

## **RADIO SPECTRUM POLICY GROUP**

### **DRAFT RSPG WORK PROGRAMME FOR 2018 AND BEYOND**

#### **Executive Summary**

The Joint Radio Company (JRC) welcomes the opportunity to respond to this consultation and in particular JRC is encouraged by the proposal to establish a European Spectrum Strategy which would seek to establish a strategic vision for spectrum policy matters beyond the current frameworks / thinking. In particular we encourage the RSPG when establishing this Strategic Vision to seek input from the European Energy Utility Sector to ensure that the spectrum requirements of this sector today and in the future, are accounted for. European Economic Development is predicated on robust and resilient energy supplies – with an increasingly dynamic energy supply system communication networks will have a crucial role in balancing supply and demand and ensuring stability of the energy networks. This functionality will be enabled by the widespread deployment of active control systems with communications capability key to managing these energy flows – to this end secure and expanded access to radio spectrum for Energy Utility Networks will become a critical component of their future operating model thus enabling the ‘Smart Grid Future.’

#### **Background**

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. These networks provide comprehensive geographical coverage to support installation, maintenance 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 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 also manages microwave fixed link and satellite licences on behalf of the utility sector.

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

## JRC's Observations on the RSPG Draft Work Programme

### Introduction

JRC focuses its response on the proposals for the RSPG to establish a European Spectrum Strategy that goes beyond current thinking and frameworks and we welcome this approach particularly as spectrum resources in the critical bands below 3 GHz have over recent times become so constrained due to the policy emphasis placed on clearing bands for mobile use. In order to ensure that future industry developments, e.g. 'Smart Grid,' can be implemented spectrum access solutions will need to be established that are not provided for in the race to release bands to the Mobile use and 5G, this is potentially where alternative approaches will be necessary.

### **Spectrum's Role in Supporting the Energy Networks of the Future**

Historically energy networks have largely been passive networks with active control components very limited in number and to the High Voltage layer. The systems used have typically been narrowband and as such utilised relatively limited amounts of spectrum. However, as energy networks become more dynamic both from a supply and demand perspective, i.e. distributed generation and also the adoption of Electric Vehicles, there is an enhanced need to more actively control the energy networks. This will result in active control components being deployed within the Medium and Low Voltage layers with the number of active units increasing by potentially two orders of magnitude. This significant increase in the number of control units and resulting dramatic increase in data flows will lead to a significant expansion in the need for spectrum access to underpin these critical communications. Moreover, the role of spectrum in supporting 'Smart Energy' has been acknowledged in a recent article from the ECC<sup>1</sup>. As such we encourage the RSPG to adopt a work item within the 'European Spectrum Strategy Programme' to establish a robust approach to spectrum access to facilitate the development of Smart Grid capability in Europe which will underpin Europe's long term Economic sustainability.

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<sup>1</sup> Providing Spectrum to support machine-to-machine communications, ECC Newsletter, December 2017