who are present at all times.

An ATH must restrict access to its metering records to:

(i) The relevant metering equipment provider

(ii) The Authority

(iii) An auditor conducting an audit

(iv) The relevant metering equipment owner

TWS's records are all electronic and are secure by way of password protection. Backup is "cloud" based and is conducted daily on an automated schedule.

An ATH must ensure that the environment in which its activities are undertaken does not, or could not reasonably be expected to, invalidate test results or adversely affect the required accuracy of measurement; and they must monitor and record the environmental conditions within its approved ATH's laboratory and storage facilities; and comply with the specific requirements of the applicable standard listed in Table 5 of Schedule 10.1 for the calibrations or tests being carried out.

TWS controls their laboratory environment to 20ºC ± 2ºC. Temperature is logged with a temperature logger. The temperature logger is checked regularly against an externally calibrated device and the results are checked by IANZ during the annual audits.

3.9 Test Equipment (Clause 2 of Schedule 10.4)

An ATH must, at all times, ensure that it has access to all items of equipment required for the performance of the calibrations and tests it is approved to undertake under this Part; and each item of equipment it uses is maintained in accordance with the manufacturer's recommendations and this Code.

Maintenance and repair records for test equipment are kept in the NCAR register. There were no maintenance or repair records to view for the audit period because no activity had been conducted.

3.10 Calibration of Reference & Working Standards (Clause 3 of Schedule 10.4)

A Working standard is a standard that has been calibrated by an ATH or a calibration laboratory that is used routinely for the calibration of metering components and metering installations.

A reference standard means a measuring instrument that has been calibrated by an approved calibration laboratory and is not used as a working standard.

TWS provided calibration records for all relevant standards and they all have current calibration reports.

3.11 Calibration Errors (Clause 5 of Schedule 10.4)

A Standard cannot be used if the ATH believes is has a calibration error. If an error is found then all ATH's that have used the standard must be notified. All metering installations certified using the standard must be treated as defective in accordance with Clause 10.43.

There are no examples of standards being found to have calibration errors. Daily comparison checks are conducted so calibration errors, although unlikely to occur, would be picked up at the earliest opportunity.

3.12 Calibration Methods (Clause 7 of Schedule 10.4)

An ATH must, before it certifies a metering installation or metering component, ensure that 1 of the following persons has calibrated the metering components under this Part:

a) An approved calibration laboratory; or

b) An ATH with the appropriate approval under Schedule 10.3.

TWS is an approved calibration laboratory and an approved Test House. TWS calibrates measuring transformers and they also certify them for those participants who request certification.

An ATH must, before it certifies a metering component, ensure that the metering component is calibrated or adjusted under the appropriate physical and electrical reference conditions detailed in the standard listed in Table 5 of Schedule 10.1; or conditions which permit the ATH to calculate the results and their uncertainty at the reference conditions detailed in the standard listed in Table 5 of Schedule 10.1. TWS controls their laboratory environment to 20ºC ± 2ºC. Temperature is logged with a temperature logger. All physical and electrical reference conditions are checked by IANZ during the annual audits

If an ATH calibrates a metering component, it must ensure that the individual test points that it uses are no less than the minimum set out in the standards listed in Table 5 of Schedule 10.1; or sufficient and appropriate in the circumstances to ensure that the calibration allows calculation of the metering installation error as set out in clause 22 of Schedule 10.7. The individual test points are those listed in the relevant table, plus an additional test point of 1% for class 0.5S measuring transformers.

An ATH must, when calibrating a metering component, if necessary, adjust and document the error compensation; and ensure that any adjustment carried out is appropriate to achieve an error as close as practicable to zero; and ensure that the uncertainty of measurement during the calibration of the metering component does not exceed one third of the maximum permitted error in the relevant standard listed in Table 5 of Schedule 10.1; and if the metering component is intended for a metering installation which is to be certified using the selected component certification method, ensure that the ATH records the errors of a current transformer from 5% to 120% of rated primary current. TWS does not calibrate any measuring transformers to include error compensation. Uncertainties are calculated and recorded using the IRL uncertainty calculator and they do not exceed one third of the maximum permitted error. TWS provides measuring transformers to MEPs and some are used in installations certified using the selected component method. The requirement to record the errors of a current transformer from 5% to 120% of rated primary current is met.

