

This document is classified as **White** in accordance with the Panel Information Policy. Information can be shared with the public, and any members may publish the information, subject to copyright.



DP174 'Changes to Electricity pricing limitations within DUIS'.

Modification Report
Version 0.3
21 June 2021







About this document

This document is a draft Modification Report. It currently sets out the background, issue, and progression timetable for this modification, along with any relevant discussions, views and conclusions. This document will be updated as this modification progresses.

Contents

1.	Summary	.3	
2.	lssue	.3	
3.	Assessment of the proposal	.5	
Арр	endix 1: Progression timetable	.5	
Арр	ppendix 2: Glossary		

Contact

If you have any questions on this modification, please contact:

Khaleda Hussain

020 7770 6719

Khaleda.Hussain@gemserv.com





1. Summary

This proposal has been raised by Robert Johnstone on behalf of Utilita Energy Limited.

This modification seeks to change the value range restriction of the BlockPrice and TOUPrice Data Items within DUIS. This is required as it allows more accurate prices to be set. This proposal would have no substantive impact on what prices can be set to, it simply seeks to increase the number of decimal places which can be used.

The Smart Energy Code (SEC) Appendix AD 'Data Communications Company (DCC) User Interface Specification' (DUIS) sets out the way to define the price of electricity using the technical workings of the Device. Suppliers must set the electricity tariffs using a combination of a Scaling Factor and a Price. The Price element must be set between -32768 to 32767. This value is then multiplied by a Scaling Factor (10 to the power of your Price +/- chosen Scaling Factor) and charged at GBP. As a result of this limited Price range, the highest value to which a Price with five decimal granularity can be set is £0.32767 pence (Price of 32767, Scaling Factor of -5 = £0.32767 / 32.767 pence).

This is an issue in the use of Block tariffs, where the first few units of consumption are charged at a higher rate because of the absence of a standing charge. This could also be an issue where Suppliers wish to incentivise load shifting through means of pricing and retaining pricing granularity. This modification seeks to amend the DUIS in order to improve the granularity for electricity pricing Block Tariff, Time of Use (TOU) Tariff and Hybrid Tariff. This is impacting Suppliers who wish to charge their customers accurately.

2. Issue

What are the current arrangements?

Using Appendix AD suppliers set the tariff/pricing using a combination of Service Requests as below:





1

•1.1 'UpdateImportTariff(Primary Element)', specific Data Items for this request are displayed in table 44 of Appendix AD

•Within Table 44 'PriceElements' specifies that the Data Items required to update the price on the Device are defined in Service Request Variant 1.2.1 'Update Price (Primary Element).

2

•SRV 1.2.1 'Update Price(Primary Element) and the data tables that support the SRV are located within Table 80 of Appendix AD. The 'PriceElements' in Table 80 contains all the data items required to update prices on the Device. These data items are provided in 'sr:PricePrimary' (Table 81)

1

•Within Table 81, this modification is concerned with 'ElectricityPriceElements' which are located in table 82 'srElecPricePrimary'

•Table 82 requires selection of one of BlockTariff, TOUTariff or HybridTariff. This requires either setting of a BlockPrice (sr:ElecBlock, Table 84), TOUPrice (sr: ElecTOUTariff, Table 85), or a Hybrid Price (sr: ElecHybridTariff, Table 86)

6

•The description for both BlockPrice and TOUPrice specify that values are to be set in the range 32768 to 32767. This value is then multiplied by the 'PriceScale' to get a cost per kWh.

The limitation in values only allows for a maximum 5 decimal number of £0.32767 per kWh being applied to the meter whilst still having the ability to retain the granularity of 5 decimal point pricing; if any price is to be applied above the max values specified, then the price must be shortened to 4 decimal point pricing.

For example, setting a Price at 32,767 and the scaling factor to -5 will result in a price of £0.32767 being set. As 32,767 is the largest Price which can be set, no 5 decimal number larger than 0.32767 can be set.

To set a price above £0.32767 a four decimal number must be used. For example, setting a price at 4,357 and a scaling factor of -4 to achieve a price of £0.4357.

What is the issue?

The issue is that based on the current parameters the equation for the electricity pricing within the DUIS limits the tariffs that can be used. The limitation in values for Block tariff, TOU tariff and Hybrid tariff only allows for a maximum price of £0.32767 pence per kWh being applied to the meter to an accuracy of five decimal places. If any price is to be applied above £0.32767 pence, then the pricing will be shortened to four decimal point pricing. The Proposer would like to have this set of Price limitation for electricity amended or removed from the DUIS. It is worth highlighting that these price limitations do not apply to gas pricing in the DUIS.





What is the impact this is having?

Currently suppliers are limited to the granularity of their prices, in some instances this may require periodic amendments to smart meter balances.

Impact on consumers

The limitation around the Price Scale set within the DUIS is not allowing exact calculation. Customers IHD's may not be fully reflective of usage costs, noting this would be fractions of a penny.

3. Assessment of the proposal

Observations on the issue

Views of TSIRS

This Draft Proposal was presented to the Technical Specification Issues Resolution Sub Committee (TSIRS) for initial feedback. Although the TSIRS is a BEIS led group, various SEC Parties are represented. The TSIRS advised the current implementation of the value and its boundaries as well as the scaler was discussed between 2012 and 2014 and was implemented using existing definitions Object Identification System (OBIS) codes from the Device Language Message Specification (DLMS)/Cosem Blue Book. Any changes to the current implementation were described as complicated and the view was that the Blue Book would need changing in order to support other implementations. The possible impact of inflation was highlighted to the TSIRS and how this might require changes to the price granularity in the future. The TSIRS noted the update.

Appendix 1: Progression timetable

This Draft Proposal was raised on 21 June 2021. The Proposal will be taken to the Change Sub-Committee (CSC) for initial comment on 29 June 2021.

Timetable	
Event/Action	Date
Draft Proposal raised	21 June 2021
Presented to CSC for initial comment	29 June 2021

Appendix 2: Glossary

This table lists all the acronyms used in this document and the full term they are an abbreviation for.





Glossary			
Acronym	Full term		
CSC	Change Sub-Committee		
DCC	Data Communications Company		
DLMS	Device Language Message Specification		
DUIS	DCC User Interface Specification		
kWh	Kilowatt hour		
SEC	Smart Energy Code		
SSC	Security Sub-Committee		
SECAS	Smart Energy Code Administrator and Secretariat		
SRV	Service Request Variant		
TOU	Time of Use		
TSIRS	Technical Specification Issues Resolution Sub Committee		

