PUBLIC

Consultation: Generic Charge Codes for LED lighting

ELEXON

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CONSULTATION: GENERIC CHARGE CODES FOR LED LIGHTING

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CONSULTATION: GENERIC CHARGE CODES FOR LED LIGHTING

WHY ARE WE CONSULTING?

We seek your views on the impacts, costs and benefits of introducing 'generic' Charge Codes for light-emitting diode (LED) lighting Apparatus.[1] In particular, we welcome views from the following participants in the Unmetered Supplies (UMS) arrangements:

- electricity Suppliers;
- Meter Administrators;
- Distribution System Operators (DSOs) and their UMS Operators (UMSOs);
- customers;
- inventory database providers;
- providers of Central Management Systems (CMS); and
- manufacturers of LED lighting Apparatus.

Charge Codes and Switch Regimes are the mechanisms we use in Settlement[2] to calculate the consumption of UMS Apparatus. Originally, all Charge Codes for street lighting were generic (e.g. 70 Watt High Pressure Sodium) and were not product-specific. A number of generic Charge Codes remain on the Charge Code Spreadsheet[3] and are widely used by UMS customers and manufacturers. However, over time we have moved towards unique, product-specific, Charge Codes due to manufacturers' commercial demand for these.

In 2011/12, we reviewed the efficiency of the UMS Settlement arrangements with the two committees responsible for this function – the Supplier Volume Allocation Group (SVG) and the UMS User Group (UMSUG). This included discussing the idea of developing a new generic series of Charge Codes and Switch Regimes. The intention was to deal with the proliferation of unique product-specific Charge Codes, the numbers of which were increasing rapidly due to technology innovation in LED street lights and sign lighting. We presented the review findings to the UMSUG in January 2013 (paper UMSUG108/06) and to the SVG in February 2013 (paper SVG144/04).

At that time the review concluded that no change was appropriate because of:

- the difficulties customers already have with implementing changes to Charge Codes and Switch Regimes;
- customers' issues with their inventory databases; and
- UMSOs' issues with inventory validation.

Philips Lighting participated in the original review. It recently asked that we reconsider a generic approach for LED lighting, as it believes that this would simplify the arrangements for manufacturers and customers. With the UMSUG, we have therefore revisited the feasibility and benefits of this idea. This consultation document presents the

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[1] By Apparatus, we mean all equipment which uses/supports electrical conductors or in which these form part.

[2] The mechanism by which generators and Suppliers of electricity financially account for (or 'settle'), after the event, any differences between the energy they have traded ahead of time and the energy they have produced or consumed in real time. To ensure the correct allocation of customers' energy consumption to Suppliers, we need to calculate the consumption of their UMS Apparatus and account for this in Settlement. The Balancing and Settlement Code (BSC), an industry legal agreement administered by ELEXON and overseen by the BSC Panel, governs the Settlement process. All licensed generators, Suppliers and distributors of electricity are signatories, or parties, to the BSC. The BSC Panel delegates some of its powers, functions and responsibilities to its sub-committees. Those relevant to the UMS Settlement arrangements are the Supplier Volume Allocation Group (SVG), which approves applications for Charge Codes and Switch Regimes, and the UMS User Group (UMSUG), which reviews these applications and makes recommendations to the SVG on the arrangements.

[3] This spreadsheet lists all of the Charge Codes and Switch Regimes approved by the SVG.

