

## 4.7 Issue Form

<b>Issue Form - BSCP40/04</b>	<b>Issue Number</b> <i>(mandatory by BSCCo)</i>
<p><b>Issue Title</b> <i>(Mandatory by originator)</i></p> <p>Use of Internet Protocol (IP) address based communication methods for Central Volume Allocation (CVA) Metering Systems.</p>	
<p><b>Issue Description</b> <i>(Mandatory by originator)</i></p> <p>The Central Data Collection Agent (CDCA) is responsible for the retrieval of data from Metering Systems registered in the Central Meter Registration Service (CMRS). The majority of these Metering Systems communicate using technologies that use a telephone number to both establish a connection and retrieve data. These technologies are:</p> <ul style="list-style-type: none"> <li>• a fixed wired telephone network (Public Switched Telephone Network (PSTN) or Corporate Telephone Network (CTN)); or</li> <li>• a Circuit Switched Data (CSD) connection over the Global System for Mobile Communication (GSM).</li> </ul> <p>Both fixed wired telephone networks and CSD connections have associated line rental (or SIM rental) charges and call charges for every call made to retrieve the data from a Metering System.</p> <p>A small number of CVA Metering Systems are communicated with using Paknet. This is a packet radio broadcast service owned by Vodafone.</p> <p>Some Registrants and Meter Operator Agents (MOAs) are currently using Internet Protocol (IP) as their preferred communication method in the Supplier Volume Allocation (SVA) market. However, the CDCA is currently unable to communicate with CVA Metering Systems using IP dialling methods due to the contractual agreement it has with ELEXON.</p>	
<p><b>Justification for Examining Issue</b> <i>(Mandatory by originator)</i></p> <p>The future of the technologies currently used to communicate with CVA Metering Systems is uncertain. As technologies advance, there is less support for PSTN and CSD.</p> <p>British Telecom (BT) has confirmed its intention to switch off the PSTN infrastructure by 2025. This is due to the investment and nationwide roll out of alternative communication products such as Ethernet and Fibre internet.</p> <p>The CSD capability over the GSM network (otherwise known as 2G), is also expected to become more and more unsupported over the coming years and to be switched off sometime between 2020 and 2025. Further to this, as network service providers such as EE and Vodafone upgrade cellular masts for newer technology, support and capability for the older technologies (such as CSD) is being removed and not replaced. This is leaving data retrieval methods no longer able to establish CSD calls.</p> <p>Paknet will therefore be the only supported communications method that is currently used for CVA Metering Systems past 2025. As such, mobile network providers (and BT) have</p>	

recommended that the metering industry switch to IP based communication methods as soon as possible as PSTN and CSD will become less supported as we approach 2025.

Both PSTN and CSD technologies also have associated line or SIM rental charges and charges against every call made to retrieve data. IP communications work either over a fixed internet connection or through General Packet Radio Service (GPRS) attached to a SIM card. Neither of these methods has associated call charges (although GPRS has associated data charges). Fixed IP communications also do not have SIM rental charges as it usually uses the customer's internet connection and so these methods may result in an immediate saving.

Registrants and MOAs also experience very frequent communication issues with CSD in both the SVA and CVA markets due to poor reliability of the communication lines during bad weather and the disruption of communication channels.

**Potential Solution(s)** (*Optional by originator*)

Registrants and MOAs are seeing benefits from using GPRS/fixed IP as their preferred communication method in the SVA market from a cost perspective, increased reliability and to safeguard for the inevitable decline of PSTN and GSM. It is proposed that an Issue Group is convened to examine the use of GPRS/fixed IP communication methods by the CDCA for CVA Metering Systems registered in the Central Meter Registration Service (CMRS).

GPRS is an additional feature of the GSM network. It uses a wireless internet connection to send and retrieve data as opposed to the CSD mobile network. Although still a part of the GSM technology, GPRS is an extension to the 2G network and as such is sometimes known as '2.5G'. GPRS communication requires an IP address and port number to establish a connection with Metering Systems as opposed to using the voice number or data number of a SIM card. It is currently uncertain whether GPRS is also at risk when the GSM network is switched off.

GPRS is not the only means of communication using the internet. Whilst GPRS offers a wireless solution for communication using IP, it is also possible to use a fixed internet connection through a Local Area Network (LAN). Both fixed IP and GPRS require a connection to be established between data retrieval agent and the provider of the network that the connection is being established over (whether that is directly through a network provider such as Vodafone or a third-party communications provider such as ASL).

The group should consider whether public or private (Virtual Private Networks (VPNs)) IP should be used to communicate with CVA Metering Systems. Where private connections are used this requires the establishment and maintenance of a VPN between the dialling party (MOA and CDCA) and the host of the internet connection. For fixed IP this is usually the customer, for GPRS this is the provider of the SIM. VPNs have differing costs; a typical VPN connection may cost around £3000 to establish, and £500 a month to maintain, however, if public IP was to be used these costs would not be required. However, the Issue Group should also consider the security implications of using public IP addresses for Metering System communications.

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