

Your response

Summary

WPD is a Distribution Network Operator (DNO), operating in the four regulated licence areas serving 7.8 million electricity connected customers in the Midlands, the South West of England and South Wales. However, as energy generation is becoming more distributed, our network is becoming smarter and more active, and, as a result, we are stepping towards being a Distribution System Operator (DSO) – transforming our operations for an increasingly low carbon, digital future.

In order for DNOs to maintain a reliable and secure electricity supply as they transition to DSOs, reliable, resilient and complete coverage communications need to be maintained and expanded upon for critical functions.

WPD's primary focus will remain unchanged, distributing and proactively managing reliable electricity to its 7.8 million customers – not just through day to day normal operation, but also during events such as severe weather, flu-pandemics, Blackstart and acts of terrorism. To do this, and adapt to a low carbon future, DSOs will require more sensors, and hence more data and a mix of resilient data infrastructures.

WPD is in a unique position among the DNOs of having our own in house telecoms expertise in our own telecommunications department. WPD has a network using fibre and fixed wireless links to provide a backhaul / trunk network to its office sites and communication sites which are then used to communicate to substation sites and field staff. In the future, these sites will need to communicate to the thousands of additional users of the smart grid and all its components. Increasingly WPD's data infrastructure is required to be extended to provide private connectivity to substations, distributed generation and active management systems because existing commercial networks are unable to provide the coverage, the resilience and the connectivity that is required and can be technically unsuitable.

Ultimately, WPD has major concerns for the future of spectrum. In the move towards 5G, the pressure on spectrum allocation will impact on our current spectrum use without any alternative at present. Indeed, we currently use spectrum in the following ways:

- 26GHz and other fixed wireless link frequencies is used for microwave communications for substation comms including electricity circuit protection.
- 450-470 MHz is used for scanning telemetry frequencies, which will see increased volumes of data traffic communicating with our Control Centres from our operational assets with no additional allocation presently for utilities.
- 400-430 MHz, we currently have a development licence from the Ministry of Defence for an LTE trial, we cannot move this to business as usual as it is a temporary licence.
- WPD currently relies upon spectrum for our private systems to support us not only for day to day operation but also for high impact low probability events e.g. Blackstart.
- The evolution towards operating a more active system as a DSO will require an increase in the numbers of communications devices connected, and therefore an increase in data and secure, resilient data infrastructure.
- It is our current opinion that the Internet of Things or public networks or even proposed 5G will not address our cyber security, connectivity and resilience concerns.

WPD Response

Western Power Distribution depends on access to radio spectrum to facilitate the critical

Operational Monitoring & Control of its remote assets and with the anticipated transition to 'Smart Grid' capability the enabler for this will be additional access to radio spectrum¹. In recognition of this developing need Ofcom are currently undertaking a due diligence process with the UK energy utilities in order to better define the industry's needs. We welcome this engagement from Ofcom to work with the industry to ensure that access to spectrum is not an obstacle to Government Policy aspirations to realise the benefits of Smart Grid. WPD have actively supported this due diligence process and recently assisted MoD and Ofcom with their technical appraisal of the 400 MHz spectrum block being promoted by the Public Sector Spectrum Release programme for release and we await the findings from this analysis. Considering Ofcom's Annual Plan proposals, we encourage Ofcom to ensure that suitable resource and oversight is committed to establishing the appropriate regulatory arrangement to facilitate the future enhanced Operational Telecommunications capability that will be central to enabling consumer and citizen access to Electric Vehicles and more Distributed Generation.

As a point of reference, the Irish communications regulator (ComReg) in its recent consultation, ref. 18/92², is actively engaging with the needs of the energy utilities for spectrum access and proposing to enable access to spectrum in the 400 MHz band specifically for 'Smart Grid' developments – WPD encourage Ofcom to adopt a similar approach to support the needs of the UK energy utilities.

¹ ENA Strategic Telecoms Group Narrative describing the importance of access to additional radio spectrum to facilitate 'Smart Grid' developments, January 2019.

http://www.energynetworks.org/assets/files/ENA%20STG%20Comms%20Brochure_TCL_Final%20v4%20issueld.pdf

² ComReg Consultation 18/92, 'Further Consultation on the Release of the 410 – 415.5 / 420 – 425.5 MHz Sub-band.' 24-10-2018.