Response to RSPG23- 014: Questionnaire on the Role of Radio Spectrum Policy to help combat Climate Change

The European Utilities Telecoms Council (EUTC), representing European electricity and gas generation, transmission and distribution companies welcomes RSPG's recognition that Radio Spectrum Policy can play a vital role in helping to combat climate change.

EUTC has responded to previous RSPG consultations and questionnaires on this subject, and will not repeat previous evidence, but wishes to supplement our previous contributions in the hope that it will be of value to RSPG in its deliberations.

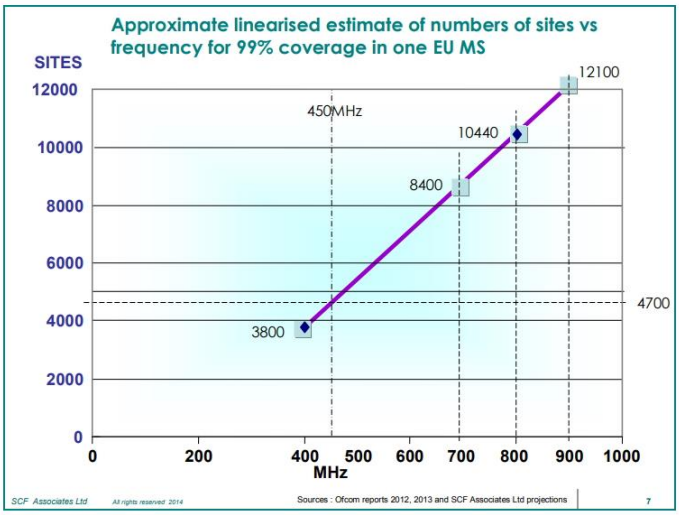
Rather than direct our responses to specific questions, we have developed a generic response as we feel it straddles several questions, in particular 4, 6, 11, 13, 14, 15 and 16.

Recognizing the urgency of submitting a response, we have also not developed the ideas fully, but are available to discuss in more detail if that would be helpful to RSPG.

Detailed points

These concepts are developed alongside the principle of utilities, possibly in collaboration with other critical users such as public safety and transportation having their own private networks alongside public (MNO) networks.

- If utility networks can gain access to 400 MHz spectrum, they can cover their geographic areas with less base station sites than either MNOs or if using higher frequencies. This would require less power to operate because of the fewer base station sites, fewer highly resilient backhaul links and less back-up generation facilities and emissions leading to an overall reduction in energy consumption and corresponding CO2 emissions.



- Private utility networks are built for longer periods of operation, usually 15-20 years, thereby reducing the carbon footprint caused by production and installation of new equipment (especially User Equipment (UE)/Customer Premise Equipment (CPE) compared to commercial MNO equipment which has to be replaced over shorter periods to reflect the consumer market requirements.
- All mission critical communications sharing a single highly resilient private network could in some situations save energy and consequent emissions.
- MNOs are increasingly looking to put individual base stations into 'sleep' modes to save energy at sparsely used sites, or during periods when the networks are lightly used (eg midnight to 6am). However, this may create issues where critical users, especially public safety, need access to continued and uninterrupted

communications. Collaboration between MNOs and Private Critical Network operators (which need to be alive at all times) could enable the private network to convey high priority traffic – such as public safety, 112 calls and eCall messages without the delays and extra energy requirements of re-awakening the MNO networks.

- Work is currently underway in 3GPP to enable utilities to 'see' into MNO networks and visa-versa to enable closer collaboration between the two networks. The purpose of these developments is to enhance power resilience in both types of network by sharing information during unplanned power supply interruptions. However, if this collaboration is successful, it should open up other opportunities to optimise operational efficiency and save energy, potentially adding options such as sharing back-up power provision on shared sites.
- Resilience for mission critical networks could be obtained by replacing the currently ubiquitous diesel generator with more sustainable energy sources – PV, Wind turbines, hydrogen fuel cell, batteries etc which could also be used to export surplus energy to the grid when not required for back-up purposes.

If diesel generators are to be relied upon for resilience, they have to be regularly tested under full load conditions, thereby creating additional carbon emissions.

The European Utilities Telecom Council (EUTC)

The European Utilities Telecom Council (EUTC) is the leading European Utilities trade association dedicated to informing its members and influencing policies on how telecommunication solutions and associated challenges can support the future smart infrastructures and the related policy objectives through the use of innovative technologies, processes, business insights and professional people.

This is combined with sharing best practices and learning from across the EUTC and the UTC global organization of telecommunication professionals within the field of utilities and other critical infrastructure environments and associated stakeholders.

CONTACT DETAILS:
Adrian Grilli
Spectrum Group Manager
European Utilities Telecom Council AISBL (EUTC)
EUTC, 22 avenue de la Toison d'Or, 1050 Brussels, Belgium
email: adrian.grilli@EUTC.org
www.eutc.org