

Ofgem: RIIO-ED2 Draft Determinations – Core Methodology Document

Telecommunications Resilience and Spectrum Access

Executive Summary

The Energy Networks Association Strategic Telecommunications Group (ENA-STG) and the Joint Radio Company (JRC) welcome the opportunity to provide this joint input to the Ofgem: RIIO-ED2 Draft Determinations – Core Methodology Document and focus this input on Telecommunications Resilience section pg. 214-216¹, specifically the observations in paragraph 6.214. Our contribution centres on the important role that radio spectrum will play in the ‘Net Zero’ future and the opportunity to avoid market / regulatory failure through appropriate policy interventions and funding provision. UK Economic Development is predicated on robust and resilient energy supplies – for an increasingly dynamic energy supply system operational communications will have a crucial role in balancing supply and demand and ensuring stability of the energy networks whilst facilitating increased supply from Distributed Energy Resources (DERs) and the expansion of demand from Electric Vehicles (EVs)². This functionality will be enabled by the widespread deployment of active, resilient control systems with enhanced and resilient data communications key to managing these energy flows. To this end, secure and expanded access to dedicated radio spectrum for Energy Utility Networks is a critical component of their future operating model and to enabling the ‘Smart Grid’ that is central to the UK Government’s ambitions for a ‘Net Zero’ future.

The ENA-STG and JRC have been actively collaborating with Ofcom for in excess of 5 years to ensure that the appropriate steps are taken to enable spectrum access for the Energy Network Operators and through this active engagement Ofcom have indicated that they are working to a Pre-ED2 timeline to provide guidance to the industry on spectrum access arrangements. To this end the guidance that we have received directly from Ofcom is at odds with the position articulated by Ofgem in paragraph 6.214. In addition, the Department for Business, Energy and Industrial Strategy (BEIS) has recently commissioned a third-party study³ to explore the options available to support enhanced operational control requirements of the Energy Networks to inform Government thinking. Whilst, the recent Storm Arwen final report from E3C and BEIS⁴ includes a specific recommendation **R4** which states ‘*Energy Network Operators should continue to engage with DCMS and Ofcom to secure the utility spectrum so that the energy sector can develop its own resilient data/voice networks in the future.*’ Whilst in parallel the Department for Digital, Culture, Media and Sport (DCMS) which sets the Policy framework for Ofcom is currently preparing updated Spectrum Policy guidance that is anticipated will enable such a development. Considering this additional information, we encourage Ofgem to revisit their understanding and approach to the need for discrete funding by the Distribution Network Operators (DNOs) in the ED2 period for enhanced resilient operational telecommunications capability.

Ofgem’s separate observation that independent of a decision on spectrum access arrangements,

‘key details such as who will own the infrastructure and how it will be operated will still need to be resolved before they can establish the scope and cost of telecoms resilience enhancements.’

It is important to note that this is a question that has been addressed to the ENA-STG by the Department for Business, Energy and Industrial Strategy (BEIS) and is currently being progressed by the group. However, it is worth noting that a recent study by Gemserv⁵ has considered the costs and benefits of enabling enhanced operational control of the Energy Networks via a range of platform solutions; fixed fibre, Public Cellular and Private Wireless options with Private Wireless being the lowest cost option offering the potential for a net reduction in cost to households of £25 per annum.

We encourage Ofgem to continue to work with Ofcom, DCMS and BEIS to enable dedicated Spectrum Access for the Energy Network Operators to ensure that Government’s ‘Net zero’ objectives are progressed.

¹ <https://www.ofgem.gov.uk/sites/default/files/2022-06/RIIO-ED2%20Draft%20Determinations%20Core%20Methodology.pdf>

² Need for Increased Spectrum Allocation and Investment in Operational Telecommunications (OT) to Support Electricity Networks to facilitate the ‘Net Zero’ transition, Position Statement of the Energy Networks Association Strategic Telecommunications Group, Jan 2019 [Electricity Networks Brochure \(LINKED\) ian@energynetworks.org](#)

³ BEIS: Risk to availability of suitable radio connectivity solutions for energy utilities, 23 June 2022, Plum Consulting.

⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1081116/storm-arwen-review-final-report.pdf

⁵ Economic rationale for enabling Smart Grid functionality of the UK energy system via a Private Radio Frequency-based enhanced Operational Communications Solution, Gemserv, 19 November 2021, <https://www.jrc.co.uk/Plugin/Publications/assets/pdf/ICT-Economic-rationale-for-enabling-Smart.pdf>

Background

The Energy Networks Association (ENA, 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.

The ENA-STG (Strategic Telecommunications Group) provides opportunities to exchange information and best practice in the key elements of telecommunications⁶ in electricity and gas distribution networks.

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 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.

⁶ [Operational telecommunications – Energy Networks Association \(ENA\)](#)