

COMMISSION IMPLEMENTING DECISION (EU) 2020/590**of 24 April 2020****amending Decision (EU) 2019/784 as regards an update of relevant technical conditions applicable to the 24,25-27,5 GHz frequency band***(notified under document C(2020) 2542)***(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) Commission Implementing Decision (EU) 2019/784 ⁽²⁾ 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.
- (2) The 24,25-27,5 GHz ('26 GHz') frequency band was harmonised globally for International Mobile Telecommunications ⁽³⁾ (IMT) at the 2019 World Radiocommunication Conference (WRC-19) by amendments to the Radio Regulations of the International Telecommunications Union's Radiocommunication Sector (ITU-R).
- (3) The ITU-R Radio Regulations, as amended ⁽⁴⁾, introduced global out-of-band emission limits ('protection limits') applicable in two stages to next-generation (5G) terrestrial wireless systems capable of providing wireless broadband electronic communications services in the 26 GHz frequency band for the protection of the passive earth exploration satellite service (EESS (passive)) in the 23,6-24 GHz frequency band ⁽⁵⁾. Those protection limits are less stringent than the EU-harmonised limits ⁽⁶⁾. The application of the first-stage limits in the Union should ensure the timely availability of 5G equipment and facilitate faster investments in 5G infrastructure in the single market. The second-stage limits, together with the requirement that no high-density terrestrial systems for the provision of wireless access services shall be deployed in an appropriate frequency range below 23,6 GHz, ensure the adequate protection of the EESS (passive) as well as meteorological satellite services within the 23,6-24 GHz frequency band.
- (4) The first-stage protection limits applicable until 1 September 2027 under the ITU-R Radio Regulations may increase the risk of harmful interference to the globally operating EESS (passive) (e.g. the Copernicus system and certain meteorological satellites) depending on the pace of deployment of next-generation (5G) terrestrial wireless systems in the 26 GHz band. Therefore, it is essential that the second-stage protection limits apply before the start of mass 5G deployment in the Union, which is expected as from 2025 ⁽⁷⁾.

⁽¹⁾ OJ L 108, 24.4.2002, p. 1.

⁽²⁾ 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 (OJ L 127, 16.5.2019, p. 13).

⁽³⁾ According to ITU-R Resolution 750 (revised by WRC-19) on the Compatibility between the Earth exploration-satellite service (passive) and relevant active services.

⁽⁴⁾ <http://www.itu.int/pub/R-REG-RR> (2020 edition).

⁽⁵⁾ For 5G base stations/terminal stations, these are: – 33/– 29 dBW/200MHz until 1 September 2027 (first stage), and – 39/– 35 dBW/200MHz thereafter (second stage).

⁽⁶⁾ I.e. the additional baseline limits in Tables 4 and 6 in the Annex to Implementing Decision (EU) 2019/784.

⁽⁷⁾ See Commission Communication *5G for Europe: an action plan* (COM(2016) 588 final).

- (5) The continued application of the current more stringent EU-harmonised protection limits in the single market would provide greater protection of the EESS (passive) across the territory of the Union. However, the application of protection limits in the Union that differed from those applied in the rest of the world, in particular by being more stringent may affect the degree of equipment availability and choice, which in turn may have a negative impact on equipment costs and the scale of investments in high-capacity (5G) networks.
- (6) WRC-19 Resolution 242, which is an integral part of the ITU-R Radio Regulations, recognises that frequency bands immediately below the 23,6-24 GHz frequency band are not intended for use with high-density mobile applications. This recognition at international level contributes to the protection of the EESS (passive) in that band further to the second-stage protection limits applicable to the 26 GHz frequency band under the ITU-R Radio Regulations. Such measures improve the protection of the EESS (passive) and the quality of satellite data necessary for weather forecast. To this end, there should be no new deployment of terrestrial systems capable of providing electronic communication services within the frequency range 22-23,6 GHz in the Union. Furthermore, relevant actions may be considered to ensure the protection of EESS (passive), if such systems may be deployed at high density in that frequency range outside the Union.
- (7) Pursuant to Article 4(2) of the Decision No 676/2002/EC and in view of the urgent need to preserve regulatory certainty in the single market with a view to implementing Article 54 of the Directive (EU) 2018/1972 of the European Parliament and of the Council⁽⁸⁾, the Commission asked the European Conference of Postal and Telecommunications Administrations (CEPT)⁽⁹⁾, under the Commission Mandate to the CEPT to develop harmonised technical conditions for spectrum use in support of the introduction of next-generation (5G) terrestrial wireless systems in the Union⁽¹⁰⁾, to assess and report on any adaptation of the protection limits under the Implementing Decision (EU) 2019/784.
- (8) In response, the CEPT submitted technical input in a letter of 6 March 2020⁽¹¹⁾ which provides clarification to a portion of the Commission's request and also recommends a preferred approach to the protection of the EESS (passive) in the 23,6-24 GHz frequency band taking into consideration the WRC-19 outcome and the need for long-term protection of the EESS (passive). In particular, this approach includes an earlier date for the transition to the second-stage limits, in order to avoid the risk of mass-market development of 5G equipment using the first-stage limits, as well as the requirement to prevent high-density deployment of terrestrial systems capable of providing wireless broadband electronic communication services in the 22-23,6 GHz frequency band.
- (9) Therefore, Implementing Decision (EU) 2019/784 should be amended in order to preserve the balance of Union policies on 5G deployment and the monitoring of the Earth's atmosphere and surface and to foster the Union's role as a leader in the global 5G ecosystem of equipment and services.
- (10) Furthermore, CEPT has been developing a technical toolkit⁽¹²⁾ to address 5G deployment in the 26 GHz frequency band, based on spectrum use under authorisation regimes other than individual rights of use such as general authorisation or a combined individual/general authorisation. It provides guidance to Member States on some possible solutions to be implemented at national level in line with their obligations in that band and taking into account the continued deployment of satellite earth stations in the EESS, the Space Research Service (SRS) and the Fixed Satellite Service (FSS).
- (11) The measures provided for in this Decision are in accordance with the opinion of the Radio Spectrum Committee established by the Decision No 676/2002/EC,