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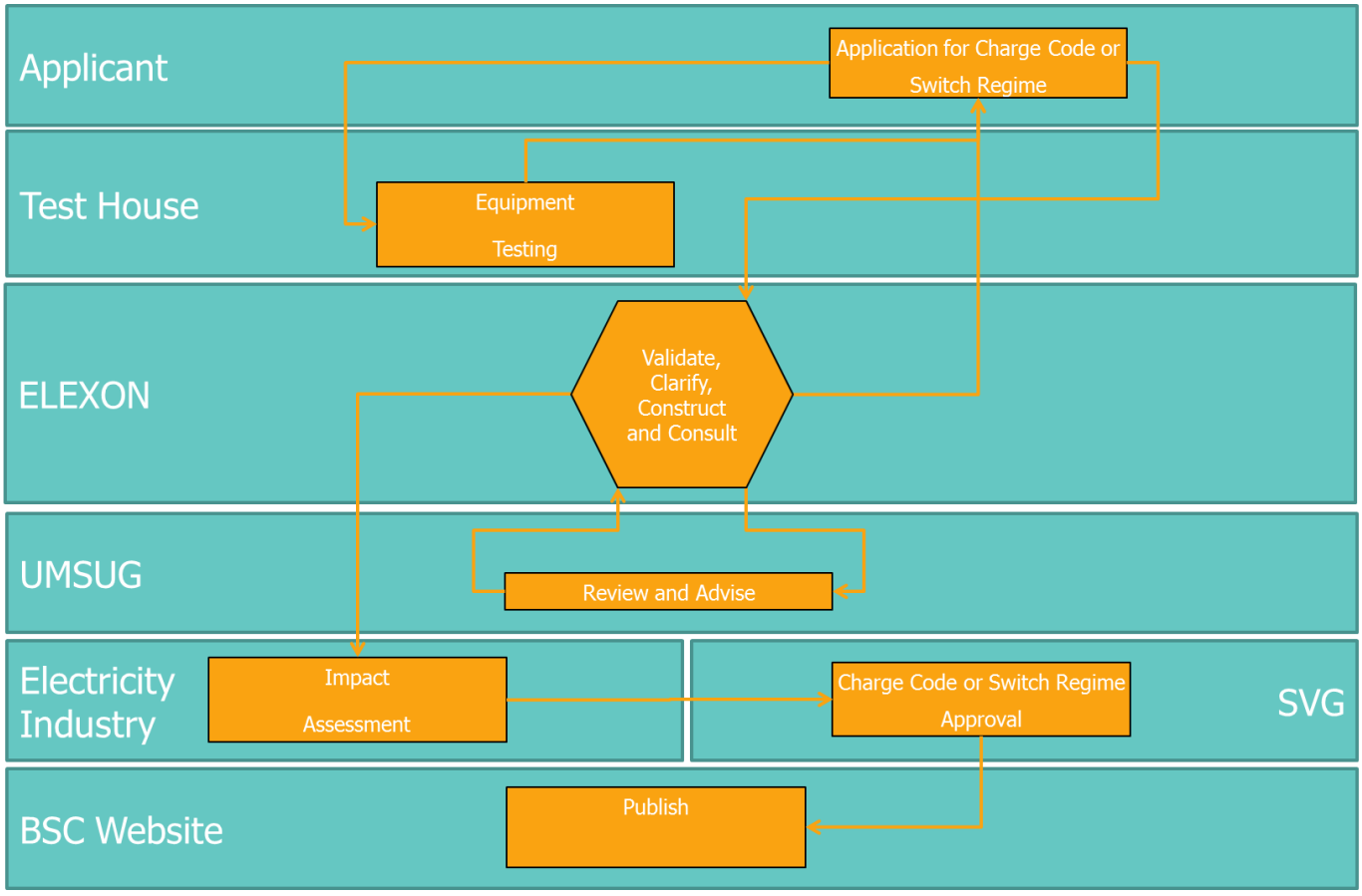
approach that the UMSUG believes is most feasible, and its view of the potential benefits. We seek your views, on behalf of the UMSUG, on whether we should progress this further.

WHAT IS THE EXISTING CHARGE CODE APPLICATION PROCESS?

The diagram below shows the existing high-level Charge Code application process. Our Operational Information Document (OID) sets out in detail how we construct Charge Codes for different types of UMS Apparatus, including testing requirements.



WHAT ARE THE ISSUES WITH EXISTING LED LIGHTING CHARGE CODES?

In recent years, ELEXON has received applications for large numbers of unique, product-specific, Charge Codes. LED drivers can be set at a range of currents (e.g. from 150-1000mA). They can also accommodate many dimming levels (e.g. 100%, 75% and 50%, but in principle dim to every % level in between). Each application for a unique, product-specific, Charge Code requires the applicant, usually the manufacturer, to obtain test house data to demonstrate the product's consumption. These testing requirements have been onerous on LED manufacturers, particularly when combined with multiple or single-step dimming of the LED during the night period. The UMSUG has sought to address this in part by allowing the manufacturer to provide load curve data. The current OID testing requirements for LED lighting Apparatus are as follows:

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CONSULTATION: GENERIC CHARGE CODES FOR LED LIGHTING

Applicants for LED Street Light Charge Codes in the 41 Series can submit a load curve based on test data from sufficient different dimming levels (to include full power and minimum dimming level) to allow for extrapolation of intermediate power levels. Customers of these applicants can apply for specific dimmed Charge Codes of apparatus that has a load curve on file with the BSCCo (ELEXON). Such customers should be made aware of the application process by the applicant.

