



Ofcom Statement & Consultation

Expanding spectrum access for fixed links in the 32 GHz band

1.0 Executive Summary

JRC welcome the opportunity to respond to this consultation on behalf of the UK Energy Network Operators and is pleased to note Ofcom's proposal to enable Ofcom licensed fixed link access to the 32GHz frequency range. With the withdrawal of other fixed link bands, e.g. 1.4GHz and 26GHz, it is imperative that alternative options are enabled to address the increasing need for backhaul spectrum anticipated by the Energy Networks Operators as they seek to implement a private LTE (pLTE) based enhanced Operational Telecommunications capability (subject to spectrum access).

2.0 - Background - The Joint Radio Company (JRC, www.jrc.co.uk)

Joint Radio Company Ltd is a wholly owned joint venture between the UK electricity and gas network operators created to manage the radio spectrum allocations for these networks used to support operational, safety and emergency communications.

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

The VHF and UHF frequency allocations managed by JRC support telecommunications networks to keep the electricity and gas industries in touch with their field engineers and remote assets. These networks provide comprehensive geographical coverage to support installation, maintenance, operation and repair of plant in all weather conditions on 24 hour/365 days per year basis.

JRC's Scanning Telemetry Service is used by radio based Supervisory Control And Data Acquisition (SCADA) networks which control and monitor safety critical gas and electricity assets throughout the country. These networks provide resilient and reliable communications at all times to unmanned sites and assets in remote locations to maintain the integrity of the UK's energy transmission and distribution. JRC also manages microwave fixed link and satellite licences on behalf of UK energy networks.

JRC supports the European Utility Telecommunications Council's Radio Spectrum Group, and participates in other global utility telecom organisations. JRC participates in European Telecommunications Standards Institute (ETSI) working groups developing new radio standards, and European telecommunications regulatory groups and workshops.

JRC works with the Energy Networks Association's Future Energy Networks Groups assessing ICT implications of Smart Networks, Smart Grids & Smart Meters, is an active member of the Energy Networks Association Strategic Telecoms Group and is an acknowledged knowledge source for cyber-security in respect of radio networks.

Fixed (Microwave) links have been utilised for many decades in order to provide backbone transmission capability to support existing, application specific networks such as SCADA, Scanning Telemetry and push to talk voice. Increasingly, as these multiple applications convene in the IP domain, increases in backhaul bandwidth requirements are essential. So too is the number of links required, as connectivity is required to push further and further towards the periphery of the energy networks. As noted in other dialogue with Ofcom, JRC & ENA-STG are striving to gain access to additional dedicated radio spectrum to allow the deployment of an LTE based smart grid connectivity FAN (Field Area Network)¹. The eventual deployment of such a network will require the introduction of more fixed links in order to provide backhaul from the RAN back to the core. The 32 GHz Band could be an important connectivity tool in the fixed link area.

¹ Call for Input: Potential spectrum bands to support utilities sector transformation <https://www.ofcom.org.uk/consultations-and-statements/category-1/potential-spectrum-bands-to-support-utilities>

3.0 Detailed Responses to Questions

Question 1

Do you agree with our proposal to make this spectrum available for fixed links? Are there other potential users of these frequencies which we have not identified?

Q 1. JRC Response

Confidential? No.

Yes, JRC agrees with Ofcom's proposal to make this spectrum available for fixed links as this would be a valuable resource to support the utility industry's proposal for a private LTE network by enabling backhaul connectivity between the radio access network and the LTE core.

Question 2

Do you agree with our proposal to make this spectrum available on an Ofcom-managed basis?

Q 2. JRC Response

Confidential? No.

JRC are supportive of this proposal as it provides the most balanced access method to this valuable spectrum without unnecessarily sterilising the band for one particular service. The ability to access the spectrum on a link-by-link basis will be valuable to JRC members as their networks continue to expand (particularly with the prospect of backhaul use for a private LTE network).

Question 3

Do you agree that 28 and 32 GHz spectrum is broadly substitutable from a fixed links perspective? If not, please explain why this is the case and provide evidence to support your views. In particular we would be interested to understand any differences between the 28 and 32 GHz bands which could make them more or less suitable for fixed links migrating from the 26 or 40 GHz bands.

Q 3. JRC Response

Confidential? No.

JRC agree that both the 28 GHz and 32 GHz Bands would provide a suitable alternative for the links migrating from the 26 or 40 GHz Bands.

Question 4

Do you agree with our provisional proposal to make 28 MHz channels and one or more 56 MHz channels available for new fixed link assignments? If not, please explain the reasons for your view and set out any preferred alternative approach

Q 4. JRC Response

Confidential? No.

Although we welcome Ofcom's proposed approach to enable larger bandwidth fixed links accessible via the standard Ofcom fixed links licensing process, we would note that a significant number of our Members' link requests are still both 7 MHz and 14 MHz bandwidth. By enabling a combination of both narrow and wider bandwidths to be deployed, this may increase the flexibility for Ofcom in the frequency planning of the band.

Question 5

Do you have any additional concerns or comments regarding the proposals in this consultation document?

Q 5. JRC Response

Confidential? No.

No comment