## Appendix 1: ISSUES ASSOCIATED WITH THE DEFINITION OF IMPORTS AND EXPORTS

### SYNOPSIS

This appendix provides an analysis of the issues and anomalies associated with the definition of Imports and Exports in Section K of the Code, identifying these anomalies in Code drafting. It then highlights the potential implications of these defects on operational practice.

### 1. BACKGROUND

The Code, in particular Section K 'Classification and Registration of Metering Systems and BM Units', sets out obligations as to how responsibilities for Imports and Exports should be allocated.

These obligations may be summarised as follows:

- All Imports and Exports must be identified and a responsible Party for each such Import and Export defined.
- Metering must be installed to measure individual Imports and Exports onto or off the Total System.
- The key entities that form the basis of Settlement (BM Units) are established in the context of the metering arrangements that enable such BM Units to be identified.

There is also an underlying need to ensure that obligations are practical and do not impose an undue cost. Such obligations should recognise that certain flows are less significant than others, as regards System operation, and may not require the same visibility in Settlement. As a result, these may not need to be separately identified and, ultimately, defined as BM Units in their own right. Finally, it should also be noted that the resultant metering could then be used for other purposes, such as billing for Use of System.

In practice, BM Units typically would be gensets; station demands; Customer premises; or aggregated demands, as seen via the SVA arrangements in Settlement. These BM Units are derived in Settlements from aggregations of Meter readings where these Meters measure flows at Boundary Points (Exit/Entry Points to the Total System) from the associated Plant and/or Apparatus.

However, the above is generally only a requirement on the basis that such entities have their own Boundary Point. Where different items of Plant and Apparatus, that are the responsibility of the same Party, share a Boundary Point, subject to the underlying considerations described above, it is often the case that only a net Import or Export need be considered. That is, that one Import or Export is deemed to exist at the Boundary Point, one Meter reading is required and the resultant BM Unit would comprise all the underlying Plant and Apparatus involved.

### 2. CURRENT CODE DRAFTING

The Code sets down which Parties should be responsible for Imports and Exports to and from the Total System (K1.2.2). As a precursor to K1.2.2, the Code also describes what an Import and Export is i.e. that they exist at a Boundary Point and are per Party concepts and are direction specific (K1.1.4 (a) and (b)). Finally, the Code further qualifies what an Import and

Export may be by relating such flows to particular items of Plant and Apparatus. In particular, references to Plant and Apparatus (from which flows arise) are taken to include Customer's premises, third party generation, Generating Plant or an Interconnector. Furthermore, the Code also states that the net flow from a genset and its associated unit transformer load should be regarded as a single flow (K1.1.4 (d)).

K1.2.1 then sets down the obligations on the responsible Parties to install metering to measure each of these flows and subsequent obligations enable entities (BM Units) to be constructed using aggregations of the resulting Meter Volumes.

## 3. ANOMALIES

Anomalies have arisen in respect of the following situations:

- Where gensets have no associated unit transformer ( e.g. a wind turbine); the above statements are not clear on whether the flow at a Boundary Point associated with such a genset should still be regarded as a single flow, in its own right. In principle, the requirement for metering here is no different from that associated with a normally configured genset. However, it is also the case that, depending on the configuration of Plant and Apparatus and the associated connection arrangements, the flow arising from an individual genset (with or without an associated unit transformer) is not always seen as a single flow at a Boundary Point, nor is there any underlying requirement to be treated as such.
- Where there are gensets embedded in Customer's premises, the above states that such gensets should be regarded as having a separate and distinct flow to that associated with the demand on the Customer's premises. Typically, however, Customer practice here is that no metering is required for such gensets and, therefore, that there is no value in determining that the flows from such gensets need to be regarded as separate and distinct.
- Recent consideration of the potential for Export from Domestic Premises (by virtue of the installation of micro generation or photo-voltaic cells for example) have lead to the Authority stating that only a net flow need be metered at such premises. A new Code of Practice (CoP 9) is now being developed to accommodate this. However, as with the anomalies identified above, it is apparent that the Code is not clear on this requirement.
- Where there are multiple gensets (or other entities e.g., wind farms) at a single Boundary Point, it is not clear whether there is one flow, or a number of flows associated with each individual genset (or other entity). Typically, noting that this configuration is often associated with CCGT Modules or wind farms, the requirement is only for metering on the common feeder from the multiple gensets and not for metering of each genset.

## 4. ANALYSIS

In following the sequential logic of the Code drafting, it is necessary to consider, firstly, the derivation of BM Unit configurations; then the obligations relating to metering (which are a prerequisite of establishing BM Units); and, finally, the precursor to the obligations relating to Metering: the definition of Imports and Exports.

In so far as the establishment of BM Units is concerned, the above issues have not caused any observed difficulties. However, it should be noted that, whilst BM Units are derived from

a set of principles that flow from metering and other criteria (K3.1.2), certain configurations of Plant and Apparatus are deemed to satisfy such criteria (K3.1.4), unless a better configuration is demonstrated to better meet those criteria. A number of the anomalous circumstances described above have resulted in BM Units that do not fall into the category of being deemed to meet the criteria automatically.

As for metering, Meter installation has taken place in accordance with Code of Practice requirements, which themselves have been consistent with the underlying requirements, as described. It has been the metering arrangements that have highlighted some of the abovementioned anomalies. However, it could be argued that the Code requirement to install metering to measure all Imports and Exports is simple and, of itself, not problematic. The issue would appear to be more closely associated with how the Code currently defines Imports and Exports.

In the first place, the Code states that Imports and Exports are on a 'per Party' and 'per Boundary Point' basis. This obligation matches with an equivalent underlying requirement. However, whilst there is a requirement to be able to separately identify Exports from Imports (which the Code recognises by defining the two concepts discreetly), the Code also imposes the obligation to identify Imports and Exports on a gross basis (i.e. that an Export should be that which would exist, in the absence of any Import, associated with the given Party at the given Boundary Point, and vice-versa for Imports). Furthermore, the Code also identifies that Imports and Exports should always be associated with individual premises and gensets that have associated unit transformers (thereby excluding gensets without unit transformers). These qualifications give rise to the anomalies described and these may be considered defects in current Code drafting.

Based on the practical outcome desired, a net Import or Export (separately identifiable) at a Boundary Point, per Party is all that is required. However, whilst this simple definition caters for most circumstances, there are some instances where the potential impact of an Export or Import from a particular item of Plant and Apparatus is such as to merit a separate Import or Export being identified. In particular, this applies to generating sets (with or without associated unit transformers) that are of a capability that would cause them to be licenced, even if the operator controlled no other assets.

## 5. IMPLICATIONS

If the above formed the basis of the definition of Import and Export in the Code, the obligations in the Code would be consistent with sensible operational practices. However, without a Modification being raised, ELEXON and BSC Parties must follow the Code. This does, however, have a number of implications for ELEXON and the industry as follows:

- All metering Codes of Practice, including back issues, will need to be amended to bring them in line with the Code;
- A number of Metering Dispensations may have been approved, when the sites are not compliant against the Code;
- The costs of installing Meters on each genset, along with the associated infrastructure, would be considerable;
- This could be a barrier to entry, particularly for renewables and smaller schemes; and
- ELEXON are unable to ignore the issue in relation to Data Take-on for BETTA.

The Modification Proposal, which this appendix supports, would resolve the anomalies and implications identified in this paper. The costs of such a modification would only amount to those associated with the change in the Code; there are neither System implications nor any changes to Code Subsidiary Documents.