



The primary purpose of this information sheet is to clarify the requirements under the [Balancing and Settlement Code](#) (BSC) for Import and Export Metering Systems (MS) that are registered in a Supplier Meter Registration Service (SMRS), where Third Party Generating Plant¹ is installed at a site connected to a Distribution System².

Under the BSC, and the [Electricity Act 1989](#), a Supplier must take responsibility for a supply of electricity (known as an Import, under the BSC) that a customer takes from a Distribution System. Where a person, who is not required to have a Generation Licence, supplies electricity to a Distribution System then a Supplier does not have to take responsibility for that export unless they get that person's consent and register the Metering Equipment (if any) that measures that export (known as an Export under the BSC) as an Export Metering System. The Export Supplier does this by requesting a Meter Point Administration Number³ (MPAN) (known as a MSID under the BSC), from the relevant Licenced Distribution System Operator (LDSO) and registering the associated Metering Equipment against that MPAN.

Under a Feed in Tariff (FIT) arrangement a Supplier (FIT Licensee)- may pay such a person for the energy they generate and any surplus energy that is exported on to the Distribution System however, the Supplier does not have to register (for Settlement purposes) the metering equipment installed (if any) that measures and records the exports. You can find out more information about FIT obligations in this Ofgem factsheet [here](#).

In particular this information sheet will highlight the requirements where the Import Metering System does not require Half Hourly (HH) Metering Equipment to be installed under the BSC but the associated Export Metering System does (and vice versa).

Metering Equipment that is registered in a SMRS as a Metering System is called a Supplier Volume Allocation (SVA) Metering System. These SVA Metering Systems can be comprised of Half Hourly (HH) or Non-Half Hourly (NHH) Metering Equipment.

The key points to remember when reading this information sheet are:

- A BSC Party (a Supplier, in this case) must take responsibility for an Import under the BSC, by registering the Metering Equipment (that measures and records the Import) as an Import Metering System (MSID/MPAN) in a SMRS;
- A BSC Party (a Supplier, in this case) may, with the generator's permission, elect to take responsibility for an Export from Third Party Generating Plant under the BSC, by registering the Metering Equipment (that measures and records the Export), as an Export Metering System (MSID/MPAN) in a SMRS; and

¹ Third Party Generating Plant is Exemptable Generating Plant (i.e. the person generating the electricity is exempt from holding a Generation Licence) the Exports from which a BSC Party (who isn't the person generating the electricity) has elected to take responsibility for by registering an Export Metering System.

² In this information sheet Distribution System shall be taken as including any Associated Distribution System.

³ This is the term used under the Master Registration Agreement (MRA).

⁴ An Outstation is Metering Equipment, either integral with a Meter or separate from a Meter, which receives and stores data

² In this information sheet Distribution System shall be taken as including any Associated Distribution System.

³ This is the term used under the Master Registration Agreement (MRA).

- If Metering Equipment is shared across an Import and Export MPAN, then the same Meter Operator Agent (MOA) and, in the case of a shared Outstation⁴, the same Data Collector (DC), must be appointed to both MPANs.

You should refer to the BSC (in particular Sections [J](#), [K](#), [L](#) and [X Annex X-1](#)) and [the metering Codes of Practices](#) to fully understand the obligations placed upon certain BSC Parties and the meaning of capitalised terms used in this information sheet. In this information sheet we mean those obligations placed on Suppliers, as Registrants of Metering Systems that measure and record electricity flows on to or off a Distribution System and that are registered in a SMRS⁵.

This information sheet also provides guidance on areas to consider where an export metering system (note the non-capitalised terms) is not registered for Settlement purposes (i.e. such as for the provision of information to the customer or FiT [S](#)supplier). The distinction between the two kinds of metering systems (i.e. either for [S](#)settlement or not) will become clearer as you go through this information sheet.

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⁴ An Outstation is Metering Equipment, either integral with a Meter or separate from a Meter, which receives and stores data from a Meter(s) for later retrieval by a Data Collector.

⁵ This information sheet does not consider requirements in relation to Licensable Generating Plant whose Import and Exports, and Exemptable Generating Plant whose Exports, or Imports and Exports, are measured by CVA Metering Systems and are registered in the Central Meter Registration Service (CMRS).

This section looks at some examples of different scenarios that could be encountered where both the Import and the Export⁶ are settled and where the Import Metering System is not a 100kW Metering System and the aggregate capacity of the installed Third Party Generating Plant at the Boundary Point⁷ is >30kW.

