

# BEAMA response to BEIS Consultation on Proportional Load Control and associated SMETS drafting

September 2019

## Link to Consultation Material and supporting information:

<https://smartenergycodecompany.co.uk/latest-news/beis-consultation-on-proportional-load-control-and-associated-smets-drafting/>

## About BEAMA

BEAMA represents manufacturers of electrical infrastructure products and systems from transmission through distribution to the environmental systems and services in the built environment, with over 200 members ranging from SMEs to large multinationals.

## Introduction

BEAMA is supportive of the inclusion of proportional functionality into SMETS and sees this as a useful extension to the specification to facilitate the intelligent management of loads such as EV chargers. Our support for this change is not an indication of support for the position that SMETS is necessarily the only way to achieve the desired load control functionality.

## Responses to Questions

*3.1 Do you agree that this proposal adds value over existing smart metering load control functionality? Please provide supporting rationale including, if you disagree, explanation of how the use cases in the annex could be met with existing functionality or are not relevant.*

The SMETS implementation was intended to support existing large loads, predominantly water and space heating. This can be achieved by switch control, which is either on or off. This enables a coarse level of control, which may not be sufficient to meet the rising demand for system flexibility. The expected increase in electrical loads, particularly for electric vehicle charging, may demand a more sophisticated and responsive approach that allows the energy taken by a load to be varied. We agree the Government's proposal will help to address this demand and should enable improved optimisation of the distribution network.

*3.2 Do you agree with our intention to enable a broad range of devices e.g. both ones that can control flow of power and ones that send a signal to set output power at different levels? If you disagree please explain why, and what your preferred way of delivering proportional load control is.*

When controlling the flow of power, the system needs a mechanism to provide a restriction. This is ideally met by a switch that when correctly designed wastes little energy in heat. Such a device only provides two states: on or off. We agree with the intention to be able to manage a broad range of loads, but the method of control used has to operate efficiently to minimise losses. Methods of delivering proportional load control by restricting the flow of power from the source are available but will generate heat, and the greater the load the greater this wasted energy is likely to be. This has adverse implications for the energy efficiency of the system. Therefore, where possible, an intelligent response by the load (such as an electric vehicle) to information provided about the power available (determined by the network or the consumer) would be a preferable way to achieve proportional control.

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*3.3 Do you agree that the maximum output should be configured as a percentage rather than another unit such as a kW value? Please provide supporting rationale for any alternative suggestions.*

The kW value can be applied directly, whereas to determine an absolute value from a proportional value would require knowledge of the maximum kW available. Which is the best approach will depend on where this value is being applied in a system. If the system is M2M, such as communication from the distribution network, then a kW value would be more appropriate. If there is human input then proportion could be more useful.

*3.4 Do you agree that no further functionality is required to allow smart metering to control and support provision of frequency response services? If not, please suggest what additional functionality you think would be required and provide supporting rationale for its inclusion in your response.*

It would be inappropriate to include frequency response services within SMETS. Despite the importance of maintaining grid frequency, as the recent outages have demonstrated there can be undesirable results so this functionality should be applied elsewhere in the network where the appropriate control can be applied.

*4.2 Do you agree that having two forms of APC (meter integrated, and HAN connected) allows valuable flexibility and is worthwhile given no additional system cost?*

Depending on associated costs, it would be better to have both forms available. This will better ensure the solution can be successfully installed in locations where there could be large distances between equipment or other complexities.

*4.3 Do you agree with the proposed approach to maintain the new SMETS2 alongside the existing SMETS2 versions?*

This seems a workable solution.

*4.5 Do you agree that proposed drafting delivers the intended outcome? Do you have suggestions on how SMETS2 changes could be drafted to more effectively deliver this?*

No further suggestions

*4.6 Are there other requirements or functionality related to load control that should be added at this stage? Please provide supporting rationale for any additional suggestions.*

Nothing else proposed at this stage

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