Your response

Question	Your response
Do you have any comments on our proposals?	Confidential? – N

The Joint Radio Company Ltd (JRC)

JRC Ltd is a wholly owned joint venture between the UK electricity and gas industries specifically created to manage the radio spectrum allocations for these industries used to support operational, safety and emergency communications.

JRC manages blocks of VHF and UHF spectrum for Private Business Radio applications, telemetry & tele-control services and network operations. JRC created and manages a national cellular plan for co-ordinating frequency assignments for several large radio networks in the UK.

As critical systems users, the Joint Radio Company (JRC) welcome the opportunity to respond to this consultation on behalf of the electricity and gas utility operators. JRC notes that Energy Networks are becoming more dynamic in terms of supply and demand, e.g. Electric Vehicles and Distributed Energy Resources, are expanding dramatically. To address this more dynamic supply / demand context and to ensure that energy supplies remain robust and predictable over time the Energy Network Operators are investing in 'Smart Grid' capability. Central to the future 'Smart Grid' is enhanced operational communications capability to address increased monitoring and control of the Network Assets which is wholly dependent on additional spectrum access. To this end, we welcome the ongoing sector specific work which Ofcom has prioritised to address this developing need and the contribution that this will have to delivering Government's 'Net Zero' agenda.

JRC Response to Specific Items

Copper retirement (PSTN withdrawal):

JRC and its Members are working closely with BEIS, Ofcom, Openreach and the Communications Providers (CPs) to address the challenges presented by the withdrawal of the PSTN service. It is clear that there are some niche applications that the Energy Network Operators depend on for operational integrity and there is currently no alternative solution commercially available noting that the PSTN system has designed in power resilience which is not replicated elsewhere. We welcome the recent interventions from Ofcom to ensure the continued and ongoing access for the Energy Network Operators and those providing CNI designated services and we will continue to work with CPs and stakeholders to address the challenges posed to our Members and UK plc.

Network Security and Resilience:

JRC welcomes the importance being placed by Ofcom of network security and resilience but notes that for Public Networks resilience is aligned to network roll-out rather than operational resilience which is not currently a priority targeted by Ofcom and clear from the withdrawal of the PSTN service. As a consequence of this Industries such as the Energy Network Operators have prioritised the deployment of Private networks to address their critical operational control needs, Utility Operational Telecoms systems are designed to high levels of availability and

resilience, with critical elements having at least 72 hours of independent power back-up. Furthermore, from 2020, utility control telecommunications have been mandated to meet the requirements of the 'Security of Network and Information Systems (NIS) Regulations 2018'. This will increase the data payload of utility operational telecoms systems (additional encryption) adding further to the need to increase telecommunications capacity and hence result in the need for access to additional spectrum.

Award Spectrum Bands as they are cleared and released:

JRC supports Ofcom's initiatives to increase spectrum access through a variety of sharing mechanisms. However, JRC notes the continued need for ongoing fixed link access particularly in the 26 GHz Band. JRC and its Members encourage Ofcom to seek full stakeholder engagement when considering any change to the current regulatory and licensing arrangements of the 26 GHz band, We are particularly concerned of the risk of harmful interference to existing fixed links from new 5G deployments band and note the importance of extensive technical analysis working with stakeholders to better understand the likelihood of harm and to explore options for mitigation.

Localised Licensing:

The on-site use of Shared Spectrum Bands may be of interest to Energy Utilities in some scenarios. However, JRC notes that since the introduction of shared MNO spectrum access in late 2019 there have been very few (<20) applications to participate in such arrangements. We encourage Ofcom to assess why the interest / activity has been so low and to identify any barriers to use that could be addressed to increase the attractiveness of spectrum sharing.

JRC supports Ofcom's plan to implement a fully automated authorisation approach for access to the shared bands in the future.

Licensing Platform Evolution:

JRC welcome's Ofcom's investment in an enhanced licensing platform provided it makes the licensing process more accessible to Users and reduces the overhead involved by requiring fewer manual interventions. Prior to introduction of the new system we encourage Ofcom to undertake sufficient testing to address any 'bugs.' We also encourage Ofcom to establish appropriate guidance by working with key existing license applicants.

Electromagnetic Fields (EMF) and Health:

Following constructive dialogue during Ofcom's first EMF consultation, JRC has welcomed the refinements made to the reference criteria but notes that the full implementation of the regulations will pose challenges for multi-user sites. JRC will continue to work with Ofcom and our members to establish a compliance regime that is proportionate in terms of affording protection to the General Public whilst minimising the administrative / regulatory burden on Industry and encourage Ofcom to review the effectiveness of the regulations once implemented after an appropriate time-frame.