Whole Current with Separate Import & Export Meters (<100kW Import, >30kW Export):

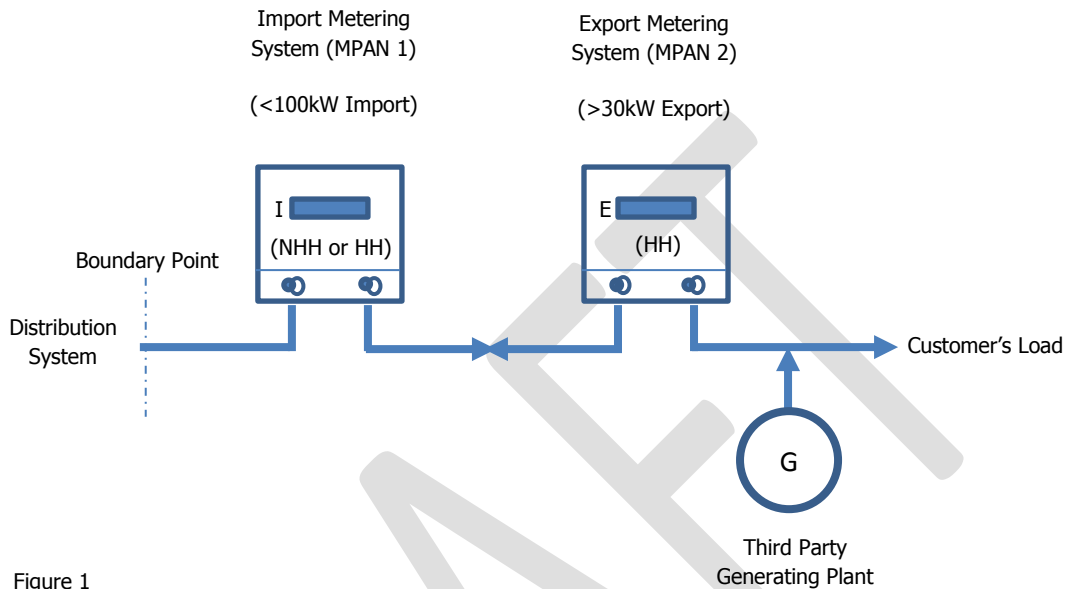


Figure 1

In this scenario the Import Metering System (which is not a 100kW Metering System and does not have to be settled HH) has been installed for some time and the Meter is either a [CoP8](#) compliant NHH Meter or a [CoP10](#) compliant NHH/HH Meter. Under the BSC the Import Supplier can choose the kind of Meter to install (i.e. NHH or HH) and, if a HH compliant Meter is fitted, whether they want to settle the metered data in the NHH or HH market⁸.

The customer then decides to install his own Generating Plant (e.g. Photo Voltaic (PV), Wind, Hydro, etc.) and approaches a Supplier (the same or different to the Import Supplier) who, with their permission, agrees to take responsibility for the Exports from the Generating Plant by registering the Metering Equipment associated with the Export flow in [a SMRS](#) as an Export Metering System. The Export Supplier does this by requesting an MPAN from the relevant Licenced Distribution System Operator (LDSO), acting in the role of a Supplier Meter Registration Agent (SMRA). The Export Supplier then arranges for his own HHMOA to install HH Metering Equipment to measure and record the Export. The Export Supplier's HHMOA installs the Export Metering Equipment (a HH Meter, only, in this case) then sends the Meter Technical Details (MTDs) via the relevant industry data flow to the

⁶ In the context of this information sheet an Import is a flow of electricity off a Distribution System and an Export is a flow of electricity onto a Distribution System.

⁷ In this context a Boundary Point is the point on an electrical circuit at which the Distribution System ends and the customer's installation begins.

⁸ To settle register readings from a HH compliant Meter in the NHH market the Supplier would appoint the relevant NHH Party Agents (NHHMOA, NHHDC and NHH Data Aggregator) and the NHHMOA would submit the Meter Technical Details via the D0150/D0149 data flows. Any 'half hourly' data stored in the Meter's Outstation and collected by the NHHDC should not be used for Settlement purposes. A HHDC (including other HH Party Agents) would need to be appointed to settle the Half Hourly data.

Supplier, LDSO and HH Data Collector (DC), i.e. the D0268⁹. The HH Export Meter has to be a [CoP5](#) (or above) compliant Meter and settled HH ([mMandatory HH mMarket](#)) because the aggregate maximum capacity of the Generating Plant at the Boundary Point is >30kW. If it were <30kW a [CoP10](#) Meter could be used and the Supplier could choose to settle the Exports NHH or HH (under the [eEelective HH market](#)).

