Public

Issue 75

Use of Internet Protocol (IP) address based communication methods for Central Volume Allocation (CVA) Metering Systems

23 May 2019

ELEXON

Health & Safety

In case of an emergency

An alarm will sound to alert you. The alarm is tested for fifteen seconds every Wednesday at 9.20am

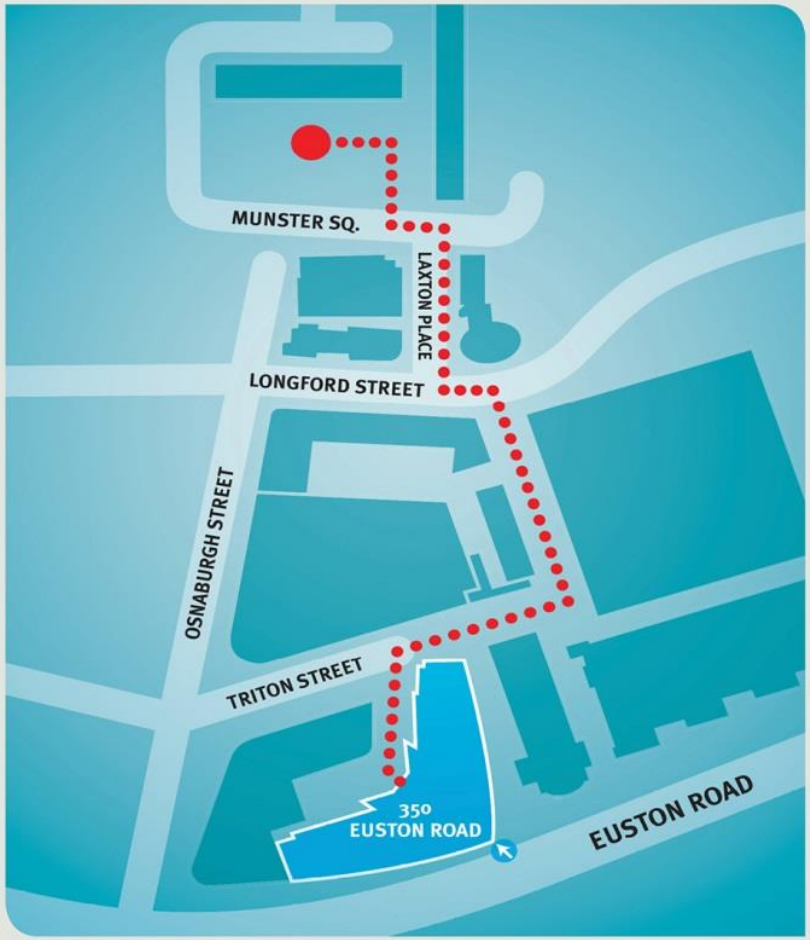
Evacuating 350 Euston Road

- If you discover a fire, operate one of the fire alarms next to the four emergency exits.
- Please do not tackle a fire yourself.
- If you hear the alarm, please leave the building immediately.
- Evacuate by the nearest signposted fire exit and walk to the assembly point.
- Please remain with a member of ELEXON staff and await further instructions from a Fire Warden.
- For visitors unable to use stairs, a Fire Warden will guide you to a refuge point and let the fire brigade know where you are.

When evacuating please remember

- Do not use the lifts.
- Do not re-enter the building until the all clear has been given by the Fire Warden or ground floor security.

Our team on reception is here to help you, if you have any questions, please do ask them.



Agenda

Agenda item	Lead
1. Welcome and meeting objectives	Chris Wood (Chair)
2. Actions update	Craig Murray (Lead Analyst)
3. Impact Assessment	Chris Day
4. Charging Options	Craig Murray/Workgroup
5. Next Steps	Craig Murray
6. Meeting Close	Chris Wood

Meeting Objectives

- Update the Issue Group on actions performed since the first meeting
- Detail the Impact Assessment and associated consequences
- Discuss charging methods for none standard Virtual Private Network (VPN) installations

Actions Update

Craig Murray

Actions Update

- Initial Impact Assessment showed cost of contract change ~£500
- ELEXON had additional questions on VPN installations
  - Ongoing costs?
  - Installation costs?
- Returned Impact Assessment showed:
  - No incremental increase in ongoing costs for VPNs
  - No additional cost for installation of standard VPN setup
  - Parties will absorb their own costs for none standard installation

Could be situations where none standard installation costs are excessive, how do we deal with these?

