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| Subject: | CEPT response on additional input regarding the impact of the WRC-19 outcome on the harmonised technical conditions for the 26 GHz band | |
| **To:** | Mr. Andreas Geiss, Head of Unit DG Communications Networks, Content & Technology (DG CONNECT) European Commission E-mail: [Andreas.GEISS@ec.europa.eu](mailto:Andreas.GEISS@ec.europa.eu) | |

Dear Andreas,

Thank you for your letter of 20 December 2019 regarding “additional input regarding the impact of the WRC-19 outcome on the harmonised technical conditions for the 26 GHz band”.

ECC discussed this issue at its Plenary meeting held 3-6 March in Tallinn, Estonia. At this meeting we also considered input from ECC PT1 which had considered the questions raised in your letter at its meeting in January 2020.

ECC is of the view that no additional compatibility studies are necessary for the amendment of Commission Implementing Decision (EU) 2019/784.

In response to the questions raised by the European Commission, ECC provides the following information:

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| Question 1: | CEPT expects that manufacturers will bring to the market wireless broadband 5G equipment that operates all the way down to the lower edge of the 26 GHz band and complies with the initial limits agreed at WRC-19, i.e. −33 dBW/200 MHz TRP for base stations and −29 dBW/200 MHz TRP for terminal stations. This interim regulation is understood by the CEPT, based on information from its industry partners, to allow for equipment to be rapidly made available worldwide  These limits would be suitable for the protection of EESS (passive) during the period where 5G roll out in the 26 GHz band is low. However, they would no longer be suitable when 5G deployment densities increase to something close to mass market levels. |
| Question 2: | CEPT is not able to provide information on the ability of current wireless broadband equipment to meet the final limits of −39 dBW/200 MHz TRP for base stations and −35 dBW/200 MHz TRP for terminal stations.  On the question of guard bands, CEPT does not support the implementation of a regulatory guard band within the band 24.25 - 27.50 GHz. The technical analysis in the lead up WRC-19 did not consider that a guard band would be needed since compliance with the unwanted emission limits in the 23.6-24 GHz and other provisions is sufficient for EESS (passive) protection and would enable the availability of the whole 26 GHz band. |
| Question 3: | CEPT is not able to provide information on the ability of current wireless broadband equipment to meet the limits in Commission Decision (EU)2019/784. |

In addition, ECC would like to provide the following conclusions from its discussion on the issues raised by the letter from the European Commission:

Two-step approach

WRC-19 agreed a two-step approach for unwanted emissions limits from IMT in the 26 GHz band into 23.6-24 GHz based on initial limits (−33 dBW/200 MHz TRP for base stations and −29 dBW/200 MHz TRP for terminal stations) for early deployments, followed by more stringent final limits which apply to new installations after a specified date. The two-step approach was based on an assumption that mass-market deployments will not occur during the initial step and therefore the aggregate emissions from 5G deployment will remain below the EESS protection requirement.

CEPT agrees that a two-step approach is a suitable way forward for Europe. This will enable the introduction of 5G to start in the period where equipment meeting the final limits is not yet available. However, the timing of the transition to the final limits must be sufficiently short that it avoids the risk of mass-market 5G development of equipment using the initial limits.

Final limits, including restrictions below 23.6 GHz

After the transition period, the CEPT assumes that the final limits in WRC-19 Resolution 750 for unwanted emissions from 5G into 23.6-24 GHz (−39 dBW/200 MHz TRP for base stations and −35 dBW/200 MHz TRP for terminal stations) will provide protection of the EESS (passive) in the band 23.6-24.0 GHz only on the condition that it can be ensured through regulatory provisions that there will be no high-density deployment in the frequency band 22-23.6 GHz i.e. access systems that provide wireless broadband electronic communication services.

It is understood that the limits of −39 dBW/200 MHz for base stations and −35 dBW/200 MHz for terminal stations *when taken together with* the guarantee of no high-density deployment in the frequency band 22-23.6 GHz will provide the same protection to EESS as the EU Decision 2019/784 limits of −42 dBW/200 MHz for base stations and −38 dBW/200 MHz for terminal stations.

Preventing such high-density deployment below 23.6 GHz will require a mandatory provision in the EU Decision that the frequency band 22-23.6 GHz shall not be used for access systems that provide wireless broadband electronic communication services.

Date of the end of the transition period

WRC-19 Resolution 750 specifies that the final unwanted emission limits apply to base stations and mobile stations brought into use after 1 September 2027. The timeframe for the transition to the second step should allow early roll-outs but avoid mass-market deployment. While it is difficult to predict when 5G roll-out in the 26 GHz band will reach levels that would cause a problem, CEPT concluded that a transition date in September 2027 poses a risk to EESS (passive) since mass market deployments in Europe might happen significantly earlier than this.

Having considered these points, CEPT recommends a date of 1 January 2024 for transition from the initial limits to the final limits, which would avoid the risk of interference to EESS from large-scale 5G deployments and would provide regulatory certainty and a clear signal to industry of the target to develop solutions.

Best regards,

Chris Woolford

ECC Chairman

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