Whole Current with integrated Import & Export Meter (<100kW Import, >30kW Export):

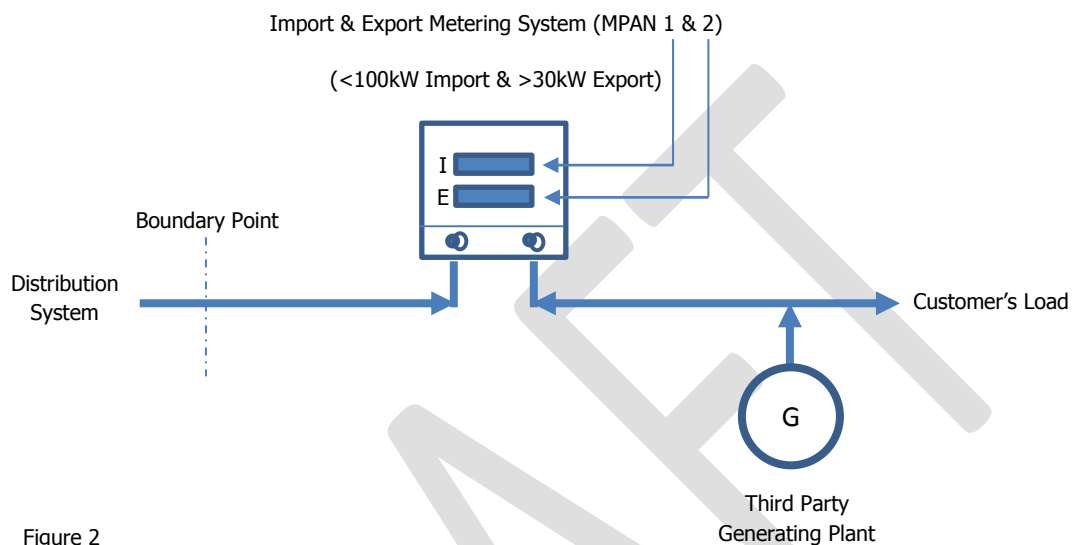


Figure 2

In this scenario the original Import Meter has been removed and a new Import/Export Meter has been installed in its place. The Import Supplier is responsible for updating the MTDs (via his NHH or HH MOA) for the Import Metering System and the Export Supplier is responsible for registering the same Metering Equipment against an Export MPAN and getting his HHMOA to update the MTDs for the Export Metering System. In this case the Export Supplier must appoint the same MOA as the Import Supplier in accordance with [Section J4.1.5](#) of the BSC. If the Import Metering System is traded NHH then the MOA appointed to both MPANs would also have to be Qualified¹⁰ under the BSC as an HHMOA too, in order to be appointed to the Export Metering System. In this scenario the Meter must be CoP5 compliant because the aggregate maximum capacity of the Generating Plant at the Boundary Point⁷ is >30kW. A CoP5 Meter should comply with CoP10 standards (and CoP8 for NHH only) but please check the 'CoP Compliance and Protocol Approval' spreadsheet on the [Codes of Practice](#) webpage of the ELEXON website to confirm the model type is confirmed as complying with CoP10 also¹¹.

⁹ 'Half Hourly Meter Technical Details'

¹⁰ i.e. have been through the BSC Qualification Process (see Section J of the BSC and [BSC Procedure \(BSCP\) 537](#)).

¹¹ If it is not on the list as also CoP10 compliant then the manufacturer may not be aware that it may also comply with CoP10 and therefore they could submit a BSCP601 'Metering Protocol Approval and Compliance Testing' application to seek compliance.

Current Transformer Operated Import Meter & Separate Export Meter Operated by Separate Current Transformer (<100kW Import, >30kW Export)