Impact Assessment

Chris Day

ELEXON

Impact Assessment

- As part of the assessment we have agreed that where a communication method requires a VPN; and that VPN is of a standard configuration to that currently implemented by IMSERV; then this would not be chargeable to parties.
- These VPN configurations relate to the following types of communication methods;
  - Those communications methods currently being employed
  - Those communications methods currently being employed (but have been identified as ceasing at some point in the future)
  - Those communications methods not currently being employed
- These are listed in the next slide.
- In terms of VPN configurations which do not comply to the above standards, these will need to be costed on a case by case basis based on actual requirements requested at the time.

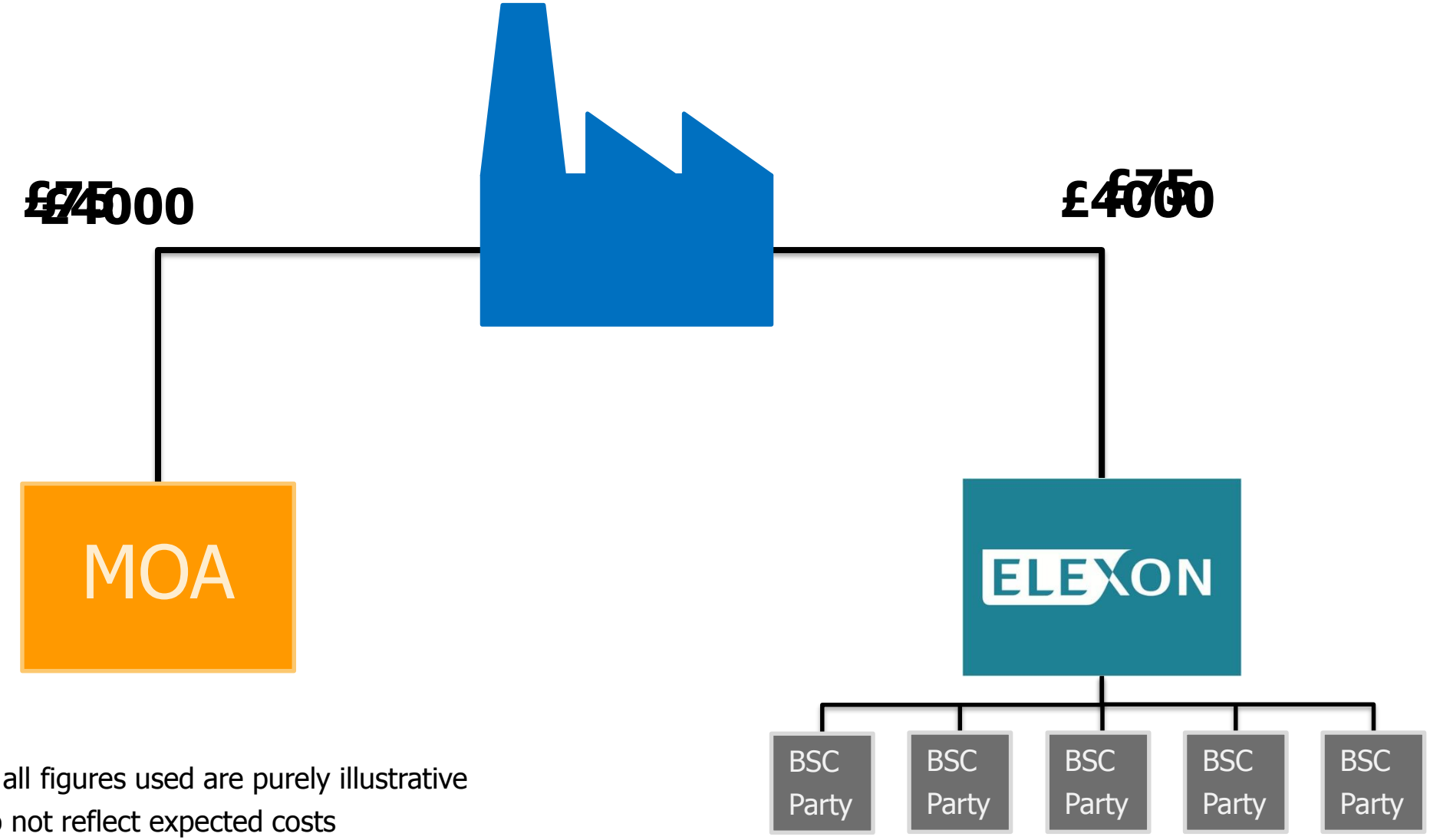
Impact Assessment

Services currently in place but are being phased out			
Identifier	**Description**	**Medium**	**Notes**
PSTN	Public Switched Telephone Network	Dedicated Connection	Standard BT Connection, only offered to 2025 however BT have confirmed that something will be available in its place – unknown what yet possibly SIP
ISDN	Integrated Services Digital Network	Dedicated Connection	Standard BT Connection only offered to 2025, nothing to replace it currently
CTN (PABX LINK)	Private Switched Telephone Network	Dedicated Connection	Private network equivalent to PSTN, currently being upgraded to have an underlying IP backbone which requires moving to the DDI connection method below
CSD	Circuit Switched Data	GSM Radio (Global System for Mobile Communication)	Equivalent to PSTN/ISDN dialling over mobile network
PAKNET	X.25 Packet Data Network	Radio	Legacy radio connection to metering provided by Vodafone, is being discontinued
2G (GPRS)	IP Connection over 2G mobile network	GSM Radio	Allows connectivity to sites over the internet or over VPN to a sim provider will be being replaced between 2020 and 2025
Services currently in place			
Identifier	**Description**	**Medium**	**Notes**
SATELLITE	IP Connection over Satellite Comms	Satellite Link	Uses satellite broadband links for very remote sites where a fixed connection is impossible and mobile coverage is not available
FIXED IP (INTERNET)	Fixed IP address on the internet	Local Internet Connection	Uses the sites own internet connection and one of their internet facing IP addresses to allow access to the site – will require the customer to allow access
FIXED IP (INTERNET COHERENT)	Fixed IP address on the internet using a mid-stage platform to provide the address	Local Internet Connection & Coherent Platform	Uses the sites own internet connection, just requires access to the internet and then a fixed address is allocated by the provider Coherent, this does not require the customer to allow access to anything other than the internet
