SEC
Smart Energy Code

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DP152

'Consumption on Smart Polyphase Electricity Meters'

Modification Report

Version 0.2

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592

About this document

This document is a draft Modification Report. It currently sets out the background, issue, and progression timetable for this modification. This document will be updated as this modification progresses.

Contents

Contact

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

Emmanuel Ajayi

020 8132 4134

emmanuel.ajayi@gemserv.com

1. Summary

This proposal has been raised by Carl Skerritt from Drax Group PLC.

Data Communications Company (DCC) Users are currently unable to interrogate polyphase metering equipment and get information from consumption at each phase. This limits the information, understanding and engagement of consumers with their energy consumption.

Being able to read consumption from each phase would mean Consumers would benefit from being able to obtain more granular data on their usage behaviours. In addition, this information would allow Suppliers the opportunity of offering smart tariffs to consumers if desired, as a result being able to obtain individual phase data.

2. Issue

What are the current arrangements?

Polyphase meters are electrical meters used for measuring three phase electricity supply. Polyphase meters are sometimes used in scenarios where each phase is used for a specific purpose e.g. for heating and/or Electric Vehicle (EV) charging. Separate phase consumption data provides Suppliers the opportunity to offer innovative propositions which allow the customer to be billed at different rates for each phase/purpose.

Currently smart polyphase meters only provide profile consumption data as a combined value across the three phases. Therefore, the tariffs offered to those consumers who have polyphase metering equipment is applied to the cumulative consumption of all three phases combined, rather than individual phase data.

What is the issue?

Some polyphase electricity meters support the measurement of consumption on each phase. However, the Smart Energy Code (SEC) does not currently support functionality that would allow this individual phase data to be retrieved, where it is available.

The current arrangements severely limit the opportunity to provide support to consumers around their energy efficiency choices which they could do if their consumption figures were provided at a more granular level.

What is the impact this is having?

This lack of individual phase data limits the ability of Suppliers to innovate and develop products such as smarter tariffs that enable the customer to take greater benefit from smart meters.

Impact on consumers

Smart metering enables consumers to be more engaged in their energy consumption by informing them of their consumption behaviours, whilst encouraging them take action to support greater energy efficiency and cost saving. With the increase in EV charging and electrification of heating, polyphase meters will become more prevalent in both non-domestic and domestic properties. In the specific application of supporting EV charging and heating, it is likely the meters will be used to charge separately for individual appliance consumption and understand consumption patterns to allow cost efficiency and energy efficiency savings. Therefore, by not having the ability for the consumer to understand the consumption by each individual phase, or be charged by each phase, limits the ability for the consumer to be informed, engaged and active in taking energy efficiency measures.

The Proposer also believes the impact of not making this change is that there would be missed opportunities for Suppliers and other Parties to innovate around smart offerings/tariffs if desired.

3. Assessment of the proposal

Observations on the issue

The Proposer provided a background to the issue to the Change Sub-Committee (CSC) members at the January 2021 meeting. A CSC member questioned if the proposal seeks to measure consumption at both phase and meter level, or just at phase level. The Proposer advised the choice could be offered and can be clarified as the modification progresses.

A CSC member further noted that the data already exists on the meter, and that the proposal will be seeking an additional data source as opposed to replacing any current sources. A CSC member added that there is ongoing work around Half-Hourly Settlement, which seeks not to have to aggregate data to obtain a meter-level reading. The CSC member advised that this proposal would not want to perpetuate or worsen the existing issues with data aggregation.

A CSC member acknowledge the intention of the modification was to provide additional data. They further noted there are other modifications currently under the Balancing and Settlement Code (BSC) regarding sub-boundary metering which will be worth looking at to ensure alignment.

At the March 2021 CSC, SECAS on behalf of the Proposer provided further update into to the issue and business context of the modification to the CSC. SECAS noted that whilst the modification still requires discussion with the Technical Architecture and Business Architecture Sub-Committee (TABASC), further discussion with the proposer outlined that this change is a device orientated opportunity, where some Devices may be able to produce individual phase data. The benefit of this change is that it paves a way for greater granularity of usage information, whilst allowing organisations to show people and consumers that there are the opportunities to cut down usage and enable efficiency. SECAS added, that the Proposer believes anticipates that the opportunity and benefit of this modification will increase with the larger uptake of polyphase meters in the domestic space. The Proposer believes the real benefit would not only be for one business as such, but for several businesses and ultimately consumers, which benefits the wider industry as a whole.

One CSC member noted that the onus on the CSC should be to provide agreement on the clarity on the issue, which the CSC member noted was clear at this point. The CSC member noted that the question around wider benefits should be addressed during refinement.

SECAS advised that discussion around the opportunity the modification presents will be discussed at TABASC as well as the high-level business requirements and discussion of possible solution in bounds of the SEC.

Appendix 1: Progression timetable

This modification was discussed at the CSC on 23 February 2021. This will be discussed further at the TABASC meeting on 4 March 2021. The modification will then be discussed at the on 30 March 2021 at CSC for discussion and final recommendation.

Timetable	
Event/Action	**Date**
Draft Proposal raised	29 Jan 2021
Presented to CSC for initial comment	26 Jan 2021
Presented to CSC for further comment	23 Feb 2021
Problem statement discussed with TABASC	4 Mar 2021
Presented to CSC for final comment and recommendation	30 Mar 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
EV	Electric Vehicles
SEC	Smart Energy Code
TABASC	Technical Architecture and Business Architecture Sub-Committee