
Meeting name	COG Working Group
Date of meeting	tbc
Paper title	Removal of Barriers to Half Hourly Settlement for sub-100kW MPANs
Purpose of paper	For Discussion
Synopsis	Following discussion at the Profiling and Settlement Review Group (PSRG), the DCMF has asked that a COG Working Group consider whether the current charging methodology is appropriate for sub-100kW Half Hourly Metering Systems (i.e. Measurement Class 'E'). This paper explains the background to the request, and presents some initial thoughts for discussion.

1 Introduction

- 1.1 As a result of the licence obligation to install Advanced Metering for Profile Classes 5-8, and the rollout of smart metering, we are moving rapidly towards a situation in which almost all customers have Half Hourly (HH) capable metering. However, this does not necessarily mean that HH data will be available to Suppliers, settlement or to Distributors. If Suppliers choose to use Non Half Hourly (NHH) settlement, the HH data collected by the meter will not be available to industry processes.
- 1.2 In order to understand better the settlement implications of Advanced and smart metering, ELEXON is currently reviewing the profiling and settlement arrangements for Suppliers of domestic and commercial customers. The PSRG has been established as an expert group (reporting to the Supplier Volume Allocation Group), and has consulted on the factors that drive Suppliers to choose HH or NHH settlement. As part of the review we are undertaking a cost benefit analysis on mandatory Half Hourly settlement for all customers in Profile Classes 5 to 8. An Impact assessment request has been issued to all parties with responses due back 8 October.
- 1.3 The view of the PSRG is that any artificial barriers to HH settlement of sub-100kW customers should be removed. Using the HH capability of advanced and smart metering provides more accurate data on customers' consumption, facilitates more accurate settlement, more cost-reflective charging for networks, and more sophisticated network management. If there are artificial barriers that incentivise Suppliers to choose NHH rather than HH settlement their removal will benefit Distributors, Suppliers and customers.
- 1.4 The current DUoS charging methodology potentially represents one such barrier to use of HH settlement. HH DUoS charges for sub-100kW MPANs are higher (on average) and more complex than the corresponding NHH DUoS charges. This creates an artificial incentive for Suppliers to choose NHH rather than HH settlement, thereby depriving Distributors of data that could allow them to manage their networks more effectively.
- 1.5 ELEXON presented this issue to the DCMF meeting on 3 August. DCMF agreed that a COG Working Group should consider potential changes to the Common Distribution Charging Methodology (CDCM) to address the issue.

2 Possible Approaches to Removing Cost Barriers

- 2.1 The [PSRG consultation](#) included analysis of HH and NHH DUoS (reproduced in Appendix 1 to this paper) indicating that (on average) Suppliers can reduce their DUoS charges by choosing NHH rather than HH settlement for sub-100kW customers. Removing this disincentive to HH settlement would require a charging methodology that (on average) recovers the same amount of money from Measurement Class 'E' customers as from equivalent customers settled through NHH processes. However, there are a number of options on how this can be done, as follows:
- 2.2 Option 1 NHH/HH equivalent average across all customers.**
This option is where HH and NHH charges are equivalent when averaged across the whole population of sub-100kW customers. Charges could (for example) be structured in a similar way to charges for 100kW customers (with red, green and amber unit rates), but with the fixed and unit charges set at a level that don't provide a disincentive to HH settlement. While on average this option removes disincentives to HH settlement, such disincentives would still remain at the Profile Class level¹. On average Profile Class 5 customers will have a higher percentage of their consumption in the 'red' band and a lower percentage in the 'green' band than Profile Class 8 customers. On average, therefore, Option 1 would incentivise HH settlement of Profile Class 8 customers, and NHH settlement of Profile Class 5 customers.
- 2.3 **Option 2 NHH/HH equivalent average across a Profile Class**
HH and NHH charges are equivalent when averaged across each Profile Class. Like option 1, this would allow charges to be structured in a similar way to existing charges for 100kW customers. However, the tariff would be set separately for each Profile Class.
- 2.4 **Option 3 NHH/HH equivalent by MPAN**
This option is where HH and NHH charges are equivalent for each individual MPAN. Under this option the same tariffs would apply to all sub-100kW customers, regardless of whether they were settled HH or NHH. This means that NHH tariffs would also apply to sub-100kW HH customers (albeit with charges calculated using HH data).
- 2.5 The Working Group is invited to consider these options as possible strawmen for a tariff structure that avoids creating artificial obstacles to HH settlement of sub-100kW MPANs.

3 Charges for Capacity and Excess Reactive Power

- 3.1 Currently, HH charges for sub-100kW customers are not only higher (on average) than the corresponding NHH charges, but also more complex. In particular, choosing HH settlement for a sub-100kW customer introduces new elements of charge including capacity charges and excess Reactive Power charges. These are avoided by choosing NHH settlement. These additional charges create complexity for both Suppliers and customers.
- 3.2 By using the choice of HH or NHH settlement as the eligibility criterion for these charges, the CDCM creates an artificial barrier to use of HH settlement. This could be avoided by choosing a different criterion (e.g. 100 kW MPANs, or MPANs with CT metering).
- 3.3 The Working Group is invited to consider whether a different cut-off point for the introduction of capacity and excess Reactive Power charges would remove an artificial barrier to HH settlement, and better facilitate the Charging Objectives specified in the DCUSA.

