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DP184

**‘Increase Smart capability of
SMETS2 Twin Element ESME to
support solar and storage use
cases’**

Modification Report

Version 0.2

19 October 2021

Corporate member of
Plain English Campaign
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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.

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1. Summary

This proposal has been raised by Tom Woolley from SMS PLC.

The Smart Technical Equipment Technical Specifications (SMETS) 2 currently defines how a twin element Electricity Smart Metering Equipment (ESME) captures and records electricity consumption on a per element basis. These limitations set against SMETS2 Devices are restricting the ability to use twin element metering, for more innovative models. The intent of this proposal is to enable twin element meters to measure the exported energy on the secondary measurement element.

2. Issue

What are the current arrangements?

Currently, the SMETS2 defines how a twin element ESME captures and records electricity consumption on a per element basis. The twin element ESME measures and records the energy imported and exported on the primary measurement element, whereas the secondary measuring element records imported energy but is not mandated to record export active energy consumption.

To support greater energy efficiency and cost saving the Proposer would like to offer products and services that require export registers on the secondary element. This would enable the Smart Energy industry to support innovative products and services for management of battery storage and solar solutions, independently from the supply via the primary element.

What is the issue?

Currently, SMETS2 is fit for purpose when considering traditional requirements for twin element metering. The issue is the current specification is preventing innovations and alternative markets from using SMETS2 as a solution, due to the current limitations. By making these proposed changes, that will not require hardware changes to existing SMETS2 twin element meters in the market, SMETS2 and the DCC Ecosystem can be used more widely. To enable this innovation and use of SMETS2 for such products and services, this Draft Proposal is proposing: -

- Support for Active Export kilowatt-hour (kWh) register on the secondary element.
- Support for four Time of Use's (TOU) to support Active Export kWh on the secondary element.
- Support for an additional load profile channel specifically for the Active Export kWh on the secondary element.
- Support for an Export Meter Point Administration Number (MPAN) on the secondary element.

What is the impact this is having?

The current SMETS2 specification focuses on traditional twin element legacy installations and does not consider added value propositions. The current limitations on SMETS2 twin element restricts the industry in developing innovative ways in utilising the secondary element on twin element meters.

These limitations prevent the industry from creating innovative products and offering cost effective tariffs to consumers.

Impact on consumers

This proposal will benefit consumers as these innovative use cases of twin element meters will support greater energy efficiency and cost saving. New products and services would allow consumers the opportunity to explore new energy tariffs and methods for carbon reduction to suit their needs.

3. Assessment of the proposal

Observations on the issue

Views of the Change Sub-Committee

SECAS presented the original version of the Draft Proposal to the Change Sub-Committee (CSC) at the September 2021 meeting. A CSC member suggested the issue as originally described was not reflective for what a Twin Element ESME does. The Proposer provided a background to the issue and clarified the use case and ask of the proposal and highlighted it is proposing for innovative products and services to be made available on the secondary measurement element.

A CSC member noted SECAS's view that this modification could work in parallel with [MP152 'Consumption on Smart Polyphase Electricity Meters'](#). MP152 is looking to address limitations and restrictions around polyphase meters and capture consumption of energy data via across the three phases instead of a combined data consumption. The request for information (RFI) responses highlighted an existing interest and appetite from the industry for modifications of this nature. The consensus was that there is a significant and increasing demand for polyphase meters and were unanimous in seeing a benefit in having the ability to read separate consumption data on each phase of those meters. SECAS will obtain the relevant Sub-Committee feedback to ensure cost benefit analysis is considered for this modification.

Whilst the Proposer and SECAS believe there are similarities between the two proposals, there is still a difference in the use case of what DP184 is proposing. SECAS and the Proposer redrafted the proposal to reflect the correct and accurate use case which is now reflected in Section 2 above.

Appendix 1: Progression timetable

This Draft Proposal was raised on 20 September 2021. DP184 was presented to the Change Sub-Committee (CSC) for initial comment on 28 September but it was believed the issue was not captured accurately. SECAS will present the revised Draft Proposal to the CSC on 26 October for comment and recommendation to convert to a Modification Proposal.

Timetable	
Event/Action	Date
Draft Proposal raised	20 Sep 2021
CSC converts Draft Proposal to Modification Proposal	26 Oct 2021
Business requirements developed with Proposer and DCC	Nov 2021
Modification discussed at Working Group	1 Dec 2021
Modification discussed with TABASC	2 Dec 2021
Modification discussed at Operations Group	7 Dec 2021
Modification discussed with SSC	8 Dec 2021
Modification discussed at Working Group	5 Jan 2022
Preliminary Impact Assessment requested	10 Jan 2022
Update provided to CSC	15 Feb 2022
Modification discussed at Working Group	07 Sep 2022

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
ESME	Electricity Smart Metering Equipment
EV	Electric Vehicles
kWh	Kilowatt-Hour
MPAN	Meter Point Administration Number
PPA	Power Purchase Agreement
RFI	Request for Information
SEC	Smart Energy Code
SMETS2	Smart Technical Equipment Technical Specifications 2
SVT	Standard Variable Tariff
TOU	Time of Use