

# UMSUG122/01 – BSCP520 AND OID REDLINING FOR ACTION 121/07 (EV 'TRICKLE' CHARGE POINTS IN LAMP POSTS)

**MEETING NAME** UMSUG 122

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**Purpose of paper** Decision

**Classification** Public

**Summary** The Office for Low Emission Vehicles (OLEV) and Regulatory Delivery at the Department for Business, Energy & Industrial Strategy (BEIS) have confirmed that electric vehicle (EV) 'trickle' charge points in lamp posts can be considered for an unmetered supply. The UMSUG and SVG agreed previously in principle to use the measured Central Management System (mCMS) arrangements for these charge points, subject to receiving this confirmation and agreeing the detail to ensure appropriate use of the arrangements. This paper presents our proposed redlined changes to [BSC Procedure \(BSCP\) 520](#) and the [Operational Information Document](#) (OID), along with our proposed next steps.

## 1. Previous UMSUG and SVG discussions

### Ubitricity<sup>1</sup>

- 1.1 In April 2017, the Supplier Volume Allocation Group (SVG) approved Ubitricity's application for a mCMS relating to its EV 'trickle' charging product.
- 1.2 Ubitricity's product uses a charge point fitted in an unmetered lamp post and a Meter in the charging cable. The Meter/cable is the property of the EV owner and so travels with the vehicle. This doesn't fit the BSC's Settlement metering arrangements which require a fixed metering point.
- 1.3 The UMSUG and SVG therefore agreed to create a variant of the BSC's unmetered Central Management System (CMS) arrangements to cater for this type of equipment. The resulting mCMS arrangements are similar to the CMS already used for programmable street lights that have multiple on/off and dimming 'events', and ensure that consumption is recorded accurately for Settlement.

### Other manufacturers<sup>2</sup>

- 1.4 Four other manufacturers have also since approached us about catering for their lamp post 'trickle' charge points under the unmetered arrangements.
- 1.5 These manufacturers' products are similar to Ubitricity's, except that the Meter is in the lamp post charge point. Because the Meter has a fixed location, this would normally be a metered supply. However, the manufacturers have highlighted non-BSC barriers to a metered approach, including that:
  - Distributors are unwilling to provide metered connection agreements for charge points fed by existing unmetered connection points (the lamp posts) – citing the size of supply and engineering regulations.

<sup>1</sup> See papers and minutes for UMSUG meeting [118](#), UMSUG meeting [119](#) and SVG meeting [194](#).

<sup>2</sup> See papers and minutes for UMSUG meeting [121](#) and SVG meeting [201](#).

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- The Meter comes prebuilt into the EV charger and so Meter Operator Agents (MOAs) can't access it for maintenance (one MOA has suggested fitting its own Meter as well as that already in the charge point).
  - The Supply Licence could require a smart Meter if the Meter is registered in Profile Class 3, as it would fall under the Designated Premises definition in the Licence.
- 1.6 In October 2017, the UMSUG and SVG discussed our proposal to accommodate this type of slow or 'trickle' charging equipment by expanding the mCMS arrangements – providing that manufacturers replace the Meter in the charge point with a 'measuring device'. Regulatory Delivery at BEIS advised that it would be seeking BEIS legal advice on whether this approach is consistent with the [Electricity \(Unmetered Supply\) Regulations 2001](#) (the 'UMS Regulations').
- 1.7 The UMSUG and SVG both agreed our proposed approach in principle, subject to:
- The BEIS legal advice;
  - The UMSUG's development of the necessary detailed documentation changes (e.g. to the OID);<sup>3</sup> and
  - Considering each individual mCMS application on a case-by-case basis.
- 1.8 The SVG also placed the following two conditions on its agreement in principle:
- The proposed approach should only be used with existing unmetered connection points, and will not be permitted for new unmetered connection points;<sup>4</sup> and
  - Unmetered Supplies Operators (UMSOs) should use separate Metering System IDs (MSIDs) for this equipment within their inventories.<sup>5</sup>
- 1.9 The UMSUG and SVG both agreed that the unmetered approach shouldn't be used for fast or rapid EV charging.