Engaging with Industry on Wireless and Spectrum:

JRC welcomes the current industry engagement being undertaken by Ofcom to establish a more detailed understanding of the Operational Telecommunications needs, both now and in the future, of the Energy Network Operators via the 'Spectrum for Utilities' sector analysis underway. This initiative is both critical and timely given the anticipated network benefits to be realised from future 'Smart Grid' developments which are central to Government Energy Policy and delivering the 'Net Zero' agenda.

Spectrum Management Strategy:

JRC will provide a detailed response to the consultation launched in December and welcome the themes that have been targeted which will be key to unlocking the potential of UK plc over the next decade – particularly the spectrum access needs that are key to future 'Smart Grid' developments.

Spectrum Roadmap:

JRC look forward to visibility of the consultation in connection with the spectrum roadmap ahead of WRC 23. JRC and its Members are already actively engaged with ITU, 3GPP, IEEE and other global telecommunications standards bodies. There are significant opportunities for alignment globally within ITU.

2G / 3G Switch-Off:

UK Energy Network Operators have a significant field deployment of 2G and 3G dependent devices which are utilised as primary connection in some non-critical scenarios and also as a secondary connection paths in other situations. The devices (data modems) are typically deployed at unmanned locations and are often integral to other plant and RTUs. Active discussions are already underway with Ofcom and CPs to ensure that the withdrawal of such systems is managed effectively and minimises the harm, disruption and cost to the Energy Network Operators.

Future of Numbering Policy Review:

Energy Network Operators are very interested to understand how the allocation of mobile network codes and number ranges is going to be managed in the future and particularly for Private Networks. JRC recognises that there is a significant need for MNC and numbers to be made available for future energy network systems based on LTE. This requirement is likely to exist regardless of network configuration or busines model i.e. private, public or hybrid / sliced MVNO etc. JRC would like to understand if the numbering policy review will address this aspect..

Vulnerable Consumers

In terms of Ofcom's approach to vulnerable consumers we direct Ofcom to the work that has been undertaken by the Energy Network Operators in terms of defining and responding to the needs of 'Vulnerable Consumers' and the divergence of approach when compared with the Communications sector. Furthermore, as Public communications systems become ever more critical to everyday activities, we encourage Ofcom to explore the approaches of other regulators, e.g. Ofgem and Ofwat and its relevance to the regulation of public communications networks in the future. For reference see UKRN report below;

UKRN-Making-better
-use-of-data-to-identi

Spectrum Sector Reviews:

JRC fully supports Ofcom 'reviewing the role of spectrum in supporting energy distribution networks to meet Government targets on carbon neutrality and manage new distribution models'. JRC has engagement significantly in this process and appreciates the commitment to this area demonstrated by Ofcom. We also endorse the 'work with other UK regulators to address common challenges across different sectors and to share best practice as a member of the UKRN' (UK Regulators Network). (Reference Section 3.34 of the Annual Plan.) we anticipate that the 'Net Zero' objectives of Government will be such a challenge that to be addressed through this liaison.

To this end, access to additional spectrum is essential if UK plc is to meet climate change objectives which will depend on far greater control and visibility of Energy Networks than is presently the case. Furthermore, alignment with other utility spectrum allocations around the world will be essential if UK Energy Network Operators are to be able to access a healthy and diverse ecosystem of devices and network hardware.

The spectrum requirements of the UK's energy utilities are reflected by other European energy companies. Indeed, the situation is exemplified by developments in the Republic of Ireland where the Communications Regulator (ComReg) acknowledged the need for additional spectrum to be made available to facilitate Smart Grid developments and in so doing afforded access to 2 x 4.5 MHz of spectrum in the 400 MHz range for the Irish utilities. Moreover, ComReg summarises in Chapter 2[1] of ComReg Consultation 18/92 the International developments relating to the 400 MHz Band of which Ofcom has provided significant input. This work was closely aligned with activity CEPT FM54 to facilitate the use of 'wideband' LTE base systems in the range 410-430 MHz for PPDR and other mission critical application.

In summary, access to additional spectrum is becoming increasingly important for the Energy Network Operators to enable future operational enhancements and facilitate citizen and consumer needs, e.g. increased Electric Vehicle charging and more Distributed Generation. We therefore encourage Ofcom to continue to show leadership in terms of its role in affording spectrum access for the industry and in due course establish spectrum access arrangements that will support the enhanced network functionality demanded.

Please complete this form in full and return to planofwork@ofcom.org.uk.

[1] ComReg Consultation 18/92, 'Further Consultation on the Release of the 410 – 415.5 / 420 – 425.5 MHz Sub-band, 24th October 2018. https://www.comreg.ie/publication/further-consultation-on-the-release-of-the-410-415-5-420-425-5-mhz-sub-band/