Change Proposal – BSCP40/02	CP No: 1341 *Version No: 1.0*

Title

Unmetered Supplies: Accommodating Multi-Level Static Dimming Devices in Half-Hourly and Non-Half Hourly Settlement

Description of Problem/Issue

We have raised this CP from DCP0046.

New products are emerging for dimming/switching of street lamps, including pre-programmed devices. These products meet the criteria for Unmetered Supplies (UMS) because they are configured to switch at specific times and to dim to specific levels (i.e. the load is predictable).

These products can facilitate reductions in energy consumption and carbon savings for UMS. However, the BSC Settlement arrangements do not currently allow for an approach to calculating the energy where such equipment is fitted.

Following discussions at the UMS Users Group (UMSUG) and Supplier Volume Allocation Group (SVG), an industry expert group (the Multi-Level Static Dimming UMS Group) has discussed this issue and recommended a solution for progression.

We raised DCP0046 to seek views from Unmetered Supplies Operators (UMSOs) and Meter Administrators (MAs) on the practicalities, impacts, costs and lead times associated with the lower-level detail needed to support the expert group's solution.

All respondents supported the intention of the change. Although there were divergent views on some points, there was a clear majority preference on the way forward. After discussing the next steps with each respondent and the UMSUG, we have raised this CP to progress the solution for implementation (with the solution detail based on the majority industry view).

You can find copies of the (non-confidential) industry responses to DCP0046 on our website here.

Proposed Solution

This change impacts UMSOs, MAs, ELEXON and UMS customers who wish to use multi-level static dimming devices to reduce their energy consumption.

The solution contains the following steps:

1) A dimmer manufacturer submits an application to ELEXON for a Charge Code for its new product. The manufacturer will need to provide standard test data from an ISO 9001 accredited test house, to demonstrate the energy drawn by the dimmer. ELEXON will calculate a new Charge Code and publish it in our existing list of Charge Codes on our website.

2) A NHH or HH UMS customer (or the ballast or dimmer manufacturer on the customer's behalf) submits an application to ELEXON for a Switch Regime, containing the following information:

    a. The switching times for which the application is being made;

    b. The percentage energy and associated LUX[1] levels mapped to the switching times;

[1] LUX is a measure of brightness.

c. A statement of the dimmer type (i.e. the product), its Charge Code, and the range and type of electronic ballasts and lamps that will be used with the Switch Regime;

d. If the requested product/Charge Code/ballast/Switch Regime combination is not already a published valid combination on our website, then the application for the Switch Regime must include evidence from either the ballast or dimmer manufacturer that the dimming device will accurately dim the proposed ballast combinations (i.e. that the chosen product will dim the lamp/ballast combination to the levels at which the application has been made);[2]

e. A letter of undertaking from the dimmer manufacturer that it will undertake the initial configuration of the product at the factory, label the product with the configuration (to help UMSOs undertake on-site audits), and remove the ability for the product to be subsequently reconfigured; and

f. An undertaking from the dimmer manufacturer to provide subsequent confirmation to ELEXON (either directly or via the customer) that this configuration/labelling has occurred.[3]

3) ELEXON will allocate the correct Switch Regime. Where the requested product/Charge Code/ballast/Switch Regime is not already a published valid combination, ELEXON will calculate a new Switch Regime and record this in our existing spreadsheet of Switch Regimes on our website. 3-digit alpha-numeric regime IDs will be used to ensure that the number of new Switch Regimes IDs is not restricted by the current limit to 3 numeric digits.[4]

4) ELEXON will record all valid product/Charge Code/ballast combinations, mapped to Switch Regimes, in a new table on our website.

5) The customer will provide the Charge Codes and Switch Regime information to the UMSO in its detailed inventory. The UMSO will need to validate the NHH or HH UMS customer's inventory against our website table of valid product/Charge Code/ballast/Switch Regime combinations, before making the appropriate Estimated Annual Consumption (EAC) calculation.

6) MAs will accommodate the new Switch Regimes in Equivalent Meter software for HH UMS customers, using our website table of valid product/Charge Code/ballast/regime combinations. Providing that the resulting calculations will accurately model the energy consumption and profile of the new Switch Regimes, individual MAs can decide how best to accommodate the new Switch Regimes in their own software. The UMSO will send the summary inventory to the MA as currently.

7) To make system development manageable, the allowed number of changes in light levels during a 24-hour period will be limited. We propose a limit of 8, and invite you to comment on this as part of your impact assessment.[5] We also propose a limit of 4 seasonal changes per year, and that the switching times must be on the hour or half-hour.

8) As an interim solution before the CP is implemented, we will allow UMS customers to apply to install the products under existing Switch Regimes. This will allow customers to obtain the resulting carbon benefits, but will mean that the actual energy used by the products will not be settled or billed accurately until the CP is implemented. Under this interim solution, the manufacturer must still apply for a Charge Code as per step 1 above. The customer must also apply for an existing Switch Regime and provide ELEXON with the same evidence specified in step 2 above. When the CP is implemented,

[2] As we build up our list of valid product/Charge Code/ballast/Switch Regime combinations over time on our website, we will not need this evidence if the application is for one of our already-published valid combinations. This requirement is therefore not intended to be unduly onerous, and the effort involved should decrease over time. We also assume that customers themselves will want assurances from manufacturers that the product will work with their lamp/ballast combinations.