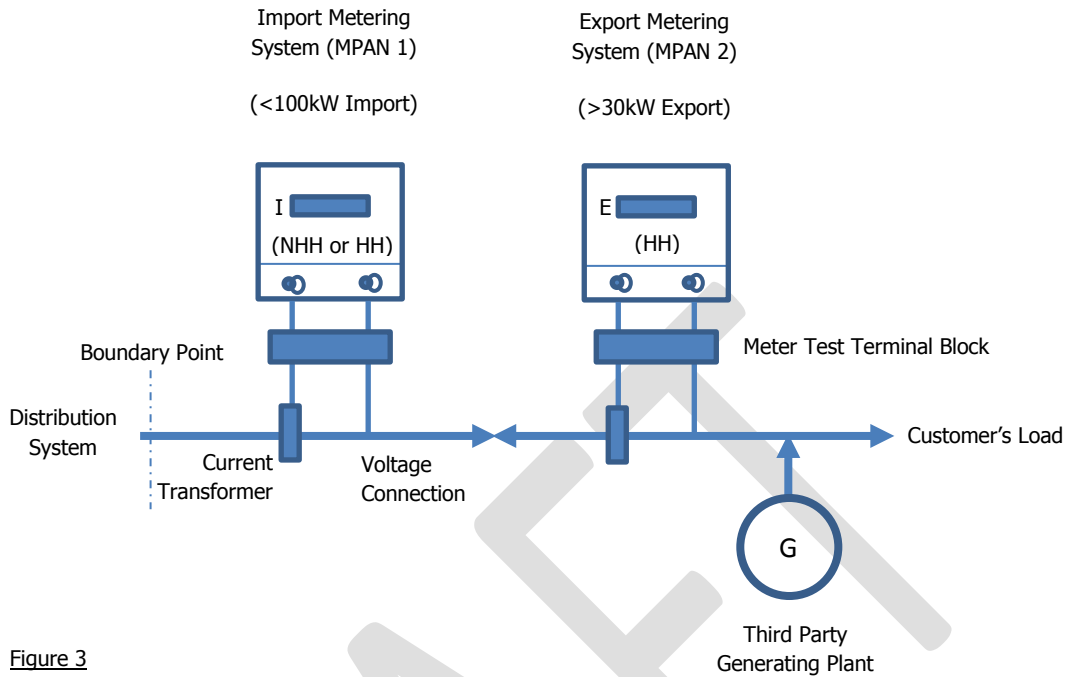


Figure 3

This scenario is similar to that for Figure 1. Since no Metering Equipment is shared the Suppliers responsible for each MPAN can appoint their own appropriately Qualified MOA and DC (i.e. NHH or HH for the Import MPAN and HH for the Export MPAN).

Import Meter & Separate Export Meter Operated by the same Current Transformer (<100kW Import, >30kW Export)

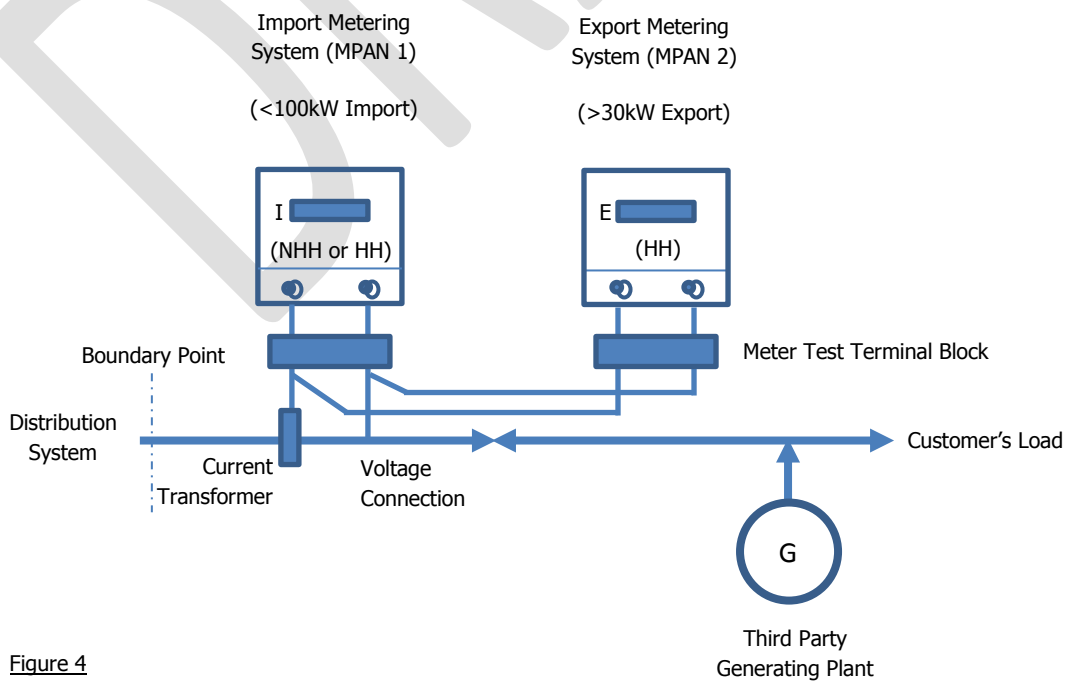


Figure 4

This scenario is similar to that for Figure 3 however Metering Equipment is shared (i.e. the same current transformer) so the Export Supplier has to appoint the same MOA as the Import Supplier¹² in accordance with Section J4.1.5 of the BSC. In this case though, since there are two separate Meters, one under each MPAN, each Supplier can appoint their own appropriately Qualified DC (i.e. NHH or HH DC for the Import MPAN and HHDC for the Export MPAN) as each Meter should have its own (integral) Outstation (rather than each Meter sending pulses to a shared separate Settlement Outstation).