In the last two years we have issued over 3,000 Charge Codes for LED Street Lights alone. Only around half of these Charge Codes were for lamps at full power, the rest were for the same LED Street Lights but with single-step, part-night dimming configurations.

HOW WOULD GENERIC LED LIGHTING CHARGE CODES WORK IN SUMMARY?

The UMSUG seeks your views on creating a set of generic Charge Codes for LED lighting Apparatus. The new Charge Codes would have the same length (13 digits) and a similar structure to the existing Charge Codes. They would contain the Circuit Watts for the LED lighting at full power. The nominal Watts that are currently defined within the Charge Code would match the full power Circuit Watts for that LED lighting. We would set up the generic Charge Codes at 1 Watt intervals, to cover all the expected full power LED lighting that is likely to have an unmetered supply. For example, there could be 500 Charge Codes from 1 Watt to 500 Watts

We would not issue Charge Codes in this new range with dimming percentages. In order to facilitate single-step dimming of these new Charge Codes (e.g. dimmed to 50% full power from 01:00 to 05:00), we would provide new Switch Regimes to customers or manufacturers upon application. These new Switch Regimes would use the existing approach for multi-level static dimming that has been in place since 2010.

Where a customer purchases their unmetered energy on a Half Hourly basis, Meter Administrators[4] will use the switching times and power percentages to reflect the dimming in the half-hourly Settlement energy calculations. Where a customer purchases their unmetered energy on a Non Half Hourly basis, the Settlement process requires UMSOs to estimate the annual consumption of the inventory of Apparatus (through an Estimated Annual Consumption value, or EAC). This is achieved by adjusting its Switch Regime burn hours (the number of annual hours that the Apparatus will consume energy) to reflect the energy saving achieved by dimming the LED.

However, in order to reduce the total number of Switch Regimes the UMSUG proposes to:

- only allow dimming levels that end in five (5) or zero (0) (e.g. 50%, 55%, 60%, 65%); and
- limit the event times to the hour or half hour (e.g. 05:00, 05:30, 06:00, 06:30).

All Charge Codes and Switch Regimes that the SVG has approved previously will continue to exist, with no changes to the arrangements for these. All new Charge Code applications for LED lighting would receive generic Charge Codes. The intent of the proposed changes is to set up a simpler process to accommodate the increased range of LED lighting equipment coming onto the market.

WHAT WOULD BE THE DETAILED APPROACH?

1. Existing Charge Code structure

Charge Codes for standard lighting equipment currently have the following structure (as defined in the OID):

[4] Meter Administrators undertake the energy calculations for UMS inventories that are settled on a Half Hourly basis.

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Digits	Description
1 and 2	Identifies the lamp type
3, 4, 5 and 6	The nominal Watts (typically the power value printed on the lamp, e.g. a 100W LED) This is not the same as (and is usually less than) the Circuit Watts
7	The control gear type
8, 9 and 10	Allows equipment with the same nominal Watts to have a different Charge Code
11, 12 and 13	The dimming level, i.e. the percentage of full load ('100' = full load Circuit Watts)

2. Existing LED Charge Code identifiers

Currently, when we provide Charge Codes for LED lighting, the first two digits above are either 40 or 41 depending on the type of Apparatus:

Code	Description	Definition
40	Light Emitting Diodes (LEDs)	LED lights that are used for traffic sign illumination or aesthetic and other purposes, e.g. not set in a lighting column, see Code 41.
41	LED Street Lights	LED Street Lights are distinct from other LEDs. This code is for LEDs that are set in a lighting column (or similarly mounted) and are used to illuminate roads and highways. LEDs that are for aesthetics or other purposes use the Code 40.

3. Proposed new generic LED Charge Code structure

The UMSUG proposes to create a new generic series of Charge Codes (e.g. called 42 series) to cover all LED lighting Apparatus (the existing 40 and 41 series). The Charge Codes would have incremental Circuit Watts at 1 Watt intervals. For example, there could be 500 Charge Codes from 1 Watt to 500 Watts.