FIXED IP (VPN)	Fixed IP address in a private network linked over the internet	Private Network over Local Internet Connection	Creates a tunnel between two networks allowing access to the private addresses, uses the internet as a carrier but keeps sites off the internet directly
FIXED IP (LINK)	Fixed IP address in a private network linked directly	Dedicated Business to Business Connection	As above but with a dedicated link between the two businesses rather than using the internet as a carrier. Is very expensive
CTN (DDI LINK)	Private Switched Telephone Network	Dedicated Connection @ Site – uses ISDN @ DC	Upgraded version of CTN, requires ISDN or PSTN dialling to connect
Future Services not yet in place			
Identifier	**Description**	**Medium**	**Notes**
4G (LTE)	IP Connection over 4G mobile network	LTE Radio (Long Term Evolution)	Replacement for GPRS in this market, will use the same radio frequencies but 4G technology which is promised to offer better connectivity
5G (LTE+)	IP Connection over 5G mobile network	LTE Radio	Will likely not be used for metering as it is very high bandwidth and aimed at high speed services
SIP	Session Initiation Protocol	Virtual Service offered over existing internet connection (or a separate internet connection dedicated to it)	Seen as a replacement for voice services, companies are now looking at delivering modem style communication over the SIP platform as well – this is being tested within the metering world, don't know if anyone is using it for live services yet

Charging Options

Craig Murray

Charging Options



Note: all figures used are purely illustrative and do not reflect expected costs

Charging Options

- Parties absorb cost of none standard VPN installations for their connection
- Central Data Collection Agency (CDCA) absorbs their connection cost to accommodate Parties' chosen communication method
- Cost passed through to ELEXON and socialised by industry

How do we mitigate the risk of a large number of expensive none standard VPN installations?

Charging Options – Potential Routes

1. Parties pay the entire installation cost (including CDCA connection)
   - Changes required to BSC Section D – BSC Modification

2. ELEXON pays for the CDCA connection with a cap on costs for individual installations (e.g. £750)*
   - Changes required to BSC Section D – BSC Modification

3. ELEXON pays the full cost for the CDCA connections but monitors for questionable behaviour, escalating to the ISG where necessary*
   - Changes possibly required

4. ELEXON pays for the full cost of CDCA connections*
   - No changes required

* This route requires installation costs to be socialised across industry via BSC Parties' funding shares

Next Steps

Craig Murray

Next Steps

- Draft Issue Report
- Circulate to Issue Group for 5WD review
- Present to BSC Panel on 13 June