⁽⁸⁾ Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (OJ L 321, 17.12.2018, p. 36).

⁽⁹⁾ Letter to CEPT dated 20 December 2019 (Electronic Communications Committee, Project Team 1, doc. ECC PT1 (20)011).

⁽¹⁰⁾ Document RSCOM16-40rev3.

⁽¹¹⁾ CEPT letter dated 6 March 2020 'CEPT response on additional input regarding the impact of the WRC-19 outcome on the harmonised technical conditions for the 26 GHz band' (Electronic Communications Committee, doc. ECC(20)055).

⁽¹²⁾ Such as the (draft) ECC Report 317 'Additional work on 26 GHz to address spectrum use under authorisation regimes other than individual rights of use: Technical toolkit to assist administrations' (approved by the Electronic Communications Committee (ECC) for public consultation on 6 March 2020).

HAS ADOPTED THIS DECISION:

Article 1

Implementing Decision (EU) 2019/784 is amended as follows:

(1) in Article 2, the first paragraph is replaced by the following:

'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.'

(2) in Article 7, the first paragraph is replaced by the following:

'Member States shall report to the Commission on the implementation of this Decision by 30 September 2020';

(3) the Annex is amended in accordance with the Annex to this Decision.

Article 2

This Decision is addressed to the Member States.

Done at Brussels, 24 April 2020.

For the Commission
Thierry BRETON
Member of the Commission

ANNEX

The Annex to Implementing Decision (EU) 2019/784 is amended as follows:

(1) Table 4 is replaced by the following:

Table 4

Base station additional baseline power limit

Frequency range	Maximum TRP	Measurement bandwidth	Entry into force
23,6-24,0 GHz	- 33 dBW	200 MHz	Entry into force of this Decision ^(e)
	- 39 dBW	200 MHz	1 January 2024 ^(e)

^(e) Member States shall not allow new deployments of terrestrial systems capable of providing wireless broadband electronic communications services in the frequency range 22-23,6 GHz, in order to ensure the appropriate protection of the Earth Exploration Satellite Service (passive) and the Radio Astronomy Service in the 23,6-24 GHz frequency band in conjunction with the limit applicable after 1 January 2024.

^(e) This limit applies to base stations brought into use after 1 January 2024. This limit does not apply to base stations that have been brought into use prior to that date. For those base stations, the limit of - 33 dBW/200 MHz continues to apply after 1 January 2024. Member States shall consider additional measures to assess and mitigate the aggregate impact of those base stations in relation to their obligation under Article 3(a) regarding the Earth Exploration Satellite Service (passive). Such measures include adaptation of the size of assigned blocks, the antenna configuration, the in-block power or the penetration of equipment.'

(2) Table 6 is replaced by the following:

Table 6

Terminal station additional baseline power limit

Frequency range	Maximum TRP	Measurement bandwidth	Entry into force
23,6-24,0 GHz	- 29 dBW	200 MHz	Entry into force of this Decision
	- 35 dBW	200 MHz	1 January 2024 ^(e)

^(e) This limit applies to terminal stations brought into use after 1 January 2024. This limit does not apply to terminal stations that have been brought into use prior to that date. For those terminal stations, the limit of - 29 dBW/200 MHz continues to apply after 1 January 2024.'