

30 Sept 2016

ENERGY SETTLEMENT FOR ELECTRIC VEHICLE TRICKLE
CHARGING

Introduction

[ELEXON](#) has been asked to consider how it might cater for technology that allows electric vehicles (EVs) to be charged from unmetered connections to street lighting columns. The Unmetered Supplies User Group ([UMSUG](#)) was asked to consider accommodating such equipment under its Central Management System (CMS) arrangements. ADEPT has representation at UMSUG.

1. Background

Currently all EV charging points are required to be metered. Earlier this ELEXON became aware of a potential new approach to EV charging.

The approach uses a socket inserted into a lighting column and a smart cable which plugs in and records the energy delivered to the EV. The infrastructure provider charges the EV user for the service and pays a Supplier for the energy.

This approach is not viable under the metered arrangements because the cable / meter would travel with the EV and could arrive in any Grid Supply Point Group (GSPG) in the country (or even abroad). Settlement needs to allocate energy to the GSPG where it was consumed. It is therefore proposed to follow an unmetered approach that would allocate the consumed energy to the point of delivery to the EV (i.e. at the lighting column). There are trials of the new technology underway in the London.

2. Proposed approach

It was recommended that UMSUG accommodates the new technology under the CMS arrangements. It has many similarities to the existing CMS approach, whereby there is a central control system which is notified of 'events' (connection or disconnection of the smart cable). The central system can then report events mapped to each lighting column to a Meter administrator (MA). The MA can then construct a Half Hourly (HH) data flow for use in energy Settlement.

The detail of the MA calculation will need to be defined and an appropriate 'Test Specification' developed with the UMSUG's input. ELEXON will circulate a draft Specification for comment and consider the need for a Change Proposal (CP) to incorporate the calculation in Balancing and Settlement Code (BSC) Procedure 520 'Unmetered Supplies' if it differs materially from the existing calculation.

Other issues

There is ongoing parallel activity, not relevant to the Balancing and Settlement Code (BSC), which is required to ensure safe operation on the public highway (for example, service cable size, cut-out fusing, earthing and liabilities). Interaction with Distribution Network Operators (DNOs) is also ongoing.

UMSUG agreed on 29 Sept 2016 to:-

- a) **RECOMMEND** that the [SVG](#) accommodates this technology under the CMS arrangements; and
- b) **NOTE** that ELEXON will develop a Test Specification for the UMSUG's review.