An ATH must ensure that it has documented instructions on the use and operation of all relevant equipment it uses for calibration; and it has documented calibration procedures that it must make available to, and ensure are followed by, its staff carrying out the calibration; and its calibration procedures are aligned with the standards listed in Table 5 of Schedule 10.1. TWS has documented instructions in accordance with this clause for all relevant equipment. The Test Procedure Register

contains a list of all procedures. The procedures match the minimum requirements of the relevant IEC standards.

An ATH may select a test point other than those specified in the relevant standard listed in Table 5 of Schedule 10.1, or at a lower burden than specified in the standard; but must, if it does this, document its reasons for the selection of these test points in the calibration report. The only different test point is 1% for class 0.5S measuring transformers and this is an additional point not a change of test point.

3.13 Sealing and Monitoring of Seals (Clause 9 of Schedule 10.4)

An ATH must have a documented system for applying seals to a metering installation that meets the requirements of clause 47 of Schedule 10.7; and is appropriate in the circumstances to ensure:

- The ATH's ability to monitor the metering installation's continued integrity.
- The relevant metering equipment provider is alerted as soon as practicable to any unauthorised access to the metering installation.

Certification of metering installations is not conducted by TWS; therefore this matter is outside the scope of this audit.

3.14 Services Access Interface (Clause 10 of Schedule 10.4)

An ATH must, when preparing a metering installation certification report, determine, and record in the certification report, the location of the services access interface. The services access interface means the point, at which access may be gained to the services available from a metering installation, that is:

- Recorded in the certification report by the certifying ATH for the metering installation.
- Where information received from the metering installation can be made available to another person.
- Where signals for services such as remote control of load (but not ripple control) can be injected.

Certification of metering installations is not conducted by TWS; therefore this matter is outside the scope of this audit.

3.15 Certification & Calibration Reports (Clause 11 of Schedule 10.4)

An ATH must, for each metering installation that it certifies, produce a certification report in accordance with Schedule 10.7. An ATH must, for each metering component:

- That it calibrates, produce a calibration report in accordance with Schedule 10.8.
- That it certifies, produce a certification report in accordance with Schedule 10.8.

TWS produces combined calibration and certification reports for all measuring transformers.

4. Requirements of Metering Installations

Certification of metering installations is not conducted by TWS, but some clauses have relevance and are included below.

4.1 Measuring Transformer Certification Expiry Date (Clause 29 of Schedule 10.7)

An ATH must, before it certifies a metering installation incorporating a measuring transformer, determine the measuring transformer certification expiry date for each measuring transformer in the metering installation in accordance with this clause.

The measuring transformer certification expiry date must be no later than the last day of the measuring transformer certification validity period specified in the measuring transformer certification report, after the date of commissioning.

The ATH must record the measuring transformer certification expiry date for each measuring transformer in a metering installation in the certification report for the metering installation and the certification report for the measuring transformer.

TWS does not conduct metering installation certification activities. TWS does calibrate and certify measuring transformers and the ATH certifying the metering installation relies on the certification validity period recorded on the certification report.

4.2 Other Equipment Connected to Measuring Transformers (Clause 30 of Schedule 10.7)

An ATH must, before it certifies a metering installation incorporating a measuring transformer used by other equipment, ensure that the accuracy of the metering installation remains within the maximum permitted error for the relevant metering installation category set out in Table 1 of Schedule 10.1.

Certification of metering installations is not conducted by TWS; therefore this matter is outside the scope of this audit.

4.3 Burden & Compensation (Clause 31 of Schedule 10.7)

An ATH must, before it may add or change any burden or compensation factor detailed in the design report, obtain the approval of the metering equipment provider responsible for the metering installation.

