



## JRC Response to the Report “Digital Britain”

**JRC Ltd**  
Dean Bradley House  
52 Horseferry Road  
London SW1P 2AF  
☎ 020 7706 5199  
✉ 020 7222 4862  
info@JRC.co.uk

### Key Points

- ❑ JRC welcomes the recognition in the Report that advanced digital communications are the backbone of a successful 21<sup>st</sup> Century economy.
- ❑ JRC is pleased to note that the energy services sector, together with energy technology, are recognised as of equal importance with information and communications technology in delivering the vision of an advanced successful and prosperous economy.
- ❑ JRC welcomes moves to enhance the capacity and geographic coverage of broadband services, both fixed and wireless.
- ❑ JRC welcomes the recognition that spectrum auctions are not always the most effective way of allocating spectrum in all circumstances.
- ❑ JRC welcomes a review of administrative incentive pricing, but warns that the review must accommodate all aspects of spectrum value, and not be dominated by high value public mobile phone services.
- ❑ JRC warns that early adaptors of the digital economy must be safeguarded to maintain confidence in the investment potential of digital technologies: many utilities have made substantial investments in digital technology, but there is a risk that these investments will be undermined if new Government inspired initiatives results in these legacy systems having to be written off prematurely at great cost.

### Interdependency of energy and telecommunications networks

1. The Report opens “The digital information and communications sector is one of the sectors in the economy, alongside energy and financial services, upon which the whole economy rests.” Thus a significant feature of an industrialised 21<sup>st</sup> Century economy is the inter-dependency of critical services, such as energy and telecommunications. Without these services, as was tragically demonstrated during hurricane Katrina in the USA, western society collapses. It is therefore crucially important to recognise this linkage, and ensure the failure of one part of the critical national infrastructure does not cause a domino style failure of related services.

2. The Report also recognises that the UK has international strengths in ‘public safety networks’, and we would include utility networks in this analysis. The UK has historically exploited telecommunications technology, including specifically radio communications to build efficient and resilient gas and electricity networks, the reliability of which consumers take for granted.

3. If the integrity of the energy networks is to be maintained, the utilities will continue to require access to specialised telecommunications facilities. This issue was specifically recognised in 1997 when, during the passage of the Wireless Telegraphy Bill which heralded new mechanisms of allocating the radio spectrum, the Government provided specific

assurances *“that it is not our intention that the introduction of spectrum pricing should affect the access of utilities to the radio spectrum that they require.”* (Hansard 8 July 1997).

4. Thus the growth of a vibrant communications sector requires commensurate investment in utility telecommunications to ensure appropriate energy networks to support the ‘Digital Britain’ vision, and this requires guaranteed access to suitable radio spectrum to deliver these specialised services.

## **Spectrum allocation**

5. JRC welcomes the recognition implied in the report that spectrum auctions are not necessarily the optimal means for allocating spectrum in all circumstances. JRC believes it is particularly important for emergency services and critical national infrastructure providers to have guaranteed access to appropriate spectrum through appropriate allocation mechanisms to ensure the vision of a ‘Digital Britain’ can be sustained for all citizens in all parts of the UK. Commercial telecoms providers do not have the commercial incentive to provide universal geographic coverage, especially in areas of low population density, whereas utilities may have vital infrastructure in such areas which must be monitored and maintained; and repaired safely in cases of failure. Radio communications are a vital ingredient to monitoring and control of the networks, plus their safe and rapid restoration following failures.

6. In referring to Administrative Incentive Pricing in the context of spectrum charges, JRC believes a complete picture must be obtained, not an analysis based on headline figures. Different parts of the spectrum have very different values based on a combination of complex parameters. The ‘Digital Britain’ report cites the sum of £22.48 billion paid for the 3G spectrum in 2000; but Ofcom launched a consultation on 26 February 2009 proposing that the price for the old TV Band I spectrum should be reduced to £600 per national channel in an effort to attract users. This illustrates the vast differences in the value of different parts of the radio spectrum.

7. It is also in the long term interests of the UK that spectrum is accessible to those organisations which can generate the most economic and social benefit. This will include small and medium size enterprises (SMEs), but they are being excluded from the market by Ofcom decisions on the minimum size of block of spectrum placed on the market, and high reserve prices. If ‘Digital Britain’ is not to be the sole preserve of large national and multi-national corporations, consideration must be given to how SMEs will share in the digital revolution.

## **Legacy systems**

8. In stimulating the introduction of greater bandwidth systems, consideration must be given to those who have already invested in the technology. Failure to give due consideration to investment in legacy systems will make organisations over-cautious when considering investing in future systems. Consumer based equipment may be amortised on a 3 year cycle whereas industrial installations may have a 10 or 15 year life cycle, an approach which should be applauded in environmentally sensitive times.

9. Utilities were early adopters of data services based on 2G and 2.5G technology, many operating exclusively in 900 MHz spectrum to reach remote geographic areas. There are significant concerns that if the refarming of 2G and 2.5G spectrum is forced through on an accelerated timescale, utilities will face major difficulties replacing the large numbers of obsolete data modems, frequently incorporated into complex systems in remote locations.

## **Background**

A. 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 emergency and safety critical operations. JRC also represents gas and electricity interests to government on radio issues.

B. JRC manages small blocks of VHF and UHF spectrum for Private Business Radio applications and for telemetry & telecontrol services. JRC created and manages a national cellular plan for co-ordinating frequency assignments for a number of large radio networks in the UK.

C. 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 throughout the country. The networks provide comprehensive geographical coverage to support the installation, maintenance and repair of plant in all weather conditions on a 24 hour/365 days per year basis.

D. JRC's Scanning Telemetry Service is used by radio based System 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.

**Adrian Grilli**  
Managing Director  
JRC Ltd  
10 March 2009