We would populate digits 3-6 of the new generic Charge Codes with the Circuit Watt value rather than the nominal Watts. We would set digits 7-10 to a fixed number ('0000') and the last three digits would always be 100. So a Charge Code for a LED lighting product with its driver set to deliver 55 Watts at full power would be 42 0055 0000 100.

We would set the assumed power factor for all new generic LED Charge Codes to 1 (unity), noting that this will not be the case in reality. The UMSUG proposes this unity value since we cannot have a power factor range with the proposed solution, only a fixed value. Neither Settlement nor UMS Distribution Use of System Charging (DUoS) uses information on reactive power. We also believe that most LED lighting products are leading rather than lagging. So the structure of the new generic LED lighting Charge Codes would be as follows:

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Digits	Description
1 and 2	42
3, 4, 5 and 6	The Circuit Watts at full power
7	Always 0
8, 9 and 10	Always 000
11, 12 and 13	Always 100

Question 1. Do you agree with the proposed structure for generic LED lighting Charge Codes?
Please provide rationale.

Question 2. Do you agree with the proposed unity approach to power factors?
Please provide rationale.

4. Applying to use generic LED Charge Codes

LED manufacturers would apply to use these Charge Codes by providing:

- data showing the power range of the driver settings that can be used; and
- a load curve based on test data from sufficient different dimming levels (to include full power and the minimum dimming level).

This would allow us to extrapolate intermediate power levels. We would still expect the test data to include both Watts (W) and Volt Amps (VA). However, we would not consider or reject applications based on the derived power factors (PF)[5] since we are assuming a unity power factor of 1. We would then provide the manufacturer with confirmation that it can use all generic Charge Codes published on the Charge Code Spreadsheet within the capability of the equipment (LED driver limits):

Nominal Watts	Unit Descri-ption 1	Unit Descri-ption 2	Company	Manufacturer's Designation	New Charge Code	Circuit Watts	PF
1	LED Generic	Generic	Generic	Generic	42 0001 0000 100	1	1
2	LED Generic	Generic	Generic	Generic	42 0002 0000 100	2	1

[5] We would query power factors with the applicant if these fall outside our expectations.

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Nominal Watts	Unit Descri-ption 1	Unit Descri-ption 2	Company	Manufacturer's Designation	New Charge Code	Circuit Watts	PF
3	LED Generic	Generic	Generic	Generic	42 0003 0000 100	3	1
…		…	…	…	…		
500	LED Generic	Generic	Generic	Generic	42 0500 0000 100	500	1

5. New Manufacturer Equipment LED Range Spreadsheet

We would publish each manufacturer's allowed Charge Code range for each product/drivers range in a new Manufacturer Equipment LED Range Spreadsheet on the BSC Website[6]:

Manufacturer	Manufacturer's Designation	Generic LED Codes – Lower Limit	Generic LED Codes – Upper Limit
Philips Lighting	25W or 40W Xitanium Driver[7]	42 0008 0000 100	42 0031 0000 100
Holophane Euope Limited	DSX2 100 LED	42 0146 0000 100	42 0232 0000 100
Urbis Schréder	8 LED LF	42 0010 0000 100	42 0019 0000 100

The UMSUG proposes to introduce this new spreadsheet to address potential issues for Meter Administrators, UMSOs and customers' asset database software. These are:

- the risk that, if Meter Administrators loaded the main Charge Code Spreadsheet directly into their systems with the same generic Charge Codes listed against multiple manufacturers, this could cause the software to reject apparent 'duplicate' Charge Codes;
- the risk that, without recording which manufacturers have been authorised to use which generic Charge Codes, UMSOs would be unable to audit whether an item of LED lighting Apparatus connected to their network is using an appropriate Charge Code; and
- the similar risk that customers would be unable to confirm that the manufacturer has undertaken the appropriate Charge Code application process through ELEXON.

The manufacturer of the LED lighting Apparatus will advise the customer of the appropriate Charge Code to use with the equipment. This Charge Code will take account of any embedded Constant Light Output (CLO) logic embedded in the driver.

[6] www.elexon.co.uk.

[7] We use these examples for the purposes of this consultation only; they may not be a true reflection of the limits for these types of Apparatus.

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All manufacturers of LED Lighting equipment would use the same range of generic LED lighting Charge Codes. As a result, it would no longer be possible to determine the manufacturer and/or model from the Charge Code.