An ATH must, before it certifies a measuring transformer if a burden is lower than a test point specified in a standard set out in Table 5 of Schedule 10.1, install burdening resistors to increase the burden to be equal to or greater than the lowest test point specified in the standard or confirm that the measuring transformer will not be adversely affected by the low burden.

TWS calibrates and certifies measuring transformers in accordance with the relevant IEC standards. They have no knowledge of on-site burden arrangements and this matter is the responsibility of the ATH certifying the metering installation.

4.4 Metering Component Stickers (Clause 8 of Schedule 10.8)

An ATH must, when certifying a metering component under this Part, confirm the certification by attaching a metering component certification sticker to the metering component or, if not practicable, provide the sticker with the metering component.

An ATH must ensure that a metering component certification sticker shows:

- The name of the metering component owner (if available).
- If the metering component is a meter or a measuring transformer, the name of the ATH or the approved calibration laboratory who calibrated the metering component.
- The name of the ATH who certified the metering component.
- The date on which the metering component was certified.
- The initials or other unique identifier of the person who carried out the certification of the metering component.

An ATH must ensure that a certification sticker is:

- Made of weather-proof material.
- Permanently attached.
- Filled out using permanent markings.

TWS attaches certification stickers to measuring transformers immediately following certification. I have checked some transformers and confirm the stickers applied contain all of the required information and they also meet the requirements to ensure permanence.

5. Alternative Certification (Clause 32 of Schedule 10.7)

Certification of metering installations is not conducted by TWS; therefore this matter is outside the scope of this audit.

6. Inspections

Inspection of metering installations is not conducted by TWS; therefore this matter is outside the scope of this audit.

7. Sealing

Certification of metering installations is not conducted by TWS; therefore this matter is outside the scope of this audit.

8. Metering Component Requirements

8.1 Metering Component Certification (Clause 42 of Schedule 10.7)

An ATH must, before it certifies a metering installation, ensure that each metering component that is required to be certified under this Part and which is in the metering installation:

- Is certified by an ATH in accordance with this Part.
- Since certification, has been appropriately stored and not used.

TWS certifies measuring transformers and supplies them to MEPs for installation in metering installations. TWS' storage facilities are appropriate to meet compliance with this clause. Once the measuring transformers are supplied to MEPs, TWS no longer has control over transportation and storage.

8.2 Meter Certification (Clause 1 of Schedule 10.8)

TWS does not certify meters.

8.3 Measuring Transformer Certification (Clauses 2 & 3 of Schedule 10.8)

An ATH must, before it certifies a measuring transformer:

- Ensure, by testing, that a current calibration report sets out the measuring transformer's errors at a range of primary values at their rated burdens.
- That is a multi-tap current transformer, carry out the calibration tests and only certify the transformer for the ratios that have been calibrated if the test is passed.
- Obtain confirmation of accuracies from the measuring transformer's manufacturer if the rated burden is lower than a test point specified in a standard listed in Table 5 of Schedule 10.1.
- Determine the measuring transformer certification validity period.

An ATH must, before it certifies an epoxy insulated current transformer, ensure that the certification tests allow for and the metering installation certification report shows, the current transformer's age, temperature, and batch.

An ATH must, before it certifies a measuring transformer, ensure that:

- The measuring transformer has a current calibration report.
- The measuring transformer calibration report:
    - Confirms that the measuring transformer complies with the standards listed in Table 5 of Schedule 10.1.
    - Records the tests the ATH has performed to confirm compliance and the results of those tests.
    - Confirms that the measuring transformer has passed the tests.
    - Records any recommendations made by the ATH on error compensation.
    - Includes any manufacturer's calibration test reports.
- It produces a measuring transformer certification report that includes:
    - The date on which it certified the measuring transformer.
    - The certification validity period for the measuring transformer which must be no more than 120 months.
    - The measuring transformer calibration report.
    - Whether the certification was based on batch test certificates.
    - If the certification was based on batch test certificates, confirmation that the manufacturer's batch testing facility is, in the ATH's opinion, of an acceptable standard.
- Confirmation that it has inspected the manufacturer's test certificates, and carried out any additional tests it considers necessary, to satisfy itself that the measuring transformer meets the accuracy requirements of this Part.