Shared Import & Export Meter Operated by the same Current Transformer (<100kW Import, >30kW Export)

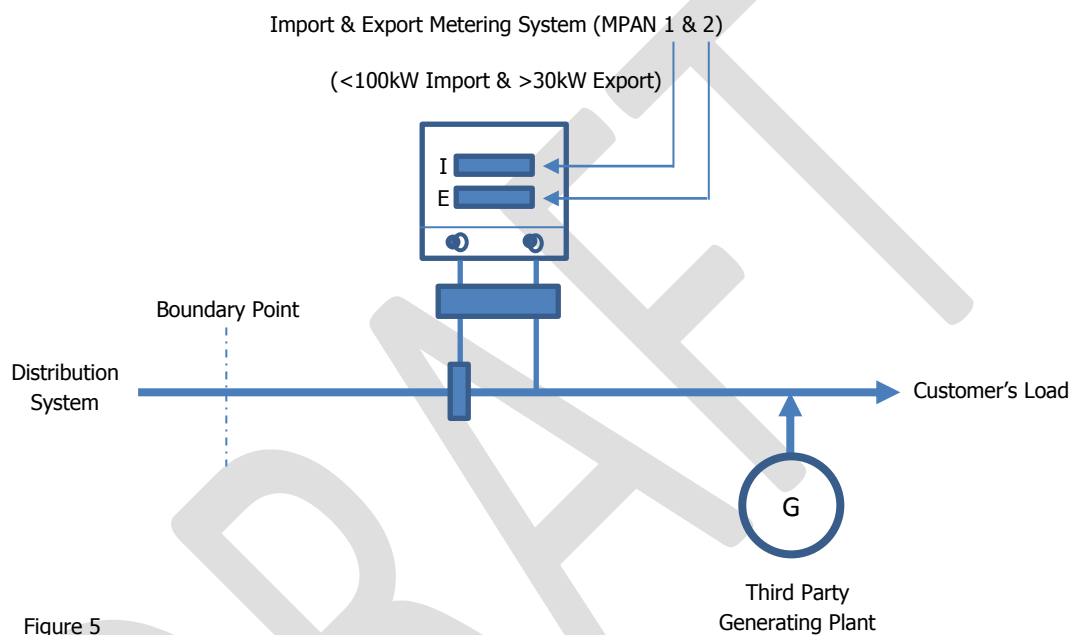


Figure 5

This scenario is identical that for Figure 1+2 however, as well as sharing the Meter, the same current transformers are also shared so in this case the Export Supplier has to appoint the same appropriately Qualified MOA and DC¹³ as the Import Supplier (i.e. NHH or HH MOA and DC for the Import MPAN and HHMOA and HHDC for the Export MPAN). In other words, both the MOA and DC may need to be Qualified as HH and NHH depending on how the Import Metering System is settled.

Reversed Scenarios (i.e. a 100kW Import Metering System and <30kW Export Metering System)

This section looks at examples of reversed scenarios to those described above, i.e. the Import Metering System is a 100kW Metering System and the aggregate capacity of the installed Third Party Generating Plant at the Boundary Point¹⁴ is <30kW. The scenarios referred to by this section are limited to those in Figures 3, 4 and 5 only. The reason being that a 100kW Metering System (i.e. the Import Metering System) is almost always going to have a CT operated Meter - whole current Meters

¹² This option of sharing the same CTs could be an issue if the MOA appointed to the Import MPAN is only qualified as a NHHMOA.

¹³ Unless the Meter pulses Import Energy and Export Energy metered data to two separate Settlement Outstations, in which case different appropriately Qualified DCs can be used.

¹⁴ In this context a Boundary Point is the point on an electrical circuit at which the Distribution System ends and the customer's installation begins.

