



ecta RESPONSE

**TO THE PUBLIC CONSULTATION BY THE
RADIO SPECTRUM POLICY GROUP
ON**

**DRAFT RSPG REPORT
6G STRATEGIC VISION**

RSPG24-030 FINAL

19 DECEMBER 2024

Introduction

1. **ecta**, the **European competitive telecommunications association**,¹ welcomes the opportunity to comment on the Radio Spectrum Policy Group (hereafter 'RSPG') consultation on its Draft Report entitled: "*6G Strategic Vision*" – RSPG24-030 FINAL.
2. **ecta** represents those alternative operators who, relying on the pro-competitive EU legal framework that has created a free market for electronic communications, have helped overcome national monopolies to give EU citizens, businesses and public administrations quality and choice at affordable prices. **ecta** represents at large those operators who are driving the development of an accessible Gigabit society, who represent significant investments in fixed, mobile and fixed wireless access networks that qualify as Very High Capacity Networks and who demonstrate unique innovation capabilities. **ecta** counts Mobile Network Operators (hereafter 'MNOs'), Fixed Wireless Access operators (hereafter 'FWA operators'), Fixed Network Operators (hereinafter "FNE Operators") as well as Mobile Virtual Network Operators (hereafter 'MVNOs') among its members.

ecta members are actively: (i) investing significant amounts of resources for contributing to EU digital compass connectivity targets through deployment of sustainable electronic communications networks and services (fixed, mobile, FWA, (B2C, B2B, B2B2C, IoT)), and (ii): acting as challengers in an environment characterized by intense 5G deployment.

3. **ecta** wishes to **thank the RSPG**, in the context of its considerations on spectrum requirements for future 6G networks, for providing an overview of what has been successful with 5G, and what has been less successful. This is what **ecta** requested.

Key ecta messages

4. **ecta's** key messages in response to RSPG24-030 FINAL are the following.
5. **Technology and service neutrality.** There should be no restrictions on operators deploying 6G in the existing harmonized bands for Electronic Communications Services. **ecta** is satisfied that the RSPG's Draft Report is consistent with this, although it would be preferable if this was affirmed more explicitly in the final RSPG Report.
6. **Evidence and technical considerations for 6G spectrum requirements.** **ecta** appreciates the analysis done by the RSPG's Draft report on the evidence and technical considerations regarding the 6G technology's drivers, enablers and the

¹ <https://www.ectaportal.com/about-ecta>

use cases, including by highlighting the similarities with 5G and the differences of those use cases with respect to 5G standalone technology.

7. **Need to ensure a competition and investment friendly and environmentally sustainable market context for effective progress and uptake of 6G.** Just as for previous generations, the spectrum and the associated policy proposals in assigning and managing the spectrum will be key. In fact, spectrum is an essential input for all wireless technologies and therefore its efficient and effective use and management is key in ensuring competition, fostering innovation and an investment friendly environment for the development of 6G technology. This challenge is already visible in some 5G markets, where weak competition in several EU Member States has limited market dynamism. It is important that this issue is not replicated in the 6G era. High spectrum fees and restrictive market conditions are undermining competition. In the run-up to 6G, policy makers should aim to ensure fair competition in spectrum policy. Ultimately, a well-balanced spectrum policy that prioritises competition and sustainability will be key to Europe's leadership in 6G and beyond. Therefore, [ecta](#) kindly invites the RSPG to include in its final report the following points, some of which are lacking in the current draft.

- a) **Spectrum availability:** [ecta](#) welcomes the proposal in the draft RSPG Report for 6G to define additional primary and pioneer bands in the coming couple of years, in a manner analogous to what was done for 5G, in order to drive the equipment industry's economies of scale, with an assumption of deployment from 2030 onward. To such purpose, [ecta](#) notes that the list of bands under consideration in the Draft RSPG report includes only: (i) the spectrum bands already harmonized for ECS (WBB) under EU Spectrum Decisions (in low bands 700 MHz, 800 MHz, 900 MHz, in mid bands: 1800 MHz, 2 GHz, 2.6 GHz, 3.6 GHz and in high bands: 26 GHz, 42 GHz), (ii) the spectrum bands under harmonization which are dedicated to low/medium power local area networks (3.8-4.2 GHz) and, (iii) the 6425-7125 MHz band as already identified for IMT at international level which is also used for the implementation of wireless access systems (WAS), including radio local area networks (RLANs) which is still under RSPG investigation on its long-term use. [ecta](#) regrets that the RSPG seems to be intent on taking an unambitious approach with regards to the assignment of some of most precious frequency bands, resulting in no little additional spectrum. Lack of suitable additional spectrum could force the mobile and wireless operators towards intense network densification, and in extremis to forego or postpone 6G deployment until a clear set of new suitable spectrum comes on stream, with extremely negative outcomes for environmental and economic sustainability as indicated in point b. below. Moreover, when it comes to the spectrum bands already harmonized for ECS, [ecta](#) firmly believes that, as regards the 26 GHz band, there is a need to assign the whole band (3 GHz of spectrum), and not just the upper 1 GHz large blocks for use by mobile/fixed-wireless access network operators. The band in fact, due to its characteristics, is well suited to the development 5G FWA services that enable the provision of gigabit connectivity services. In view of the EU Digital

