

## DCMS Consultation

# Implementing the European Electronic Communications Code (EECC)

## Executive Summary

The Energy Networks Association (ENA) and the Joint Radio Company (JRC) welcome the opportunity to provide this joint response to this consultation by the Department for Digital, Culture, Media and Sport (DCMS) on the European Electronic Communications Code (EECC). In so doing we are representing Critical National Infrastructure operators (our members) and protecting their access to suitable spectrum resources to provide for the regulatory and commercial requirements of the services they offer, something that has been eroded by recent regulatory and policy decisions favouring public mobile services to the detriment of our members. We see the continuing access to 26 GHz and other suitable national spectrum for fixed links and radio wide area networking as being crucial to the establishment of 'Smart Grid capability to deliver upon Government Policy and ensure that the UK energy system is able to transition in a robust and resilient manner to enable the near zero system of the future.

The recent electricity network event in the UK, the Low Frequency Demand Disconnection (LFDD) on 09 August 2019, has again emphasised the requirement for robust resilient real time inter asset communications where radio-based communications are a primary contributor.

## Context to this Response – The Increasing Importance of Enhanced Telecommunications Systems for Energy System Management

We note the increasing demand both for optimisation and enhancement of electricity and gas networks characterised as "Smart Grid" to deliver the 2050 carbon neutrality targets set by Government. This will require a sustained modernisation of the function of these networks with operational enhancements that will deliver real time, inter site, command and control capability based on robust, low latency communications with high availability on a greatly increased scale across the UK. To facilitate this the industry has identified the need for radio communications and specific national radio spectrum to be allocated and mandated specifically to support this operational capability as there is no credible commercial alternative available. Unfortunately, the current regulatory regime and its focus on consumer-citizen outcomes has for some time run counter to the needs of Industry Verticals, the energy sector in particular, and this needs to be addressed to ensure that the UK's energy system is able to modernise and deliver upon Government aspirations for 'Smart Grid.' The ENA & JRC acknowledge that Ofcom is well placed to administer spectrum policy outcomes subject to the appropriate co-ordination of policy across Government Departments and Regulators, i.e. BEIS & DCMS and Ofgem & Ofwat.

## Background

### The Energy Networks Association (ENA, [www.energynetworks.org](http://www.energynetworks.org))

Energy Networks Association (ENA) represents the 'wires and pipes' transmission and distribution network operators for gas and electricity in the UK and Ireland. Our members control and maintain the critical national infrastructure that delivers these vital services into our homes and businesses.

ENA's overriding goals are to promote the UK and Ireland energy networks ensuring our networks are the safest, most reliable, most efficient and sustainable in the world. We influence decision-makers on issues that are important to our members. These include:

- Regulation and the wider representation in UK, Ireland and the rest of Europe.
- Cost-efficient engineering services and related businesses for the benefit of members.
- Safety, health and environment across the gas and electricity industries.
- The development and deployment of smart technology.

As the voice of the energy networks sector ENA acts as a strategic focus and channel of communication for the industry. We promote the interests and good standing of the industry, and provide a forum of discussion among company members.

ENA also provides business support functions to a number of industry related companies. These include secretariat services, financial services, database management, tailored consultancy services, public relations and event management.

### The Joint Radio Company (JRC, [www.jrc.co.uk](http://www.jrc.co.uk))

Joint Radio Company 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 & telecontrol 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.

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 industry plant and equipment throughout the country. These networks provide resilient and reliable communications at all times to unmanned sites and plant in remote locations to maintain the integrity of the UK's energy generation, transmission and distribution.

JRC also manages microwave fixed link and satellite licences on behalf of the utility sector.

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.

## ENA & JRC specific responses to the consultation questions:

### Q 1. – Q 11.

#### Response

No Comment

**Q12.** Do you have views on the appropriate competent authority for different spectrum management functions?

#### Response

The Communications Act requires Ofcom to focus its activities for the benefit of the UK's citizens and consumers. This focus can however be detrimental to UK industries.