## 2. OLEV and BEIS discussions

### UMS Regulations

- 2.1 On 16 January 2018, and at OLEV's request, we met with OLEV, BEIS, Regulatory Delivery at BEIS, the Department for Transport (DfT) and Ofgem to discuss the metering requirements for EV charge points. OLEV is responsible for administering the DfT's [On-Street Residential Charge Point Scheme](#). This provides grant funding for local authorities to install EV charge points in residential areas that lack off-street parking.
- 2.2 On 8 February 2018, OLEV contacted us to confirm that OLEV and BEIS's Regulatory Delivery and legal teams are satisfied that 'trickle' charging of EVs can be accommodated under the UMS Regulations.
- 2.3 Regulatory Delivery at BEIS has confirmed that it will be updating the National Measurement Office's 2014 [Guidance on the UMS Regulations](#) to state that EV 'trickle' charge points can be considered for an unmetered supply.<sup>6</sup>

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<sup>3</sup> We already updated the [mCMS Test Specification](#) on 6 November 2017. This is because the changes required were very minor and involved replacing references to 'MID-approved Meter' (originally included to cater for Ubitericity) with 'measurement device'.

<sup>4</sup> The SVG believes that any new land developments (e.g. construction of new roads or housing estates) should consider requirements for metered EV charging infrastructure at the point of design.

<sup>5</sup> To facilitate allocation of different Line Loss Factors and future reporting of EV charge point consumption.

<sup>6</sup> The guidance currently says that 'supplies to electric vehicle charging points should be metered in all cases because of the size of the load and the inability to predict the usage of such points'. However, this was written before recent innovations in charge point technology.

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## Alternative Fuels Infrastructure Regulations

- 2.4 During the discussions, BEIS and OLEV highlighted that EV charge point operators have other obligations under the [Alternative Fuels Infrastructure Regulations 2017](#) (AFIR). These include:
- Meeting the AFIR's requirement for an 'intelligent metering system' (IMS);<sup>7</sup>
  - Meeting the requirements set out in paragraph 5 of the AFIR's Technical Specifications Schedule, which are that:
    - the IMS displays to the motorist the time of use of the charge point;
    - the IMS is secure with regard to data sent to and from it; and
    - information on the performance of the IMS is available to the motorist at the point of recharging.
- 2.5 OLEV has provided its view that one manufacturer's product meets the requirements of an IMS under the AFIR, on the basis of information provided to it by that manufacturer. OLEV has advised that it has asked BEIS (legal and Regulatory Delivery) to view an IMS as a bundle of all of the functionalities of the charge point – including, but not limited to, the measuring device and mCMS. OLEV has also confirmed that BEIS is responsible for the enforcement of the AFIR. We're unaware if other manufacturers have discussed AFIR compliance with OLEV or BEIS.
- 2.6 We've highlighted to OLEV and BEIS that our mCMS specification only covers the back-end software that records data for BSC Settlement, and so we won't be testing or approving the actual charge point (or any associated apps that the operator may use as the 'display' to the motorist). If a process is needed for charge point operators to also demonstrate compliance with the wider AFIR requirements, then BEIS would need to put this in place separately.

## 3. BSCP520 and OID redlining

- 3.1 The following sections explain our proposed changes to the OID (Attachment A) and BSCP (Attachment B), in order to deliver the approach agreed previously in principle by the UMSUG/SVG. We invite the UMSUG to discuss and agree the most appropriate wording, so that we can progress this for the SVG's approval.
- 3.2 At the moment, these changes are redlined into the same version of the BSCP as those relating to separate Action 121/01 ([UMSUG paper 122/02](#)). This is because we suggest progressing all of these BSCP changes as a single Change Proposal (CP).

### Defining slow or 'trickle' charging

- 3.3 We've been unable to find any existing legal definitions of 'trickle', slow, fast or rapid charging that we could use for BSC purposes. However, it appears to be accepted that a power output greater than 7kW constitutes fast charging.<sup>8</sup>
- 3.4 We therefore suggest adding a statement to the OID that any unmetered EV charge points should:  
*'not be used for fast or rapid charging (e.g. they should have an individual power output that is typically not greater than 7kW)'.*
- 3.5 We suggest including this in a new section (1.4) of the OID.

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<sup>7</sup> Defined in the AFIR as 'an electronic system that can measure energy consumption, providing more information than a conventional meter, and can transmit and receive data using a form of electronic communication'.

<sup>8</sup> See, for example, the Technical Specification Annexes in OLEV's [Guidance for Local Authorities](#) (on its On-Street Residential Charge Point Scheme) and the [Go Ultra Low website](#).