Target 2030, it will be necessary to ensure a wide availability of spectrum in this band, especially for the coverage of rural areas that will not be reached by fibre.

b) **Network densification vs. economic and environmental sustainability:**

As stated by the RSPG Draft Report, sustainability is at the heart of the 6G technology. ecta notes that the extremely conservative approach undertaken by the Draft RSPG report with regards to a set of very important spectrum (inter alia, mostly disregarding the 470-698 MHz band and other relevant bands listed hereafter) appears to be at odds with the 6G sustainability concept. Pushing mobile and FWA network operators towards network densification and towards using mmWave frequency bands (e.g., 26 GHz, 42 GHz and even above) for 6G (and indeed even for 5G), is not a substitute for making available additional spectrum (for instance, in the sub-700MHz band, etc.)². Densification in fact stands at odds both with operators' economic sustainability, and with environmental sustainability. Using mmWave bands would mean far more costly networks for operators in future compared to current networks and would result in increased energy consumption, carbon emissions³ and visual pollution compared to today's networks. By contrast, enabling the use of additional low band spectrum (incl. in the 600 MHz band⁴) and additional mid-band spectrum would lead to a substantially lesser number of antenna sites compared to mmWave antenna deployments, and thus less land occupation, less visual pollution, and lower EMF emissions as well as a more sustainable business model to the benefit of end-users. ecta regrets that the European Union and the Member States have lost an opportunity in WRC-23 to propose, for the 470-698 MHz band, a pragmatic and future proof solution aimed at introducing a co-primary mobile allocation in the whole 470-694 MHz band in Region 1, or in its geographical areas by means of multi-Member States clusters so as to provide certainty and allow for early preparation of the market players for the new European situation post 2030 that will see the advent of 6G. ecta reminds that the advent of 6G will make even the more urgent the adoption of adequate and future-proof solution for the sub-700 MHz band use in Europe beyond 2030. Therefore, ecta calls for including in the final text of the RSPG report the importance of the 470-698 MHz band and possible actions that could include this band among the possible bands for 6G.

c) **Spectrum assignment policies:** On the basis of past experience regarding the spectrum allocation and management of 5G spectrum, ecta firmly

² With regard to expected mid-band spectrum needs, in the light of 5G capacity expansion and for 6G in future, please refer to the 2021 Coleago Consulting Report: <https://www.gsma.com/spectrum/wpcontent/uploads/2021/07/Estimating-Mid-Band-Spectrum-Needs.pdf>

³ The impact on the carbon footprint is addressed in a 2023 Analysys Mason Report: <https://www.analysysmason.com/consulting/reports/5g-mid-band-carbon-impact/>

⁴ For further details regarding the 600 MHz band, please refer to the ecta response to RSPG23-021 FINAL and to the ecta response to the RSPG questionnaire on the Prospects for 470-694 MHz Band submitted in November 2024.

believes that spectrum assignment policies and procedures of many EU Member States, even the more before the advent of 6G, must be substantially improved, to ensure sustainable investments from operators and the associated socio-economic welfare maximization. Good design of spectrum assignment procedures should ensure sustainably competitive markets, as competitive markets foster innovation, investment, and help to combat inflation. Future spectrum assignment procedures, including in the context of 6G, should focus first and foremost on promoting socio-economic welfare, in the form of joint coverage of rural areas by mobile and fixed wireless network operators in line with the EU's 2030 Digital Targets, as well as preserving competition, with all wireless network operators enabled to achieve balanced spectrum portfolios, plus enabling pro-competitive network sharing among operators. Policy decisions are needed in particular to avoid that some Member States' spectrum assignment proceedings are driven once again primarily by cash generation for state budgets, in ways that drain precious resources from the telecoms market which are ultimately detrimental for users. In this context, [ecta](#) would welcome specific harmonization of the Member States's spectrum assignment proceedings, with a focus on limiting auction reserve prices, and aiming explicitly at avoiding the repetition of extremely high auction prices, and deliberately unbalanced and anomalous outcomes (prevalent in the 700 MHz and 3,5 GHz bands due to auction design⁵), etc.