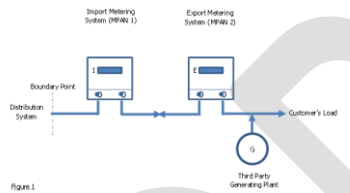
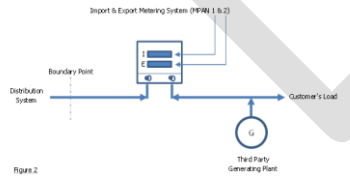
are usually only rated to handle up to 100 Amps (A) per phase and so will typically not be able to handle power above about 6972kW (i.e. 3 (phases) x 2340V x 100A-).

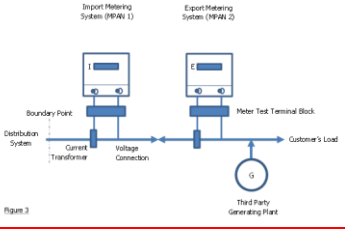
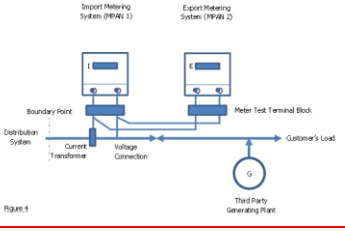
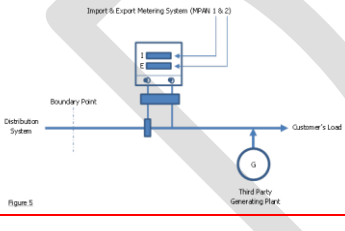
In Figure 3, since no Metering Equipment is shared, the Suppliers responsible for each MPAN can appoint their own appropriately Qualified MOA and DC. In the reverse scenario to that depicted, the Import Supplier will need to (because it is a 100kW Metering System) appoint a HHMOA and HHDC and the Export Supplier can choose to either settle the Exports from the <30kW Export Metering System in the NHH market by appointing a NHHMOA and a NHHDC or, alternatively, appoint a HHMOA and HHDC and settle them in the HH market.

In the shared Metering Equipment scenarios (Figures 4 and 5), where the scenarios are reversed to tho depicted, the Export Supplier would need to make sure they appoint the same MOA and potentially the same DC and make sure that those Party Agents were appropriately Qualified for the NHH market if they chose to settle the Exports in the NHH market.

Other things to consider when choosing an Import/Export Metering System solution.

In addition to the BSC requirements mentioned in the different scenarios set out above, the table below gives some examples of other things participants may/will need to consider when deciding which solution is the most appropriate for a particular customer's installation.

Description of I/E MS Solution	Things to consider
<p><u>Whole Current with Separate Import & Export Meters</u></p>  <p>Figure 1</p>	<p><u>Seals</u> - The Meter Operation Code of Practice Agreement places restrictions on who may break and remake seals on equipment that is sealed by and is under the responsibility of someone else.</p> <p><u>Meters</u> - The Supplier Licence requirement to fit Advanced Meters for NHH Profile Classes (PC) 5 to 8 by 2014 will mean the Import Meter will be HH capable and, more than likely, Export capable too. Export Suppliers may wish to use the same Meter for the Export MPAN. With the rollout of Smart Meters for NHH PCs 1 to 4 by 2020 such dual Meter scenarios are likely to end up with a single Meter solution.</p>
<p><u>Whole Current with integrated Import & Export Meter</u></p>  <p>Figure 2</p>	<p><u>De-appointment</u> - There is no link between the Import and Export MPANs in SMRS therefore the Import and Export Suppliers need to be careful they do not try to de-appoint the MOA or DC without prior agreement between themselves.</p> <p><u>NHH only</u> – An NHH Import Supplier (or NHH Export Supplier in the reverse scenario) may not wish to appoint a dual (NHH & HH) Qualified MOA if they are only Qualified as a NHH Supplier and they deal solely with NHH MOAs.</p>
<p><u>Current Transformer Operated Import Meter & Separate Export Meter Operated by Separate Current Transformer</u></p>	<p><u>Meters</u> - With the rollout of Smart Meters for NHH PCs 1 to 4 by 2020 and Advanced Meters for NHH PCs 5 to 8 by 2014 such dual Meter scenarios are likely to end up with a single Meter solution.</p> <p><u>CTs</u> - The Meter Operation Code of Practice Agreement places the responsibility for the provision and on-going maintenance of CTs on the LDSO. If CTs are installed by other parties, certain CT details need to be communicated to the LDSO so these can</p>

