Commission Implementing Decision (EU) 2019/784 of 14 May 2019 on harmonisation of the 24,25-27,5 GHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services in the Union (notified under document C(2019) 3450) (Text with EEA relevance)

COMMISSION IMPLEMENTING DECISION (EU) 2019/784

of 14 May 2019

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(notified under document C(2019) 3450)

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Decision No 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision)[(1)], and in particular Article 4(3) thereof,

Whereas:

(1) The 24,25-27,5 GHz (‘26 GHz’) frequency band is being studied as a candidate band for International Mobile Telecommunications for 2020 and beyond[(2)] (IMT-2020), which is part of the agenda of the World Radiocommunication Conference 2019 (WRC-19)[(3)]. IMT-2020 represents the 5G framework of radio standards developed by the Radiocommunication Sector of the International Telecommunication Union (ITU-R) based on mobile broadband technology.

(2) According to the ITU Radio Regulations[(4)], the 25,25-27,5 GHz frequency band is allocated worldwide to the mobile service on a co-primary basis. The 24,25-25,25 GHz frequency band is not allocated to the mobile service in Region 1 of the ITU, which includes the European Union. That does not prevent the Union from using this frequency band for wireless broadband electronic communications services as long as it complies with international and cross-border obligations under the ITU Radio Regulations at its external borders.

(3) The Commission Communication ‘5G for Europe: An Action Plan’[(5)] (‘5G action plan’) sets out a coordinated Union approach to the deployment of 5G services as of 2020. The 5G action plan calls for the identification of pioneer frequency bands for the launch of 5G services by the Commission in cooperation with the Member States, taking into account the opinion of the Radio Spectrum Policy Group (RSPG).

(4) The RSPG has adopted three opinions on a strategic spectrum roadmap for 5G in Europe[(6)] (‘RSPG Opinions’), in which it identified the 26 GHz frequency band as one

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pioneer band for 5G and recommended to Member States that they make a sufficiently large portion of that band, e.g. 1 GHz, available for 5G by 2020 in response to market demand.

(5) The 26 GHz frequency band provides high capacity for providing innovative wireless broadband electronic communications services with 5G technology based on small cells[7] and with a block size of 200 MHz. In accordance with the European Electronic Communications Code (EECC)[8], Member States must allow the use of at least 1 GHz of the 26 GHz frequency band by 31 December 2020 in order to facilitate 5G rollout, provided that there is clear evidence of market demand and of the absence of significant constraints for migration of existing users or band clearance. The EECC also provides that measures taken by Member States pursuant to that requirement must comply with the harmonised conditions set by technical implementing measures in accordance with the Radio Spectrum Decision.

(6) Portions of the 26 GHz frequency band are used in the Member States for terrestrial fixed wireless connections ('fixed links') including backhauling[9]. The approach to managing the co-existence between terrestrial wireless broadband electronic communications services, including next-generation or 5G, and fixed links at national level, should allow flexibility for Member States.

(7) The use of the 24,25-26,65 GHz portion of the 26 GHz frequency band for automotive short-range radars should be gradually phased out by 1 January 2022[10]. There is a steady trend in the market development for automotive short-range radars towards new deployments in the 77-81 GHz frequency band harmonised at Union level[11]. Therefore, no co-existence issues with automotive short-range radars are identified.

(8) The 24,25-24,5 GHz portion of the 26 GHz frequency band is designated at Union level for transport and traffic telematics devices, in particular for automotive radars[12] on a non-protected and non-interference basis. There is no current or planned use of those automotive radars in the band[13], while such use increases in the 76-81 GHz frequency range.

(9) The 24,25-27 GHz portion of the 26 GHz frequency band is used for radio determination devices[14], which operate in 'underlay' mode based on ultra-wide band technology[15]. Such use should be adaptable to the evolution of use of the 26 GHz frequency band for terrestrial wireless broadband electronic communications services.

