



STRATEGIC SPECTRUM ROADMAP TOWARDS 5G FOR EUROPE

RSPG Opinion on 5G implementation challenges (RSPG 3rd opinion on 5G)

Executive Summary

The European Utility Telecom Council (EUTC) welcomes the opportunity to respond to this consultation on behalf of its members representing European electricity, gas and water utilities.

Utilities are embarked in a digitalization process where telecommunication services will play a fundamental role to ensure access - with enough capability and reliability - a massive amount of network devices. Only with this digitalization the grids will become as smart as needed to allow the customers the active role they are claiming for its energy involvement (use and production). On the other hand, 5G is seen as the solution for the Internet of Things and TO are expecting its intensive use by vertical sectors as Energy and, very particularly the electrical subsector.

Our response focuses on sections 5, 6 and 7 which are most relevant to the utility sector.

ABOUT EUTC

The European Utilities Telecom Council (EUTC) is a non-profit organization delivering education, collaboration, best practices and thought leadership in telecommunication technology to utilities, other critical infrastructure providers and regulators, ensuring efficient, secure, sustainable and affordable smart infrastructure solutions. For more information, please visit our website www.eutc.org

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RESPONSES

II (5). The RSPG notes that connectivity for vertical industries could be provided by mobile operator's solutions, third-party providers and directly by verticals themselves in EU harmonised ECS bands or in dedicated spectrum for verticals.

Utilities use a variety of telecoms solutions to meet their diverse needs which vary with parameters beyond their control, such as geographic terrain, regulatory constraints and environmental factors. Spectrum sources to support wireless networks include:

- Licensed of spectrum;
- Licence-exempt spectrum
- Third-party providers of telecoms networks or spectrum; and
- Commercial using network mobile operator solutions.

II (6). The RSPG recommends that Member States consider other spectrum solutions including dedicated or shared spectrum for the business/sectoral needs ("verticals needs") that may not be met by mobile operators. Such solutions could take advantage from economies of scale and ecosystem availability in spectrum bands with EU harmonised technical conditions.

Many European utilities acquire spectrum to support their critical operational networks from national regulators where possible. This allows their operational telecommunications capability to focus on the areas of greatest need for the utility and incorporate the necessary requirements, such as power supplies independent of the mains electricity supply and resistance to flooding. It should be noted that regulatory requirements being imposed on utilities are increasingly focusing on resilience, from both natural disasters such as flooding and man-made incidents such as cyber security.

Utility communications needs are also in some cases diverging from commercial networks, for example the onus on resilience, the need for narrow-band data services and upload-centric networks.

Future telecommunications networks models will be unduly restrictive and not necessarily in citizens and customers interests if vertical sectors can only access spectrum by leasing from operators or through licence-exempt spectrum. It would be anti-competitive if utilities could only access 'high power' protected spectrum through mobile operators.



II (7). The RSPG notes that, in addition to the above, in order to respond to some targeted EU public policy objectives requiring, for example pan European services for specific verticals, there may be need for technology neutral dedicated EU harmonised spectrum. RSPG recommends assessing these needs on a case by case basis and is ready to give its view when/where appropriate.

The European Utilities Telecoms Council (EUTC) is seeking a harmonised tuning range for 2 x 3 MHz of dedicated utilities spectrum across Europe in the 400 MHz region, associated with 2 x 1 MHz in the VHF Band, and 10 MHz in the 1.4 GHz Region. [see attached chart]. EUTC recognises that the same harmonised frequency allocation is not an option for some member states, and therefore utilities must be flexible in their approach.

EUTC endorses EU Policy interventions to ensure that the European Energy Utilities have access to the appropriate quantity and quality of radio spectrum to enable future Smart Grid and Smart Meter developments for the benefit of European citizens and consumers, and to enhance the European way of life.

EUTC Spectrum Proposal

Within Europe, multiple small allocations within harmonised bands:

- **VHF spectrum (50-200 MHz)** for SCADA, automation, smart grids and smart meters. [2 x 1 MHz]
- **UHF spectrum (400 MHz)** for SCADA, automation, smart grids and smart meters. [2 x 3 MHz]
- **Lightly regulated or licence-exempt shared spectrum** for smart meters and mesh networks. (870-876 MHz)
- **L-band region (1-2 GHz)** for more data intensive smart grid, security and point-to-multipoint applications [10 MHz]
- **Public microwave bands (1400 MHz – 58 GHz)** for access to utilities' core fibre networks/strategic resilient backhaul.