

MP184 ‘Increase Smart capability of SMETS2 Twin Element ESME to support Solar and Storage use cases’ Business requirements – version 0.2

About this document

This document contains the business requirements that support the solution(s) for this Modification Proposal. It sets out the requirements along with any assumptions and considerations. The DCC will use this information to provide an assessment of the requirements that help shape the complete solution.

1. Business requirements

This section contains the functional business requirements. Based on these requirements a full solution will be developed.

Business Requirements	
Ref.	Requirement
1	Requirement for Active Export kWh register on the secondary element.
2	Requirement for four TOU to support Active Export kWh on the secondary element.
3	Requirement for an additional load profile channel specifically for the Active Export kWh on the secondary element.
4	Requirement for an Export MPAN on the secondary element.
5	Requirement for Export data to be made available on the HAN so that IHD and PPMID manufacturers can also benefit and provide data to the consumer.

2. Considerations and assumptions

This section contains the considerations and assumptions for each business requirement.

2.1 General

This solution will be applied to SMETS2 Devices. To enable support for solar panel and other microgeneration type applications, the proposal is to enhance the current UK SMETS specification to maximise the number of potential applications, by supporting the additional data.

2.2 Requirement 1: Requirement for Active Export kWh register on the secondary element

SMETS currently defines that the ESME should be capable of recording Active Energy Imported and Exported. This proposal is requesting to amend the text to read 'cumulative Active Energy Exported via the secondary measuring element of its Electricity Meter in the Secondary Active Export Register'.

2.3 Requirement 2: Requirement for four Time of Use (TOU) to support Active Export kWh on the secondary element.

The proposal of a new section in SMETS that defines pricing to be applied to the secondary element on a twin element meter as follows:

5.13.1.3 Secondary Export Tariff TOU Price Matrix [INFO]

A 1 x 4 matrix containing Prices for Time-of-use Pricing Tariffs relating to Supply via the secondary measuring element of the Electricity Meter

2.4 Requirement 3: Requirement for an additional load profile channel specifically for the Active Export kWh on the secondary element.

A log capable of storing UTC date and time-stamped half hourly data (the amount of energy Imported or Exported in a half hour period) arranged as a circular buffer such that when full, further writes shall cause the oldest entry to be overwritten. The log shall be capable of storing a minimum of:

- i. 3 months of Active Energy Exported via the secondary measuring element of the Electricity Meter.

2.5 Requirement 4: Requirement for an Export MPAN on the secondary element.

The proposal of a new MPAN (MPAN 3) shall be defined and included and provide specific support for the export channel on the secondary element.

2.6 Requirement 5: Requirement for Export data to be made available on the Home Area Network (HAN) so that In Home Device (IHD) and Prepayment Interface Device (PPMID) manufacturers can also benefit and provide data to the consumer.

The proposal is to include additional HAN items as follows: -

- Active Export kWh on the secondary element

- 4 x TOU's that are related to the secondary element
- Load profile channel for Active Export – Secondary

3. Glossary

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

Glossary	
Acronym	Full term
DCC	Data Communications Company
HAN	Home Area Network
MPAN	Meter Point Administration Number
PPMID	Prepayment Interface Device
TOU	Time of use