¹ Strictly speaking, MPANs settled on a HH basis can't be in Profile Classes 1 to 8. When we refer to a HH MPAN "being in" one of these Profile Classes, we mean that their Load Factor would have put them in that Profile Class, had the Supplier settled them NHH.

4 Implementation Options for Sub-100kW Tariffs

4.1 Section 2 of this paper proposes that sub-100kW HH customers (i.e. Measurement Class E) should have different tariffs to 100 kW HH customers (i.e. Measurement Class C). If new tariffs of this type were introduced, it would raise the question of how the required consumption data should best be reported to Distributors:

- Should Distributors receive site-specific data from Half Hourly Data Collectors (as happens currently in the HH market); or
- Should Distributors receive aggregated data from settlement (as happens currently in the NHH market)? Under this option, SVAA would provide 'HH supercustomer' data, aggregated into the appropriate time bands for that Distributor. Such data could be provided in D0030 format (to facilitate use of existing NHH billing systems) or via a new flow, depending on Distributor requirements.

4.2 Both options appear potentially workable. The first would provide Distributors with additional data which could be valuable in managing their networks, while the second might reduce the impact on billing systems and reduce the impact on Distributors of scaling their processes to support increased numbers of HH-settled MPANs.

4.3 We suggest that this is an implementation issue, which should be given further consideration once the proposed tariff structure has been clarified.

5 Recommendations

5.1 We invite the Working Group to:

- a) **CONSIDER** the current issues with DUoS charges for NHH and HH settled MPANs and whether the current tariff structure presents an artificial barrier to HH settlement for sub-100kW customers;
- b) **CONSIDER the options proposed for** changing the tariff structure for sub-100kW HH-settled MPANs to facilitate the Charging Objectives specified in the DCUSA .

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Appendix 1 – Analysis of Existing DUoS Charges

The PSRG consultation (issued in April 2010) included a comparison of NHH and HH DUoS charges for a 'typical' customer in each of Profile Classes 5-8. This calculation used the latest available average demand data from the Profile Administrator's load research programme, and the 2010/11 Statements of Charges published by the DNO in each GSP Group. The analysis is reproduced here for convenience:

GSP Group	Customer with PC5 Profile		Customer with PC6 Profile		Customer with PC7 Profile		Customer with PC8 Profile	
	NHH	HH	NHH	HH	NHH	HH	NHH	HH
Eastern (_A)	£1,706	£1,503	£1,649	£1,373	£2,055	£1,632	£2,545	£1,957
East Midlands (_B)	£1,295	£1,491	£1,249	£1,341	£1,564	£1,584	£1,928	£1,841
London (_C)	£1,432	£1,906	£1,384	£1,699	£1,733	£1,966	£2,157	£2,275
Merseyside and North Wales (_D)	£1,797	£1,909	£1,732	£1,770	£2,180	£2,173	£2,707	£2,618
Midlands (_E)	£1,417	£1,747	£1,366	£1,549	£1,710	£1,781	£2,108	£2,051
Northern (_F)	£1,943	£1,860	£1,879	£1,716	£2,348	£2,065	£2,926	£2,467
North Western (_G)	£1,275	£1,658	£1,231	£1,458	£1,535	£1,654	£1,892	£1,880
Southern (_H)	£1,374	£1,755	£1,329	£1,572	£1,659	£1,831	£2,062	£2,135
South Eastern (_J)	£951	£1,295	£919	£1,171	£1,139	£1,371	£1,398	£1,627
South Wales (_K)	£2,105	£2,158	£2,031	£2,018	£2,543	£2,520	£3,145	£3,097
South Western (_L)	£1,753	£1,833	£1,693	£1,704	£2,117	£2,145	£2,624	£2,603
Yorkshire (_M)	£1,642	£1,738	£1,585	£1,609	£1,983	£1,968	£2,449	£2,345
South Scotland (_N)	£1,501	£2,067	£1,448	£1,906	£1,815	£2,314	£2,248	£2,773
North Scotland (_P)	£2,547	£3,098	£2,462	£2,817	£3,071	£3,309	£3,807	£3,939
AVERAGE	£1,624	£1,859	£1,568	£1,693	£1,961	£2,022	£2,428	£2,401
Difference (+ve for HH higher)	£235		£125		£61		£-27	

For NHH charges the customer was assumed to be paying the night rate between 00:00 and 07:00 GMT. For HH charges the relevant rate (red, amber or green) was applied to each Settlement Period in accordance with the charging statement for each DNO. For purposes of calculating HH charges, a nominal capacity was calculated from the average kW demand over the year, and an appropriate Load Factor. The Load Factors used were 20%, 25%, 35% and 45% (for Profile Classes 5, 6, 7 and 8 respectively).