

APPROVAL OF THE SWARCO MEASURED CENTRAL MANAGEMENT SYSTEMS

MEETING NAME SVG 219

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Paper number 219/04

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Purpose of paper Decision

Classification Public

Summary ELEXON has conducted witness testing of the Swarco measured Central Management System (mCMS). The system met all BSC requirements. We invite the SVG to approve the mCMS for use in Settlement.

1. Background

- 1.1 Swarco has developed electric vehicle (EV) charge points suitable for installation on street lamp posts.
- 1.2 The mCMS software is capable of measuring energy delivered to any connected EVs and producing an event log that details the levels of consumption and times of use.
- 1.3 The accuracy of the energy calculation is determined through a combination of the test evidence supplied in the test report and the witness testing conducted by ELEXON. All testing is conducted against our [mCMS Test Specification](#). The requirements in the Test Specification are mapped to the requirements for a Central Management System (CMS) set out in BSC Procedure (BSCP) 520 '[Unmetered Supplies Registered in SMRS](#)'.
- 1.4 The [Electricity \(Unmetered Supply\) Regulations 2001](#) (secondary legislation) require the electrical load of Unmetered Supplies to be predictable. The Department for Business, Energy and Industrial Strategy's (BEIS's) [Guidance on the UMS Regulations](#) states that 'BEIS considers that [...] predictable shall be assumed to mean a load that can be consistently understood throughout its usage period, such that billing can be correctly estimated or accurately calculated based on pre-defined operational profiles or based on event records. BEIS considers that to maintain settlement accuracy, there should be a maximum permitted variation of +/- 3.5% which means the calculated usage should be equivalent in accuracy to that of a metered supply'.
- 1.5 You can find more background information on the mCMS arrangements for EV charge points in separate [SVG paper 206/04](#).

2. Swarco mCMS test report and witness test

- 2.1 In February 2019, Swarco formally applied for approval of its mCMS. It provided a test report detailing its own testing against all of the test scenarios in our mCMS Test Specification. ELEXON undertook witness testing of Version 1.0 of Swarco's mCMS on 11 March 2019. ELEXON witnessed tests on the day that aimed to replicate all but one of the test scenarios in the Test Report.
- 2.2 The Swarco mCMS was deemed to have met all Settlement requirements outlined in BSCP520. Therefore, ELEXON recommends that the SVG approves it for use in Settlement.
- 2.3 A Meter Administrator (Power Data Associates) has confirmed that the daily Swarco event log files can be accessed, downloaded and processed correctly.
- 2.4 The testing conducted for Swarco's mCMS demonstrates an accuracy difference of +3.97% against the reference Meter used for the scenarios tested. This falls outside of the BEIS guidance of +/- 3.5%. Due to the baseload consumption of the charge point being higher than seen in previous applications (approximately 7 Watts), this had more of an impact on the energy being measured by the reference measuring device. If

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the baseload consumption of the charging point itself is subtracted from the energy recorded by the measuring device, the total accuracy difference is +3.24%, which falls within the BEIS guidance of +/- 3.5%.

- 2.5 ELEXON's witness test report is detailed in Attachment A and a non-confidential version of Swarco's own test report in Attachment B (with any commercially-sensitive information such as screen shots redacted). Appendix 1 contains photos from the witness testing. Due to the file sizes, all the detailed (confidential) test evidence or the full confidential version of Swarco's test report have not been issued to SVG Members. ELEXON can provide these to SVG Members on request.

3. UMSUG views

- 3.1 ELEXON provided the Unmetered Supplies User Group (UMSUG) with the full confidential test reports and evidence, noting that the mCMS had passed testing and that ELEXON would be seeking SVG approval at this meeting 219. There were no comments from UMSUG members.

4. Recommendations

- 4.1 We invite you to:
- a) **NOTE** that the Swarco mCMS has passed ELEXON's witness testing against the requirements specified in BSCP520;
 - b) **APPROVE** the Swarco mCMS (Version 1.0) for use in Settlement; and
 - c) **NOTE** that we will update the [CMS page](#) of the BSC Website to reflect this approval.

Appendices

Appendix 1 – Witness testing photos

Attachments

Attachment A – ELEXON's witness testing report for Swarco's mCMS

Attachment B – Swarco's own test report (commercially-sensitive information redacted)

For more information, please contact:

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Appendix 1 – Witness testing photos

Swarco test set up. A heater is used to represent the load of the EV.