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- 3.6 We've used the word 'typically' to give flexibility to consider case-by-case applications, and to reflect that the 7kW isn't intended as an arbitrary cut-off point or formal BSC parameter. For the same reasons, we propose including this wording in the OID (which is guidance) rather than BSCP520 (which would be binding on UMSOs and can only be amended through a CP).
- 3.7 We'll need confirmation from Regulatory Delivery at BEIS that our wording doesn't contradict its planned changes to its own guidance on the UMS Regulations.

## Using separate MSIDs for mCMS

- 3.8 As this is a BSC-specific requirement for UMSOs, we propose to include it in Section 1.2.1 of BSCP520. To support this, we've also defined mCMS as a term/acronym in Section 1.7 of the BSCP.

## Restricting use to existing UMS connection points

- 3.9 We recognise the SVG's view that plans for new land development should include metered charge point infrastructure. However, we also note that, if we place this restriction in the BSCP, then:
- It could prevent case-by-case consideration of any future applications to use unmetered EV charging equipment at new UMS connection points;
  - It could be seen to conflict with the UMS Regulations, if this restriction isn't mirrored in Regulatory Delivery at BEIS's guidance; and
  - ELEXON and the BSC Auditor wouldn't monitor compliance with it.
- 3.10 We therefore propose including the following guidance in the OID (again in the new Section 1.4):
- 'It is anticipated that any unmetered charge points for electric vehicles will be fed by existing UMS connection points, with metered charge point infrastructure being considered for any new land developments at the time of design.'*
- 3.11 This gives more flexibility for the future.

## Restricting use to residential areas

- 3.12 At [UMSUG121](#), we discussed whether to restrict use to 'residential' areas. We noted that this could be difficult to define, as not all residential streets are public highways. Since then, we've also realised that OLEV's On-Street Residential Charge Point Scheme can, in accordance with its [guidance](#), potentially be used for:
- Car parks owned by local authorities (providing that they're in or near a residential area); and
  - Areas that include a mixture of residential and commercial buildings (providing that the charge points will be used primarily to meet the needs of local residents).
- 3.13 We therefore don't propose to progress any 'residential' restriction, on the basis that it could be impractical and open to challenge.

## 4. Next steps

### mCMS applications

- 4.1 We're aware that there's various local authority tenders either planned or in process. We believe these are all running to different timescales, but our conversations with manufacturers indicate that at least one of them has pressing deadlines. While we need to follow due process, we don't want the BSC to be an undue barrier to innovation or to competition in the tender process.

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4.2 We've therefore informed manufacturers that they can now submit their mCMS applications, so that we can start arranging dates for testing.<sup>9</sup> We've also advised them that, where they're involved in tenders (and once they've submitted their applications), we can provide letters confirming that they're undergoing our formal testing process. We'll process applications in the order received.

## OID changes

- 4.3 Nothing in the OID currently prevents us using mCMS for EV charge points. However, while each application will be considered on a case-by-case basis, ELEXON, the UMSUG and the SVG need to apply a consistent set of principles. We therefore propose to take the UMSUG's recommended OID changes to the SVG for approval at its next meeting on 27 March 2018. The SVG has agreed previously that implementation of OID changes should be tied to Market Domain Data (MDD) Releases, which means an implementation date of 11 April 2018 (the MDD 267 Release).
- 4.4 In parallel, we'll progress manufacturers' mCMS applications through the testing process – making the SVG's 27 March meeting the earliest potential approval date for any applications.

## BSCP changes

- 4.5 We also propose to raise a CP to implement the agreed BSCP520 changes. These could potentially be combined into one CP with the other changes covered in paper [UMSUG122/02](#). On the basis that nothing in the BSCP currently prevents us using mCMS for EV charge points, we propose that the CP doesn't need to be approved or implemented before the SVG approves any mCMS applications.

## 5. Recommendations

- 5.1 We invite you to:
- AGREE** the final changes required to the OID and BSCP520;
  - AGREE** that ELEXON will take the OID changes to the SVG for approval at its meeting on 27 March 2018;
  - NOTE** that ELEXON will process and test mCMS applications in parallel, but will only seek the SVG's approval of these once the OID changes are approved; and
  - AGREE** that ELEXON will raise a CP to progress the BSCP520 changes, but that this does not need to be approved or implemented before the SVG approves any mCMS for Settlement.

## Attachments

Attachment A – OID draft redlining

Attachment B – BSCP520 draft redlining

## For more information, please contact:

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<sup>9</sup> Of the four manufacturers who've contacted us, three have already submitted applications at the time of writing.