TWS complies with all of the requirements above. I confirmed this by checking the records for some recently certified measuring transformers.

8.4 Control Device Certification (Clause 4 of Schedule 10.8)

TWS does not certify control devices.

8.5 Data Storage Device Certification (Clause 5 of Schedule 10.8)

TWS does not certify data storage devices.

8.6 On-site Calibration and Certification (Clause 9 of Schedule 10.8)

TWS does not conduct on-site calibration or certification.

9. Record Keeping

9.1 ATH Record Keeping Requirements (Clause 12 of Schedule 10.4)

An ATH must ensure it documents and maintains a record system for all records, certificates, and reports for any activity regulated under this Part.

An ATH must ensure that:

- All its records, certificates, and reports are stored securely.
- Each of its test records for a metering installation is identified by a unique identifier.
- All of its records, certificates, and reports are sufficiently detailed to enable verification of all aspects of all tests it carries out, including the following:
    - Test conditions.
    - Specific test equipment used.
    - Personnel carrying out the tests.

I checked some records and confirm compliance with all of the requirements above. Compliance is confirmed.

9.2 Retention of Records (Clause 13 of Schedule 10.4)

An ATH must, for each activity regulated under this Part in relation to a metering installation and metering component that it certifies and a metering component that it calibrates, retain, for at least 48 months after the date of decommissioning the metering installation or removal of a metering component, all of its records, certificates, and reports and all certification reports produced by the ATH.

Records are kept on the TWS server and backed up to cloud based storage daily, these records are kept indefinitely. Compliance is confirmed.

9.3 Availability of Records (Clause 14 of Schedule 10.4)

An ATH must, within 5 business days of creating a record, certificate, or report for a metering installation that it certifies, send, in electronic form or such other form as may be agreed between the parties, a copy of the record, certificate, or report to the metering equipment provider responsible for the metering installation and ensure that the metering equipment provider receives the record, certificate, or report.

TWS provides records to MEPs at the time measuring transformers are supplied.

10. Conclusions

This is the second ATH audit conducted under “new Part 10” for TWS. TWS has continued with their sound record of compliance. There is no non-compliance identified and no recommendations made.

TWS's ATH has operated in a stable environment for a considerable number of years. The personnel involved continue to demonstrate a strong technical knowledge and a sound understanding of the Code.

Table of Non Compliance

Subject	Section	Clause	Non compliance	Indicative Impact	Audit History	Procedures	Remedial Action
			Nil				

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Remedial Action
Nil				

Brett Piskulic – Veritek Limited
Electricity Authority Approved Auditor

11. Audit Date Recommendation

Clause 1(4)(c) of Schedule 10.3, requires the Authority to specify the date of the next schedule audit when they issue a certificate of approval. The Authority has provided a guideline for the calculation of the next audit date, which is shown below. The total risk score is zero due to no issues being raised, which results in a recommendation for an audit frequency of 36 months.

Breach risk ratings

		Adequacy of control		
		Weak	**Moderate**	**Strong**
Audit Risk Rating	**High**	**0**	**0**	**0**
	Medium	**0**	**0**	**0**
	Low	**0**	**0**	**0**

Table 1: Indicative audit frequency

Future risk rating	1-3	4-6	7-8	9-17	18-26	27+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

12. Audit Summary for Electricity Authority Website

As per clause 9 of schedule 10.2 of the Electricity Industry Participation Code, the Authority is required to publish a summary of each audit report.

Date of audit report:	13/02/2017
Participant involved:	TWS Energy Controls Limited
Auditor involved:	Brett Piskulic – Veritek Limited
Scope of the audit:	**Clause 3(2) of Schedule 10.3 (Class A) - Functions requiring approval:** (a) calibration of— (i) working standards: (ii) metering components (other than calibration on-site): (b) issuing calibration reports:
Outcome of the audit:	Compliant

13. TWS Response