Indeed, for some years, Ofcom's priority has been to take spectrum from long-term industry users and make it available for public mobile. There is a need for joined up policy on Spectrum between Government and Ofcom and to ensure that Ofcom is focused on the interests of UK businesses as well as consumers. The ability for Ofcom to be Directed and influenced by Statements of Strategic priorities is one way to help achieve this and we welcome the recent direction from DCMS in this regard. Furthermore, we encourage DCMS when developing strategic policy priorities to consult across Government Departments e.g. BEIS and Regulators e.g. Ofgem and Ofwat, plus Industry and CPNI users to ensure alignment with broader Government Policy priorities. In summary, Ofcom is the appropriate competent authority to undertake the different spectrum management functions subject to the appropriate direction from Government.

**Q13.** Do you think that a 'use it or lose it' condition would promote spectrum trading, prevent under utilisation, enhance mobile coverage and/or mitigate barriers to entry?

#### Response

Yes, for mobile spectrum allocations as this may increase spectrum availability for critical national infrastructure operators including ENA & JRC members.

In addition, we note that the spectrum being allocated to mobile broadband operators has typically been licensed for the whole of the UK. This may be considered an inefficient method because, for example, a radio band may be cleared of existing UK-wide industry users and replaced with public systems that primarily operate within populated / profitable areas only. As a result there are vast areas of the country where the spectrum allocated and acquired by Mobile Operators is largely unused and could be re-deployed by Industry Verticals through the deployment of private LTE systems, in the case of the Energy sector specifically for resilient operational telecommunications purposes.

**Q14.** In relation to any ‘use it or lose it’ condition, what do you consider would be the best measure of the ‘level of use’ of spectrum? Beyond ‘level of use’, what other conditions should be considered when designing a ‘use it or lose it’ condition?

**Response**

In order for a “use it or lose it” regime to operate effectively we suggest the following framework whereby the system deployed must be fit for purpose, i.e. capable of delivering a credible service, rather than merely occupying spectrum for a percentage of time within a defined period.

Also, for measurement of use purposes, each public mobile and fixed broadband licence should be separated into multiple geographical areas in keeping with the frequency and maximum power allowed, i.e. the higher the frequency the smaller the cell size. Each of these areas could then be measured for being capable of delivering a credible service.

**Q15.** Do you agree with our preferred approach for ‘use it or lose it’ to be applied to future mobile spectrum licences only? If no, please provide any supporting evidence.

**Response**

The ENA & JRC encourage DCMS to go further and apply the ‘use it or lose it’ framework to all of the spectrum rights held by the mobile network operators. Otherwise, there will continue to be large quantities of spectrum across the UK that will remain unused and effectively sterilised and in so doing compromise the opportunity for UK Industry Verticals to deliver enhanced operational telecommunications systems capability where they need it in a cost-effective way.

**Q16.** If you hold licences in the 26 GHz spectrum band, what do you expect the cost of sharing by 2022 to be? (Please specify cost for both sharing or clearing.)

**Response**

We agree with the DCMS stated preference for Option 2 to only clear the 26.5 to 27.5 GHz band subject to demand from the Mobile Operators.

Indeed, knowing that the spectrum below 26.5 GHz will be preserved for continued fixed link services this will enable the utilities to further expand their fixed link requirements within this band.

At this stage it is difficult to judge the cost of sharing as the characteristics of the 5G deployments in the upper 26GHz (26.5 – 27.5 GHz) band are not known, but on the basis that all of the 26 GHz fixed links licences that JRC manages on behalf of the UK Energy Utilities are below 26.5 GHz any cost is likely to be modest.

**Q 17 – Q 21**

**Response**

No Comment

**Q 21.** What is the impact of setting minimum durations for individual rights of use given anticipated UK market developments?

**Response**

This is a common approach in other jurisdictions and perhaps Ofcom should seek guidance from National Regulatory Authorities that adopt this approach. We believe that there is merit in adopting minimum durations appropriate to the rate of technology development / system refresh and hence 15 years minimum periods may be appropriate for Mobile Spectrum access in keeping with the existing initial term.

The imposition of minimum terms will potentially facilitate regulators to regain access to spectrum and in so doing encourage competition through offering a mechanism for spectrum to be returned to market and redeployed.

**Q 22. – Q 30.**

**Response**

No Comment