Question 3. Do you agree with the proposed approach to providing generic LED Charge Codes?

Please provide rationale.

6. Using the generic LED Charge Codes with single or multi-step dimming

The new Charge Codes would be used with the existing multi-step approach using existing or new Switch Regimes even where only a single-step dimming event occurs. This approach would replace the existing '500' series Switch Regimes that are used with Charge Codes ending in three digits less than 100. We will retain the 500 Series for use with legacy Charge Codes that end in in three digits less than 100; however, we would also applications for new Switch Regimes to provide the equivalent new 'multi-level' type Switch Regimes.

As now, we would publish the Switch Regimes on both the Valid Dimming Combination and Switch Regime Spreadsheets.[8] We would only accept applications for Switch Regimes where:

- the dimming percentages end in a five (5) or a zero (0): e.g. 50%, 55%, 60%;
- the minimum dimming level is not less than [45%] and the maximum is not higher than [85%];
- the dimming events (the time at which the Apparatus dims the LEDs) occur on the hour or half hour (e.g. 05:00, 05:30, 06:00, 06:30).

The UMSUG proposes this approach to limit the number of potential Switch Regimes. It proposes these specific limits based on its existing experience of manufacturers' applications.[9]

Question 4. Do you agree with the proposed minimum and maximum dimming percentage limits for Switch Regimes?

Please provide rationale.

7. Existing single-step process

In the existing process, if an LED dims to 50% power from 01:00 to 05:00 you would use a Charge Code ending in '050'. The inventory combines this with a Switch Regime within the published 500 series that has that timing for the dimming. See example below (we have highlighted the Eastern region annual hours for reference later on):

Regime	Period	Eastern	East Midlands	London	Merseyside & North Wales	Midlands	Northern	North Western	Southern	South Eastern	South Wales	South Western	Yorkshire	South Scotland	North Scotland
536	Dimmed from 01:00 to 05:00 - Bright	***2840***	2832	2815	2816	2823	2831	2817	2822	2824	2782	2792	2820	2818	2848
536	Dimmed from 01:00 to 05:00 - Dim	***1311***	1317	1338	1331	1327	1310	1330	1332	1330	1370	1364	1325	1320	1282

[8] The Valid Dimming Combination Spreadsheet lists all SVG-approved combinations of Switch Regimes for use in association with multi-level static dimming devices. The Switch Regime Spreadsheet lists all Switch Regimes approved for use by the SVG.

[9] The UMSUG's analysis demonstrated that most existing dimmed codes are between 75% and 50% dimming, with peaks at 50%, 55% and 60%. It also highlighted that dimmed codes amass at 5% intervals. No dimmed Charge Code listed on the BSC Website is currently lower than 43% or higher than 86%.

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8. Revised Valid Dimming Combination Spreadsheet

We would amend the existing Valid Dimming Combination Spreadsheet to display all events and percentages on a single line, to allow users to filter entries. A new spreadsheet view for single-step dimming to 50% might look like this (but would have a filter added to help users identify the correct Switch Regimes):

Valid Dimming Combination	Switch Regime Code	On Event	Dim % Energy	Switch Event 2 Time (UTC)	Switch Event 2 Dim % Energy	Switch Event 3 Time (UTC)	Switch Event 3 Dim % Energy	…	Switch Event 8 Time (UTC)	Switch Event 8 Dim % Energy	OFF Event
Events	*01A*	PECU	100	01:00	50	05:00	100	…	NULLS	UUU	PECU

The revised Switch Regime Spreadsheet showing the average burn hours (if at full Circuit Watts) used to calculate annual consumption would look like this:

Regime	Period	Eastern	East Midlands	London	Merseyside & North Wales	Midlands	Northern	North Western	Southern	South Eastern	South Wales	South Western	Yorkshire	South Scotland	North Scotland
01A	Dimmed from 01:00 to 05:00 – Dim 50%	**3496**	3491	3484	3482	3487	3486	3482	3488	3489	3467	3474	3483	3478	3489

9. Revised energy calculation for single-step dimming

Where a customer purchases their unmetered energy on a Half Hourly basis, the Meter Administrator will use the existing approach to multi-level dimming for single step dimming. That is, they will enter the dimming level and timings indicated by the Switch Regimes into the Equivalent Meter[10]. Any percentage reduction in power will then be applied to the full Circuit Watts at the indicated times. The energy calculations that determine the half-hourly consumption values for the LED lighting Apparatus will reflect the dimming (reduced power).