(10) Some portions of the 26 GHz frequency band are used for space and satellite services across the Member States. These services comprise within the 25,5-27 GHz range space-to-earth communications to earth stations in the Earth Exploration Satellite Service (EESS)[16], in the Space Research Service (SRS) and supporting the European Data Relay System (EDRS), as well as earth-to-space communications to satellite on-board receivers in the Fixed Satellite Service (FSS) within the 24,65-25,25 GHz range. Therefore, those space and satellite services should be appropriately protected against interference from terrestrial wireless broadband electronic communications services. They also need prospects for further development. Furthermore, the 24,45-24,75 GHz and 25,25-27,5 GHz portions of the 26 GHz frequency band are used

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worldwide for communications between non-geostationary and geostationary satellites in the Inter-Satellite Service (ISS), including the EDRS.

(11) Next-generation (5G) terrestrial services should be rolled out within the 26 GHz frequency band under harmonised technical conditions. These conditions should safeguard the continued operation and development of satellite earth stations (in the EESS, SRS and FSS) with frequency allocations within the band in order for earth stations to be authorised in the future based on transparent, objective and proportionate criteria. Those conditions should equally ensure that existing and future satellite services are unlikely to have a significant negative impact on terrestrial 5G deployment and coverage.

(12) Pursuant to Article 4(2) of the Radio Spectrum Decision, the Commission gave the European Conference of Postal and Telecommunications Administrations (CEPT) a mandate to develop harmonised technical conditions for spectrum use in support of the introduction of next-generation (5G) terrestrial wireless systems in the Union, including in the 26 GHz frequency band.

(13) In response to that mandate, CEPT issued Report 68[(17)] ('the CEPT Report') on 6 July 2018. This specifies harmonised technical conditions in the 26 GHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services in the Union, which are suitable for 5G use. Those technical conditions are consistent with 5G standardisation developments regarding channelling arrangements[(18)], namely channel size or duplex mode of operation, and active antenna systems and are therefore conducive to global harmonisation. They assume synchronised operation of neighbouring systems of different operators, which ensures that the spectrum is used efficiently. Unsynchronised or semi-synchronised operation of neighbouring systems requires further studies in order to develop relevant harmonised technical conditions. Such operation remains possible with geographical separation.

(14) The technical conditions provided in the CEPT Report for the use of the 26 GHz frequency band are based on the assumption of an authorisation regime based exclusively on individual rights of use, which is also conducive to ensuring appropriate co-existence with current band use. Any other authorisation framework such as general authorisation or a combined individual/general authorisation regime could require additional technical conditions in order to ensure appropriate coexistence of terrestrial systems capable of providing wireless broadband electronic communications services with other services in the band, in particular taking due account of continued deployment of FSS, EESS and SRS satellite earth stations.

(15) The CEPT Report also provides guidance and technical conditions for the use of the 26 GHz frequency band for terrestrial wireless broadband electronic communications services, including 5G, to ensure the protection of existing space and satellite services and fixed links within the 26 GHz frequency band as well as services in adjacent bands.

(16) Co-existence between terrestrial wireless broadband electronic communications services (including 5G) and earth stations in the EESS, SRS and FSS operating in the 26 GHz frequency band can be ensured by applying, where appropriate, technical constraints to the deployment of terrestrial services in a limited geographical

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area around a satellite earth station. In this regard, deploying new earth stations preferably away from locations with high population density or high human activity may represent a proportionate approach to facilitating such co-existence. Moreover, CEPT has been developing technical toolkits[19] to support 5G deployment based on individual authorisation while allowing in a proportionate way the continued use of current and planned EESS/SRS receiving earth stations and FSS transmitting earth stations in the relevant portions of the 26 GHz frequency band. These toolkits can facilitate coexistence in fulfilling the obligations under this Decision.

(17) Coexistence between terrestrial wireless broadband electronic communications services (including 5G) and satellite receivers in the FSS and ISS, including EDRS, is currently feasible, subject to technical conditions that address the antenna elevation of wireless broadband base stations.