Description of I/E MS Solution	Things to consider
 <p>Figure 3</p>	<p>be sent by the LDSO to other industry participants (i.e. via the D0215 'Provision of Site Technical Details' data flow). Under the BSC (L2.5.3) the appointed Registrant (Supplier) is also responsible for maintaining copies of test certificates and commissioning records for the life of the CTs. LDSOs may not be able to provide CTs to timescale desired by the customer/Supplier. Having enough physical space to fit additional CTs may be an issue.</p>
<p>Import Meter & Separate Export Meter Operated by the same Current Transformer</p>  <p>Figure 4</p>	<p><i>Seals</i> - The Meter Operation Code of Practice Agreement places restrictions on who may break and remake seals on equipment that is sealed by and is under the responsibility of someone else.</p> <p><i>De-appointment</i> - There is no link between the Import and Export MPANs in SMRS therefore the Import and Export Suppliers need to be careful they do not try to de-appoint the MOA without prior agreement between themselves.</p> <p><i>Meters</i> - The Supplier Licence requirement to fit Advanced Meters for NHH PCs 5 to 8 by 2014 will mean the Import Meter will be HH capable and, more than likely, Export capable too. Export Suppliers may wish to use the same Meter for the Export MPAN. With the rollout of Smart Meters for NHH PCs 1 to 4 by 2020 such dual Meter scenarios are likely to end up with a single Meter solution.</p> <p><i>NHH only</i> – An NHH Import Supplier (or NHH Export Supplier in the reverse scenario) may not wish to appoint a dual (NHH & HH) Qualified MOA if they are only Qualified as a NHH Supplier and they deal solely with NHH MOAs.</p>
<p>Shared Import & Export Meter Operated by the same Current Transformer</p>  <p>Figure 5</p>	<p><i>De-appointment</i> - There is no link between the Import and Export MPANs in SMRS therefore the Import and Export Suppliers need to be careful they do not try to de-appoint the MOA or DC without prior agreement between themselves.</p> <p><i>NHH only</i> – An NHH Import Supplier (or NHH Export Supplier in the reverse scenario) may not wish to appoint a dual (NHH & HH) Qualified MOA if they are only Qualified as a NHH Supplier and they deal solely with NHH MOAs.</p>

Things to consider when the exports from a generating plant are not settled:

Because a Supplier can choose not to accept responsibility under the BSC for the exports from generating plant connected to a Distribution System (where the person generating that electricity does not require a licence from [Ofgem](#) to do so), it is possible that there may be other (non-BSC) obligations on Suppliers, or directly on customers (via Distribution System connection agreements, possibly), to ensure that those exports are measured and recorded by non-BSC metering systems. For instance, a LDSO may require a certain standard of metering equipment to be used to measure and record flows on to their Distribution System, or a Supplier may wish to pay the person who is

generating that electricity for their exports on to the Distribution System¹⁵ (but does not want to register and settle those exports under the BSC). If such obligations exist, then it i's up to the LDSO or Supplier to set those requirements out clearly and make their own arrangements to get hold of the metered data from the export metering system.

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¹⁵ e.g. under a Feed-in-Tariff arrangement.

Appendix A - Background to the BSC Requirements

The BSC set out the requirements for the wholesale electricity trading arrangements in Great Britain (i.e. England, Wales and Scotland).

Section L Requirements

Section L 'Metering' of the BSC sets out requirements for installing, commissioning, operating and maintaining Metering Equipment used to measure and record quantities of Active Energy (and where relevant, Reactive Energy¹⁶) for Settlement purposes.

Metering Equipment must comply¹⁷ with the relevant Code of Practice (CoP) at the time it is first registered for Settlement purposes (L3.2 'Compliance with Codes of Practice'). Where an item of Metering Equipment is materially changed then it must comply with the relevant CoP at the time of the material change (L3.3 'Material change').

Section L also sets out what type of Metering Equipment is required for Settlement purposes (L2.2 'Type of Metering Equipment'):

- Where an SVA Metering System is a 100kW Metering System¹⁸ then the Metering Equipment must be Half Hourly Metering Equipment;
- Where the SVA Metering System is associated with any Third Party Generating Plant (except for Small Scale Third Party Generating Plant¹⁹ (SSTPGP)) then it must be Half Hourly Metering Equipment;
- Where the SVA Metering System is not a 100kW Metering System or is it associated with a SSTPGP then it can be either Non-Half Hourly or Half Hourly Metering Equipment.

Section K Requirements

Once compliant Metering Equipment has been installed and commissioned it can be registered in Settlement as described in Section K 'Classification and Registration of Metering Systems and BM Units'.