Where a customer purchases their unmetered energy on a Non Half Hourly basis, this requires the Meter Administrator to estimate the annual consumption of the Apparatus (the EAC). Here, two different methods can be set to achieve the same results:

For ease of calculation, assume we have an LED light with 100 Circuit Watts dimmed to 50% from 01:00 to 05:00 in the Eastern region. The *existing* Non Half Hourly calculation would be:

100 Watts * 2840 Hours + 50 Watts * 1311 Hours= **349.6 kWh** per year

We calculated this using the Burn Hours in ***red*** italics from the existing Switch Regime spreadsheet shown above and converting to kWh, using an existing Charge Code ending in '050' (e.g. 41 0100 0013 050).

The *new* calculation would be:

100 Watts * 3496 Hours = **349.6 kWh** per year

[10] An Equivalent Meter is the software used by a Meter Administrator to calculate the Half-Hourly energy consumption.

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We calculated this using the Burn Hours in ***green*** italics in the revised table above and converting to kWh, using a generic Charge Code ending '100' (e.g. 42 0100 000 100).

10. Declaring the new combinations of generic Charge Codes and Switch Regimes

The customer will need to populate their inventory with the new generic Charge Code and new Switch Regimes as per current practice. There are no proposed changes to the Standard Inventory Format defined in the OID.

11. Benefits

The UMSUG has identified the following potential pros and cons of introducing generic LED lighting Charge Codes:

Pros	Cons
Benefits to customers from reducing the number of Charge Codes for LEDs, making identification of the correct Charge Code simpler.	Any change will cause confusion initially.
Benefits to Meter Administrators and UMSOs as they would only have to populate their systems once with the new Charge Codes.	Potential dis-benefit to UMSOs from reduction in detail of the Apparatus and its manufacturer, since the Charge Codes will not be Apparatus-specific.
Benefits to manufacturers in applying for use of the generic Change Codes, e.g. less onerous application process. Would also shorten the time between submitting an application and ELEXON allocating the relevant Charge Codes. As the generic Charge Codes would be pre-approved by the SVG there would be no need for the committee to approve their allocation to the applicant or for the applicant to wait for ELEXON to update the spreadsheet. Once a manufacturer has had its test data validated, ELEXON would notify it that it can use the appropriate generic LED lighting Charge Code range straight away.	May make it less easy for manufacturers to distinguish their product's energy savings as a unique selling point.
Benefits to ELEXON, the UMSUG and the SVG from reducing the overall number of Charge Codes by removing single-step dimming Charge Codes for LEDs. Reduces proliferation of Charge Codes caused by the current need for a unique ID; avoids risks of duplicates or running out of IDs. Administration/efficiency benefits in reducing the number of unique Charge Code applications.	Increases the number of Switch Regimes to accommodate single-step dimming, as variants at numerous dimming levels would be required to replicate the existing functionality. However, this is standing data and can be set up without any requirements for testing. Inventory system providers may have to make system changes to support the new Switch Regimes.

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Pros	Cons
	CMS providers may need to make system changes, as a single generic LED lighting Charge Code will be applied to equipment which may have different dimming and CLO characteristics.

During the UMSUG's discussion, it was suggested that some single-step Switch Regimes for the most popular '500' series Switch Regimes could be set up for use by customers when we publish the new generic Charge Codes (e.g. for popular dimming percentages such as 50% and 75%). However, we believe that provision of new Switch Regimes should only be on application to ensure that the number of Switch Regimes matches actual operational use. The UMSUG has identified that it should be easier for a customer to identify the appropriate Switch Regime from the Valid Dimming Combination Spreadsheet than the existing process of identifying the correct single-step dimmed Charge Code.

12. Implementation approach

We propose the following implementation approach:

- We would add the new generic LED lighting Charge Codes to the main Charge Code Spreadsheet;
- Use of generic LED lighting Charge Codes would be mandatory for all new applications for LED lighting Apparatus;
- When a manufacturer of LED lighting Apparatus applies for new Charge Codes, we would update the new Manufacturer Equipment Range Spreadsheet with the appropriate valid ranges;
- Manufacturers or customers could apply at any time for new Switch Regimes to allow for single or multi-step dimming;
- We would process new Switch Regimes in the existing timescales (e.g. approximately one month from time of application);
- Legacy unique Charge Codes would continue, so manufacturers and customers would not be required to change these to the new generic LED lighting Charge Codes; and
- Manufacturers could optionally apply to have their existing 100% Charge Codes (Charge Codes ending in 100) for their 40 or 41 series mapped to a new generic Charge Code.