(18) Member States should assess the possibility of continuing to operate fixed links in the 26 GHz band based on shared spectrum use with terrestrial wireless broadband electronic communications services, including 5G, or discontinuing their operation in the band. Such an assessment should take into consideration potential mitigation techniques, and national and cross-border coordination as well as the extent of 5G deployment, subject to market demand for 5G systems, in particular in less-populated and rural areas. The possibility of shared spectrum use as a national option depends on, among other things, the availability of detailed information on the deployment of fixed links and the feasibility of assigning large blocks of contiguous spectrum to 5G systems. To that end, CEPT provides technical guidance on the co-existence between terrestrial wireless broadband electronic communications services, including 5G, and fixed links, taking into account progressive 5G deployment.

(19) Terrestrial wireless broadband electronic communications services, including 5G, in the 26 GHz frequency band should provide appropriate protection to the EESS (passive) in the 23,6-24 GHz frequency band[20]. Specific measures may be required at national level to ensure radio astronomy stations operating in the 23,6-24 GHz frequency band are protected. These measures are likely to constrain usability of the full 26 GHz band around such stations. The protection of the EESS (passive) in the 50,2-50,4 GHz and 52,6-54,25 GHz frequency bands is ensured by the existing generic spurious emission limits applying to base stations[21].

(20) The use of unmanned aerial vehicles (‘UAVs’) such as drones with terrestrial wireless broadband electronic communications networks that use the 26 GHz frequency band could have an impact on existing use such as satellite receivers in the FSS and ISS. As a result, connectivity from base stations to terminal stations on board UAVs should be prohibited in the 26 GHz frequency band, and only connectivity from terminal stations on board UAVs to base stations should be allowed in compliance with applicable air traffic management regulation. In this regard, the connectivity from terminal stations on board UAVs to base stations could have a significant impact on, for example, the separation distance to EESS/SRS earth stations co-using the 26 GHz band. This requires further study, which may deliver supplementary harmonised technical conditions. Using

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UAVs with wireless broadband electronic communications networks should not hinder the deployment of future EESS/SRS earth stations.

(21) Provision should be made for cross-border agreements between spectrum users or national administrations to ensure the implementation of this Decision in order to avoid harmful interference and improve spectrum efficiency and convergence in spectrum use.

(22) This Decision ensures that Member States take up the 26 GHz frequency band for next-generation (5G) wireless broadband electronic communications services based on legally binding technical conditions in accordance with CEPT Report 68 and in line with the Union's policy objectives.

(23) The notion of 'designating and making available' the 26 GHz frequency band in the context of this Decision refers to the following steps: (i) the adaptation of the national legal framework on frequency allocation to include the intended use of this band under the harmonised technical conditions set in this Decision, (ii) the initiation of all necessary measures in order to ensure coexistence with existing use in this band, to the extent necessary, (iii) the initiation of the appropriate measures, supported by the launch of a stakeholder consultation process where appropriate, in order to allow the use of this band in accordance with the applicable legal framework at Union level, including the harmonised technical conditions of this Decision.

(24) Member States should report to the Commission on the implementation of this Decision, in particular as regards the gradual introduction and development of terrestrial 5G services in the 26 GHz frequency band and any co-existence issues, to help assess its impact at Union level as well as its timely review. Such a review can also address the suitability of the technical conditions to ensure adequate protection of other services, in particular space services such as satellite receivers in the FSS and ISS, including EDRS, taking into account the development of terrestrial wireless broadband electronic communications services, including 5G.

(25) The measures provided for in this Decision are in accordance with the opinion of the Radio Spectrum Committee established by the Radio Spectrum Decision,

HAS ADOPTED THIS DECISION:

Article 1

This Decision harmonises the essential technical conditions for the availability and efficient use of the 24,25-27,5 GHz frequency band in the Union for terrestrial systems capable of providing wireless broadband electronic communications services.

Article 2

[[F1]By 30 June 2020, Member States shall designate and make available on a non-exclusive basis the 24,25-27,5 GHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services, in compliance with the essential technical conditions set out in the Annex.**]**

Depending on the authorisation regime applied in this band, Member States shall analyse if it is necessary to impose additional technical conditions in order to ensure appropriate