Section K describes what an Import and an Export are (K1.4.4) and identifies who is responsible for an Import and an Export (K1.2) at a Boundary Point. Section K1.2.1 (a) also requires that Imports and Exports be separately measured.

Section K1.6.1 (d) states that the quantities of Imports and Exports at a Metering Point (in accordance with Schedule 8 of the [Master Registration Agreement](#)) shall be a single Metering System. This means that in the simplest case of a single customer with a single Boundary Point with on-site

¹⁶ Reactive Energy is not used for Settlement but the BSC and the relevant Code of Practice do contain requirements to measure and record Reactive Energy for Licenced Distribution System Operator (LDSO) purposes.

¹⁷ Section L3.4 of the BSC allows the Registrant of a Metering System(s) to apply for a Metering Dispensation from a Code of Practice requirement in accordance with BSCP32 'Metering Dispensations'.

¹⁸ The full definition of a 100kW Metering System can be found in Section X, Annex X-1 of the BSC but for the purposes of this Information Sheet we will take this to mean an SVA Metering System where the Imports are large enough to trigger the relevant criterion (i.e. (i), (ii) or (v)) described under that definition. In this document we will describe such an SVA Metering System, registered to measure and record such Imports, as '>100kW Import'. Where the Import Metering System is not a 100kW Metering System, we will denote this as '<100kW Import'.

¹⁹ Section X, Annex X-1 defines this and the current SSTPGP Limit (SSTPGPL) is 30kW. We will describe such an SVA Metering System, registered to measure and record such Exports, as '>30kW Export'. Where the maximum aggregate capacity of the Generating Plant is less than 30kW at the Boundary Point to the Distribution System, and a SVA Metering System is registered to measure and record such Exports, we will denote this as '<30kW Export'. ~~If the exports are not settled (i.e. no Export Metering System has been registered) then we will denote this as simply '>30kW' or '<30kW' as appropriate.~~

generation whose Exports are settled by a Supplier, then this will require 2 MSIDs (also known as Meter Point Administration Numbers (MPANs) under the [MRA](#)); one for the Imports and one for the Exports.

Section J Requirements

Where SVA Metering Equipment at a Third Party Generating Plant measures both Import Active Energy and Export Active Energy then Section J4.1.5 requires the Registrant (Supplier) of an Export Metering System to appoint the same Meter Operator Agent (MOA) as that which is appointed to the Import Metering System (e.g. a shared Meter with Import and Export registers or shared current transformers for two separate Import and Export Meters). In addition, Section J4.1.6 requires the Export Supplier to appoint the same Data Collector (DC) as the Import Supplier if the Outstation for the Metering Systems are shared (e.g. a shared Meter with Import and Export registers and a single Outstation storing Import or Export HH Data or separate Import and Export Meters impulsing to a single Outstation).

Settlement Metering Codes of Practice (CoP)

There are currently 10 metering [Codes of Practice](#) under the BSC:

[CoP1](#) – for circuits with a rated capacity >100MVA (HH)

[CoP2](#) – for circuits with a rated capacity ≤100MVA (HH)

[CoP3](#) – for circuits with a rated capacity ≤10MVA (HH)

[CoP4](#) – calibration, testing and commissioning requirements for Metering Equipment (NHH and HH)

[CoP5](#) – for energy transfers where the maximum demand is <1MW (HH)

[CoP6/CoP7](#) – for Imports via low voltage circuits fused at 100A or less per phase (HH)

[CoP8](#) – for Active Energy Imports via low voltage circuits (NHH)

[CoP9](#) - for Active Energy Imports and Exports via low voltage circuits (NHH)

[CoP10](#) – for Import and Export Energy via low voltage circuits (NHH, or HH (Elective market only))

CoPs 1, 2, 3 and 5 are relevant for Settlement use in the [mandatory](#) or [eElective](#) HH market (i.e. Measurement Class C or E). If a >30kW Export is settled then these CoPs are relevant for the Export Metering System and not CoP10. CoP10 is for HH Settlement use in the [eElective](#) HH market only and for NHH Settlement use (i.e. <100kW Imports and <30kW Exports). CoP1, 2, 3, 5, 6, 7 and 10 compliant Meters are suitable where the Registrant is required by its Supply Licence to install Metering Equipment that is capable of providing measured electricity consumption data for multiple periods (at least half hourly) and providing the Registrant with remote access to such data (i.e. Advanced Meters required for Profile Classes 5 to 8) (see [Section L3.2.6](#)). Meters that comply with CoP8 or 9 only are not suitable for that purpose.