The UMSUG will use the consultation responses to determine an appropriate implementation date.

Question 5. Do you agree with the proposed implementation approach?

Please provide rationale.

Question 6. How long would you need to make any changes to your systems, documents and processes to support the new generic LED lighting Charge Codes?

Please provide rationale.

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13. Example of manufacturer's generic Charge Code declaration to the customer

When the manufacturer has been informed of the range of generic Charge Codes that can be used for its driver then they can map its products to the appropriate Charge Code. Here is an example of how a manufacturer could provide this information to the customer (use of this format would be good practice but would not be mandatory):

Iridium3 Mini with CLO						
Housing	**Lamp Colour**	**Lumen package**	**Optic**	**Power system (W) average over 100 K hrs**	**Driver**	**UMSUG Charge Code**
BGP381	740	11 CLO	MSO / WSO / DK	8	25W Xitanium	42 0008 0000 100
BGP381	740	13 CLO	MSO / WSO / DK	9	25W Xitanium	42 0009 0000 100
BGP381	740	15 CLO	MSO / WSO / DK	11	25W Xitanium	42 0011 0000 100
BGP381	740	17 CLO	MSO / WSO / DK	12	25W Xitanium	42 0012 0000 100
BGP381	740	19 CLO	MSO / WSO / DK	13	25W Xitanium	42 0013 0000 100
BGP381	740	20 CLO	MSO / WSO / DK	15	25W Xitanium	42 0015 0000 100
BGP381	740	22 CLO	MSO / WSO / DK	14	25W Xitanium	42 0014 0000 100
BGP381	740	25 CLO	MSO / WSO / DK	16	25W Xitanium	42 0016 0000 100
BGP381	740	30 CLO	MSO / WSO / DK	20	25W Xitanium	42 0020 0000 100
BGP381	740	35 CLO	MSO / WSO / DK	24	25W Xitanium	42 0024 0000 100
BGP381	740	40 CLO	MSO / WSO / DK	28	40W Xitainium	42 0028 0000 100
BGP381	740	45 CLO	MSO / WSO / DK	31	40W Xitainium	42 0031 0000 100
BGP381	830	11 CLO	MSO / WSO / DK	9	25W Xitanium	42 0009 0000 100
BGP381	830	13 CLO	MSO / WSO / DK	10	25W Xitanium	42 0010 0000 100
BGP381	830	15 CLO	MSO / WSO / DK	12	25W Xitanium	42 0012 0000 100
BGP381	830	17 CLO	MSO / WSO / DK	14	25W Xitanium	42 0014 0000 100

Question 7. Do you have any additional comments on this proposal?

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14. Collated consultation questions

We invite you to respond to the following consultation questions:

Question	Answer
Question 1. Do you agree with the proposed structure for generic LED lighting Charge Codes? ***Please provide rationale.***	
Question 2. Do you agree with the proposed unity approach to power factors? ***Please provide rationale.***	
Question 3. Do you agree with the proposed approach to providing generic LED Charge Codes? ***Please provide rationale.***	
Question 4. Do you agree with the proposed minimum and maximum dimming percentage limits for Switch Regimes? ***Please provide rationale.***	
Question 5. Do you agree with the proposed implementation approach? ***Please provide rationale.***	
Question 6. How long would you need to make any changes to your systems, documents and processes to support the new generic LED lighting Charge Codes? ***Please provide rationale.***	
Question 7. Do you have any additional comments on this proposal?	

HOW DO I RESPOND TO THIS CONSULTATION?

Response deadline and contact details

Please:

- use the response form available from the Consultations page of the BSC Website;
- email your response to bsc.admin@elexon.co.uk by **17:00** on **Friday 31 July 2015**;
- use 'UMSUG LED Charge Codes response' as the subject line of your email;
- indicate clearly if any aspects of your response are confidential and, if so, which parts; and
- contact Kevin Spencer on 020 7380 4115 if you have any questions.

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