

DSR Metering Option (a) – Straw Man Technical Solution

1. Introduction

DECC's recent consultation on implementation of EMR has proposed provision of MPAN-level data by the Supplier-appointed data collector as one of four possible metering options for DSR CMUs:

The DSR capacity provider must notify the data collector (appointed by the supplier) to pass the half hourly, non-aggregated BSC metered data for the relevant CMU component (and related meters on the same site if appropriate) to the settlement agent. This option is for either DSR, embedded generation that exports electricity to the network, or embedded generation which has a separate BSC meter.

The requirement for Supplier-appointed data collection agents to provide MPAN-level data for use in EMR settlement is also potentially relevant to CFD (either as an alternative to Additional BM Units or as a temporary measure before registration of an Additional BM Unit is complete).

The purpose of this note is to describe a straw man technical solution for implementing this requirement (as a basis for discussion with DECC, Suppliers and Supplier Agents). Section 2 discusses key issues; section 3 summarises the straw man solution; and section 4 summarises code changes that would be required to implement it.

2. Key design decisions

This section discusses a number of key design decisions that arose while developing the straw man solution, and explains our reasons for recommending the options we did.

2.1 Should data be provided by the Data Collector or the Data Aggregator?

The BSC requires Suppliers to appoint both a **Data Collector** and a **Data Aggregator** for each Half Hourly Metering System:

- The Half Hourly Data Collector (HHDC) collects and validates data from the meter, and passes it to the Data Aggregator. The HHDC also provides the meter readings to the relevant Distributor (to help them in levying network charges on the Supplier, and managing their network).
- The Half Hourly Data Aggregator (HHDA) validates the HHDC's data against the Distributor's registration database (e.g. to verify that the Supplier who appointed the HHDC is the one registered to supply the MPAN). Validated data is then stored in the HHDA's database, and subsequently used to submit aggregated Half Hourly data to settlement as required by the settlement timetable. The aggregation process also applies Line Loss Factors (LLFs) to the raw metered data to account for losses on the distribution system¹.

Most organisations that perform one of these roles also perform the other, and in most cases a Supplier appoints the same organisation to perform both. However, they are defined as separate

¹ The LLF is intended to adjust the value recorded on the meter to its equivalent at the Transmission System boundary. Applying the LLF increases the metered values, which is a benefit to embedded generators (and recognises that embedded generation is typically close to demand, and hence can supply more demand than generation sourced from the Transmission System).

roles, so a decision is needed on where responsibility for providing data should lie. The following table summarises the pros and cons:

	Pros	Cons
HHDC provides data	<ul style="list-style-type: none"> Reporting on MPAN-level data is traditionally seen as part of the HHDC role. 	<ul style="list-style-type: none"> HHDC does not have access to registration database, leading to lower quality data entering settlement² HHDC cannot adjust metered data to reflect distribution losses³
HHDA provides data	<ul style="list-style-type: none"> HHDA is sent details from the registration database, so can prevent incorrect HHDCs submitting data to the Settlement Agent HHDA can, if required, adjust metered data to reflect distribution losses 	<ul style="list-style-type: none"> Reporting on MPAN-level data (as opposed to aggregated data) is not traditionally seen as part of the HHDC role.

Based on these pros and cons, our initial recommendation (for discussion with DECC, Suppliers and Supplier Agents) is that HHDA's are better placed to provide data to the Settlement Agent.

2.2 How should data be provided to the CM/CFD Settlement Agent?

Potential options for providing data to the CM/CFD Settlement Agent include:

- Data is submitted as a data flow over the Data Transfer Network (DTN)
- Data is provided as attachment to an email
- Data is sent using FTP

The DTN is the network (established through the Distribution Licence) used to transmit data between Suppliers, Supplier Agents, Distributors and other participants in the retail power market. A Data Transfer Catalogue (DTC) specifying the different types of file that can be sent over the DTN is maintained under the Master Registration Agreement (MRA).

Our perception is that Suppliers and Supplier Agents have historically shown a preference for using the DTN to implement business processes, as opposed to manual workarounds. New data flows are regularly added to the DTC to support new business requirements as they arise. Therefore our initial recommendation (for discussion with DECC, Suppliers and Supplier Agents) is that meter readings

² For example, consider the scenario where an embedded generator has entered into a new PPA; the new Supplier has registered themselves as responsible for the MPAN; the old Supplier has sent a flow to their HHDC telling them to stop collecting data; but the old HHDC has failed to process this flow correctly (and therefore both old and new HHDCs are collecting data). If it is an HHDC responsibility to provide data to settlement the Settlement Agent will receive two different flows of data for the same MPAN. If it is an HHDA responsibility the HHDA would be able to check the registration database, ensuring that only the correct Supplier's data would be submitted to the Settlement Agent.

³ Adjusting metered data for losses is a requirement for CFD, and also appears to be an implicit requirement for CM (given that the CM design compares metered volumes to FPNs, which are supposed to be adjusted for distribution losses). HHDC systems do not hold the LLF values required to do this

should be sent to the Settlement Agent over the DTN. This will require the Settlement Agent to have access to the DTN network.

2.3 How (and by whom) should the HHDA be told which MPANs to report data for?

In order for the solution to work, someone must tell the HHDA which MPANs are relevant to CM (or CFD), so that they can submit the relevant data to the Settlement Agent. This must happen when the generator (or DSR customer) first registers their CMU; when they subsequently change Supplier; and when their Supplier subsequently changes HHDA.

Because the Supplier appoints the HHDA (and should always know who the HHDA is) our initial recommendation (for discussion with DECC, Suppliers and Supplier Agents) is that instruction should flow from the generator (or DSR customer) to the Supplier and then to the HHDA. Communication between Supplier and HHDA should be via the DTN, requiring two new data flows:

- A flow from Supplier to HHDA instructing the HHDA to start (or stop) submitting data to the Settlement Agent for a given MPAN
- An acknowledgement flow from the HHDA to the Supplier, confirming receipt of the instruction, and providing an error code if it cannot be processed (e.g. because the HHDA is not appointed to that MPAN).

3. Straw Man Solution

Based on the discussion above, our proposed straw man solution can be summarised as follows:

- Capacity provider (or CFD generator) identifies the relevant MPAN(s), and informs the Settlement Agent
- Capacity provider (or CFD generator) contacts the Supplier(s) for those MPANs, and instructs them to provide data to the Settlement Agent
- Supplier(s) send DTN flows to relevant HHDA(s), instructing them to provide data to the Settlement Agent
- HHDA(s) process the flows from the Supplier, setting a flag against the relevant MPANs in their database, and sending a confirmation to the Supplier over the DTN that the instruction has been accepted
- Each subsequent Aggregation Run performed by the HHDA produces a file of metered data for the relevant MPANs, which is sent to the Settlement Agent over the DTN

4. Code changes required to support this solution

The following changes to industry codes and documents would be required to support the above straw man solution:

- BSC obligation on Suppliers to instruct their HHDA to provide metered data to the Settlement Agent on request from a customer or generator
- BSC obligation on HHDA to provide metered data to the Settlement Agent from each aggregation run (for the MPANs notified to them by their Supplier). Details of this requirement and associated processes would be added to BSCP503 ([‘Half Hourly Data Aggregation for SVA Metering Systems Registered in SMRS’](#)).

- Changes to MRA Data Transfer Catalogue to recognise the Settlement Agent as a user of the DTN
- Changes to MRA Data Transfer Catalogue to create three new data flows: instruction from Supplier to HHDA, response from HHDA to Supplier, and metered data from HHDA to Settlement Agent