[3] Requirements 2e and 2f are intended to ensure that the product retains the correct Switch Regime. There was an almost-unanimous view from DCP respondents that the customer should not have the ability to reconfigure the product. Some respondents queried how manufacturers' configuration and labelling could be enforced. We have concluded that requiring a letter of undertaking and a follow-up letter of confirmation is the most that ELEXON could enforce in this area, but that this should help UMSOs with their own audits.

[4] Respondents to DCP0046 had split preferences/impacts between the 2 options. However, a large majority of respondents indicated that alpha-numeric IDs would have significantly less impact on their systems (some can already use these).

[5] This did not form part of DCP0046, but was suggested by one respondent. We have not identified any reason why a customer would require more than 8 light level changes within 24 hours.

ELEXON will provide the customer with their new (correct) Switch Regime and the customer must then submit an updated inventory to the UMSO.[6]

9) We will undertake an education exercise with UMSOs and customers through the UMSUG on both this interim solution and the CP requirements, to ensure customers are aware of the process and the benefits of applying for the correct Switch Regimes once the CP goes live.

All applications will be discussed at the UMSUG, and will go through the Market Domain Data (MDD) change process managed by the SVG.

You can find further lower-level details of the solution in Attachments A and B.

Justification for Change

The BSC arrangements should not be a barrier to Councils and Lighting Authorities installing products which can achieve reductions in energy consumption and associated environmental benefits.

To which section of the Code does the CP relate, and does the CP facilitate the current provisions of the Code?

This CP facilitates the UMS provisions of BSC Section S8, and the requirement on UMSOs to ensure that UMS energy is calculated to standards of accuracy which are no worse than those for metered supplies (S8.1.3).

Estimated Implementation Costs

Our implementation costs are 14 man days of effort (equating to £3,360) to implement the redlined changes to BSCP520 and the OID, update our LWIs and website guidance, create the new website spreadsheets and provide the necessary education to UMSOs, MAs and UMS customers.

There will also be some ongoing operational effort for us in processing applications.

Configurable Items Affected by Proposed Solution(s)

This CP will impact BSCP520 'Unmetered Supplies registered in SMRS'. We have provided our proposed redlined changes to the BSCP as Attachment A to this CP.

This CP will also impact our Operational Information Document (OID). This is a guidance document that we provide on our website. Because most of the solution detail will be included in this guidance rather than in BSCP520, we have attached an indicative redlined version of the OID to help you respond to this impact assessment.

We welcome your comments on the proposed BSCP/OID changes.

Impact on Core Industry Documents or System Operator-Transmission Owner Code

None.

[6] There was a significant majority preference for this interim approach among DCP respondents, although some noted that it was crucial to educate customers on the benefits of applying for the correct Switch Regime once the enduring CP solution is in place. As the customer's energy is likely to be overstated without the correct Switch Regime, there will be a natural incentive on the customer to apply for the correct Switch Regime and submit an updated inventory once the CP is implemented. We expect any initial uptake of the devices before 30 June 2011 to be low, and any overall Settlement consumption volume error in this period to be non-material. The interim solution also recognises that ELEXON cannot practicably prevent customers from using non-registered devices. It therefore provides a process for registering the device and Charge Code in advance of the full enduring solution, so that the energy drawn by the dimmer is correctly declared.

Related Changes and/or Projects

None.

Requested Implementation Date

30 June 2011 Release (assuming the CP is approved by the SVG on 2 November 2010).

This gives an implementation lead time of just under 8 months. The lead times needed by UMSOs and MAs (as provided in their responses to DCP0046) make a February 2011 implementation unfeasible, but all but one respondent stated that they could meet a June 2011 implementation based on this lead time.

One UMSO/MA stated in their response to DCP0046 that they needed a lead time of 12-15 months. In order not to delay the benefits of this CP, we propose that the CP is implemented on 30 June 2011 on a voluntary basis. This means that UMSOs/MAs who wish to offer customers the ability to use multi-level static dimming devices can do so as soon as they are able after 30 June. UMSOs/MAs who do not wish to offer this ability, or who delay offering it, will not be in breach of the BSC but will bear the risk that customers may choose to switch to an alternative UMSO/MA.

We have previously followed a similar implementation approach for the introduction of Central Management Systems (CMS) under CP1196, which facilitated (rather than mandated) the use of this technology in Settlement.

Version History *(mandatory by BSCCo)*

We raised version 1.0 of this CP on 3 September 2010 for industry impact assessment.

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Attachments: Yes

Attachment A – BSCP520 proposed redlining (18 pages)
Attachment B – OID indicative redlining (31 pages)