

BNE Consultation Response

Broadcast Networks Europe (BNE)¹ welcomes the opportunity to submit a consultation response and share its views on the RSPG Questionnaire on Long-term vision for the upper 6 GHz band. BNE answer addresses the point B, Questions directed to the stakeholders providing incumbent services in the upper 6 GHz band.

The BNE point of contact for any questions or further clarifications is:

Mr Jaume Pujol, Head of BNE Policy Working Group

Email: Jaume.pujol@broadcast-networks.eu

Mobile: +34 627499535

- **Context:**

WRC-23 identified the upper 6 GHz band (6425-7125 MHz) for IMT in ITU Region 1, while addressing the need for protection of incumbent services and also referring to the possibility for WAS/RLAN in the band.

There is now a global discussion around the band for different services such as WIFI and IMT, while incumbent users (e.g. satellite and fixed links) are seeking protection. There are on-going technical sharing studies in various CEPT groups and the RSPG is considering a potentially harmonized European strategy for the band.

BNE members are using the upper 6 GHz band intensively for long range fixed links in the backhaul network, for transport and distribution, for redundancy and where fibers are not feasible.

Any decision on the future use of the band should take into consideration these usages, impact on the services provided, investments made and compensation instruments and should clearly and explicitly include protection measures.

Find below the BNE answers to the questions in Part B of the questionnaire:

1) What are your current and future spectrum needs (before and beyond 2030) in the upper 6GHz band?

The upper 6 GHz band is a critical band heavily used by all BNE members across different European countries to provide high-capacity long range fixed links nationwide, both in urban and rural areas. These links are primarily used for the distribution and monitoring of various services important to society, such as broadcast transmission services to transmitting stations and other critical applications. As such, these services have a high constant traffic load and are used to provide critical services with very high performance and availability expectations. BNE members use fixed links in the backhaul network, for transport and distribution, for redundancy and where fibers are not feasible.

Regarding future spectrum needs, the use of the spectrum and its demand is not expected to decrease for the foreseeable future, on the opposite, it may increase, for example since broadcasting is evolving towards higher capacity services such as Ultra High Definition television, UHD, and continuing migration to DVB-T2. Moreover, it is important to point out that in practice no alternative bands are available as

¹ BNE represents Europe's terrestrial network operators in Europe and internationally. Terrestrial broadcast operators are responsible for managing and maintaining infrastructure, TV network design, multiplexing, distribution, transmission and carriage deliver so that TV, radio and other over-the-air services can reach their audiences. We are securing for 250 million European viewers universal access to the over-the-air services, radio and TV that they watch and enjoy for more than 3h30 on average per person per day.

BNE's 19 members are operating in 21 European countries: Austria, Belgium, Croatia, Czech Republic, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Poland, Romania, Serbia, Slovakia, Spain, Switzerland, UK and Sweden.

other bands, such as 4 GHz, lower 6 GHz or 7/8 GHz, are either saturated or fixed links have already been evacuated.

In the potential case of having to migrate the current links, the process would be extremely complex including very high costs, taking into account that the longer links use diversity of space with antennas of around 3.7 m in diameter (it might even make it impossible to install new antennas to do the migration).

In summary, the upper 6 GHz band is essential for BNE members for the deployment of long distance links and will continue to be so in the future. The whole band should continue to be available for fixed services also in the future.

2) What impact on your service do you expect from the introduction of MFCN and/or WAS/RLAN in the upper 6GHz band?

If fixed links were to be forced out of the upper 6 GHz band, the impact would be enormous, as there would be no alternative left for the operation and deployment of long-distance links as other suitable bands are also very saturated. So, no matter if any / which additional services would be introduced in the band, there will still be necessary to find the right conditions to maintain the band for fixed links. Thus, before taking any decision, coexistence issues will need to be carefully analysed and mitigated.

BNE recognises that the use of Wi-Fi indoors is less likely to provide a detrimental challenge to the existing use of this spectrum for the services already provided over fixed links. However, it should be noted that in many countries the lower 6 GHz band has already been evacuated due to the risk for interference from Wi-Fi links in that band, with large reinvestment costs to migrate fixed links to the upper 6 GHz. Also, if RLAN usage in the band is spread and without appropriate limiting emission conditions, there is a clear risk that the capacity in the fixed links will be reduced, since more robust modulation may need to be implemented to avoid interference.

Regarding potential introduction of MFCN, BNE members would be extremely concerned about the use for mobile outdoors base stations close to any of the existing licensed fixed links in the band. Indeed, it should be mandatory to study geographical separation from the fixed links to avoid harmful interference. It is here important to take into account, as described above, that the upper 6 GHz is currently used by stations of fixed links both in urban and rural areas.

3) What measures could improve compatibility from your perspective?

Current usage and licensing model of the 6 GHz upper band does not address compatibility issues. So, before considering any long-term vision for the band, it is necessary to carefully study spectrum needs, cost-benefit and interference analysis and studies should be done including all stakeholders. In this regard, BNE welcomes again the RSPG work and expects a long term solution that will protect existing services.

For MFCN, there should be clear and technically viable sharing conditions defined for interfering with fixed links, and it should be clearly stated in any regulatory instruments that incumbent services, including their developments, should be protected. There needs to be detailed national regulation providing such protection.

For RLAN, technical parameters should be developed so that the risk of interference to fixed links is minimized. Any RLAN in the band in Europe should preferably be low power limited to indoor usage.

Any further EU and/or CEPT study assessing measures to improve compatibility, should be developed minimising the risk of interference to incumbents.

Finally, if any impact to incumbent users is to be envisaged, compensation mechanisms should also be studied.