- d) **User demand as key to avoid inflated expectations on 6G:** [ecta](#) believes, on the basis of the past experience with the 5G, that industry and policy makers should be cautious about creating inflated expectations for 6G, to avoid another hype cycle about 'the next G', leading to inflated spectrum fees, political pressure on roll-out which is disconnected from actual user demand and operators' ability to invest in infrastructure and monetise services, etc. Spectrum assignment in the context of 6G should be analysed with this in mind, also taking into account that user demand for the network and service capabilities being envisaged for 6G is far from materializing. Indeed, user demand for 5G Stand-Alone capability remains limited so far. It seems that this is being acknowledged also by the Draft RSPG report: *"Currently, there are still a significant number of European MNOs in an intermediate stage of 5G adoption, as they maintain the massive use of 5G NSA without a clear perspective for adopting 5G SA. This implies relevant limitations, innovative features of 5G, including network slicing based on the 5G SA version, preventing the deployment of relevant use cases. A critical point in this scenario lies in*

⁵ Examples include Member States where 700 MHz and 3,4-3,8 GHz auctions were deliberately structured to have asymmetric outcomes (e.g. no 700 MHz spectrum for the new entrant, only 2 operators with large 700 MHz assignments, e.g. 2 out of 4 operators in the 3,5 GHz band being able to obtain 80 MHz, whilst the other 2 having only 20 MHz, etc.)

business models, notably regarding network monetisation and the ROI, which directly impacts operators' investment plans". To such purpose, ecta underlines that licensing of additional spectrum in the context of 6G is not to be expected before 2029.

- e) **Additional EU harmonized spectrum for local/vertical use cases for 6G:** *ecta* challenges the notion, prevalent throughout the RSPG's Draft Report, that additional EU harmonized and locally licenced spectrum for local/vertical use cases would be needed, for 6G, or even before 6G is deployed. It is preferable to take stock of the situation, given that many Member States have reserved spectrum for local/vertical use, and that usage is modest at best, and certainly is limited to specific small geographic areas⁶. A case-by-case assessment is needed of the objective needs of industry, including the geographic locations at which local/vertical spectrum usage is happening and the extent to which industry needs are served by mobile network operators or using spectrum assigned to mobile network operators but made available for specific industrial use. Certainly, reserving >100 MHz for local/vertical use cases across the EU is unnecessary and is unduly wasteful of mid-band spectrum. Similarly, the argument for reserving large quantities of 26 GHz or higher spectrum for local/vertical use cases needs to be tested against objective reality. Therefore, *ecta* underlines that the assignment of dedicated spectrum resources for local uses/verticals should be left to the discretion of each Member State, as they can be the best ones to evaluate whether there is genuine demand and where.

- f) **Competition and diversity as the key for strategic autonomy in the supplier market:** a key objective of European 6G policy must also be to strengthen technological resilience and ensure greater autonomy in critical 6G infrastructure. Relying on a limited pool of suppliers for essential 6G components creates strategic dependencies that could impact Europe's security, resilience, and technological sovereignty. To address this, it is essential to foster a diverse ecosystem of suppliers.

8. Need for great caution on solutions such as imposition of inter-service spectrum sharing with non-terrestrial networks. The RSPG seems to suggest that non-terrestrial networks (in particular new low earth orbit satellite constellations) represent a suitable solution for some 6G usage scenarios and seems to propose in the Draft Report an approach of inter-service spectrum sharing by regulatory design where it states: *"In support to EU policy and harmonised spectrum conditions/requirements, an adoption of an EU mandatory regulatory requirement in the European telecommunications standards institute (ETSI) standardisation process to enable cross- technology and inter-service spectrum sharing could help*

⁶ The Draft BEREC Report on the evolution of private and public 5G networks in Europe, available [here](#), provides a clear evidence on this low take up of local spectrum uses by the verticals throughout the European Member States.

accelerating this process. This should be also promoted outside ETSI such as 3GPP as appropriate". ecta calls for great caution and disagrees with this proposal, and considers that it is by far preferable, and in line with the EU's 2030 Digital Targets, to rely rather on voluntary agreements between the providers of different services when it comes to spectrum usage.

9. **Need to further harmonize the EMF limits rules before the advent of 6G:** The theme of Electromagnetic Field Emissions (EMF) is absent from the draft RSPG report. Nevertheless, ecta appreciates previous actions by RSPG regarding the issue of heterogeneous EMF limits across the EU, and notes that such restrictions already impair the assignment and usage of mmWave bands (e.g. 26 GHz restrictions in the Walloon Region of Belgium). Lower EMF limits in some Member States (or sub-national areas of Member States) create a two speed Europe, disadvantaging Member States with lower EMF limits in terms of 5G deployment, and the same could happen with 6G in the future. In order to promote the EU Single Market, ecta calls on the RSPG to recommend that the EU institutions adopt a Regulation on EMF to put an end to the distortion of the market resulting from certain Member States (e.g., Bulgaria, parts of Belgium, Italy despite the recent amendments to the national law) adopting stricter measures than others. This is also needed to ensure that late entrant operators are not discriminated against, as in some cases it prevents them from making use of multi-operator antenna sites. ecta has provided comments on the SHEER Opinion in September 2022, covering this matter⁷.

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In case of questions or requests for clarification regarding this contribution, the Radio Spectrum Policy Group is welcome to contact Mr Luc Hindryckx, ecta Director General, or Ms Pinar Serdengecti, ecta Regulation and Competition Affairs Director.

⁷ ecta position available here: <https://www.ectaportal.com/members-area/consultations/60-ec-consultations>