**3GPP TSG RAN Meeting #106 RP-243272 Spain, December 9-12, 2024**

**Title:** DRAFT LTI Response to LS on Minimum requirements related to technical performance for IMT-2030 radio interface(s) (ITUR\_WP5D\_TEMP\_167

**Response to:**  LS on Minimum requirements related to technical performance for IMT-2030 radio interface(s) (ITUR\_WP5D\_TEMP\_167)

**To:**  ITU-R WP5D

**Cc:**

**Source:** CMCC (Moderator)

**Contact Person:**

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**This ITU input will become part of ITU deliverable(s): no**

**Responsible 3GPP group for final output to ITU: 3GPP PCG**

**deadline for the final output to ITU: January 23rd, 2025 (16:00 hours UTC)**

**way to make this document available for ITU (see Art.51 of 3GPP working procedures):**

**[√] a. via OPs as a deliverable from their organizations (for PCG review only)**

**[ ] b. via Individual Members (for PCG or TSG review) coordinated by ITU sector convener**

**[.] c. via 3GPP LS coordinator (for TSG or WG review)**

**Attachments:** Draft list of definitions on TPRs (to be updated)

*------------ [remove upper part before submission to ITU in case a. and b. (Art.51)] -----------------*

**For 3GPP review:**

**in:** 3GPP TSG SA **feedback LS before:** December 13, 2024 **to:** 3GPP PCG

**Formerly distributed versions of this LTI document:**

<version x XX-xxyyyy>

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**Overall description:**

<additional text to highlight aspects of the review, e.g. some specific actions>

*----------------- [remove 3GPP review part before submission to ITU] -----------------*

**[Alliance for Telecommunications Industry Solutions][[1]](#footnote-1)**

Reply Liaison Statement on Minimum requirements related to technical performance for IMT-2030 radio interface(s)

3GPP TSG RAN has received the LS (5D/TEMP/167) on Minimum requirements related to technical performance (TPR) for IMT-2030 radio interface(s) and would like to thank for the opportunity to provide input. 3GPP TSG RAN#106 in December 2024 initiated a Study on 6G scenarios and requirements. One important aspect of the study is to investigate a candidate set of items for minimum TPRs based on the Recommendation ITU-R M.2160, and the associated target values for the identified minimum TPRs.

Based on Candidate IMT-2030 TPRs under discussion in WP 5D [1] and the inputs from 3GPP members, 3GPP TSG RAN has made initial considerations of possible TPRs and proposes the following for consideration. 3GPP TSG RAN may provide further inputs to WP5D in the future. The list below should be seen as an initial view and additional candidates will be considered in the future. The definitions of these items will be further discussed, e.g. considering commercial relevance.

1. Peak data rate

2. Peak spectral efficiency

3. User experienced data rate

4. 5th percentile user spectral efficiency

5. Average spectral efficiency

6. Sustainability/Energy efficiency

7. Area traffic capacity

8. User plane latency

9. Control plane latency

10. Connection density

11. Reliability

12. Mobility

13. Mobility interruption time

14. Bandwidth

In addition, 3GPP TSG RAN would also like to mention that the TPRs will clearly be closely related to the evaluation scenarios. While the exact evaluation assumptions will of course require more discussion, 3GPP TSG RAN believes it is helpful to identify some of the elementary aspects early, to facilitate work on detailed TPRs and associated values.

A very important evaluation assumption is carrier frequency. Considering relevant frequency bands for IMT-2030, , a carrier frequency equal to 7 GHz (among others which may be informed by 3GPP TSG RAN later) would be valuable to include in the set of evaluation assumptions for IMT-2030 in addition to the existing set of evaluated IMT-2020 frequencies and other potential frequencies.

A closely associated evaluation assumption is the bandwidth, for which 3GPP TSG RAN believes that at least channel bandwidth of 200MHz (among others which may be informed by 3GPP TSG RAN later) from system perspective should be considered in due course. (Note that this does not imply that 200MHz channel bandwidth shall be supported in all devices.)

Furthermore, 3GPP TSG RAN adopted the study plan as below and may provide further inputs to WP5D accordingly. 3GPP TSG RAN looks forward to future co-operation with ITU-R WP5D on the minimum requirements related to technical performance for IMT-2030.

* RAN#106 (December 2024)
* Initial discussion on the possible TPRs
* RAN#107 (March 2025)
* Aim to finalize the candidate set of TPRs
* Initial discussion on the associated values of the identified TPRs
* RAN#108 (June 2025)
* Aim to finalize the associated values of the identified TPRs.
* After RAN#108
* Any remaining issues on 6G focusing on ITU-R may continue, if needed

3GPP TSG RAN will keep ITU-R WP5D proactively apprised of further developments, including the outcomes of 3GPP TSG RAN’s study, and very much looks forward to future co-operation with ITU-R WP5D on the TPRs and evaluation assumptions for IMT-2030.

Reference:

1. “Working document towards a Preliminary Draft New Report ITU-R M.[IMT-2030.TECH PERF REQ]: Minimum requirements related to technical performance for IMT-2030 radio interface(s)”, Annex 5.7 to [5D/413](https://www.itu.int/md/R23-WP5D-C-0413/en) Report on the 47th meeting of Working Party 5D.
1. Submitted on behalf of the 3GPP 5G-SRIT GCS Proponent (The *GCS Proponent* is collectively the 3GPP Organizational Partners (OPs) [http://www.3gpp.org/partners](http://www.3gpp.org/partners%29)). (Source PCG54\_yy) [↑](#footnote-ref-1)