

61 Oak Avenue, Highveld,
Techno Park, Centurion, 0157
Private Bag X808, Pretoria, 0001

C: +27 65 966 4485
Email: mngomenp@telkom.co.za

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Mr Davis Kgosimolao Moshweunyane and Mr Richard Makgotlho
Block C
350 Witch-Hazel Avenue
Eco Point Office Park
CENTURION

Per email: chairperson@icasa.org.za
dmoshweunyane@icasa.org.za
CC: rmakgotlho@icasa.org.za

Dear Mr Moshweunyane and Mr Makgotlho

RE: TELKOM ADDITIONAL SUBMISSION PERTAINING TO THE 2ND DRAFT NATIONAL RADIO FREQUENCY PLAN 2025

Telkom SA SOC Pty Ltd (“**Telkom**”) thanks the Independent Communications Authority of South Africa (“**the Authority**”) for the opportunity to participate in the public hearings pertaining to the second draft National Radio Frequency Plan 2025, which were held on 15 and 16 January 2026 (“**Public Hearings**”).

The Authority afforded participants at the Public Hearings an opportunity to provide additional information within seven (7) working days after the Public Hearings. In this regard, the Authority requested that Telkom provide additional information relating to the following:

- the future use of frequency bands above 92 GHz for fixed wireless services; and
- the European rules pertaining to the use of the 1900 MHz frequency band for Future Railway Mobile Communication System (“**RFMCS**”).

1. Future use of frequency bands above 92 GHz for fixed wireless services

As stated by Telkom during the Public Hearings and in Telkom’s written submission to the Authority dated 11 December 2025, several frequency bands above 92 GHz are being made available for fixed wireless systems. These terrestrial fixed wireless systems will provide high-capacity fixed links for, amongst others, backhauling of mobile systems over short distances. While all frequency bands up to 3000 GHz have been allocated to various radiocommunication services, the bands above 92 GHz are generally not being used in South Africa. These bands could therefore be made available for fixed wireless systems.

Radio frequency spectrum from 92 GHz to 174.8 GHz is divided into two frequency ranges, with nomenclature indicated as “W-Band” and “D-Band”. The specific frequency bands within these ranges, which are for fixed wireless systems, are set out below. We also provide information pertaining to international regulatory developments pertaining to these frequency bands.

W-Band: 92-94 GHz, 94.1-100 GHz, 102-109.5 GHz and 111.8-114.25 GHz

- **ECC REC 18(02)** “Radio frequency channel/block arrangements for Fixed Service systems operating in the bands 92-94 GHz, 94.1-100 GHz, 102-109.5 GHz and 111.8-114.25” was adopted in Europe on 14 September 2018. These frequency bands were included in the European Table of Frequency Allocations (“ECA Report 25”) on 27 June 2025.
- ITU-R Study Group 5 adopted **Draft new Recommendation ITU-R F.[W-BAND]** “Radio-frequency channel and block arrangements for fixed service systems operating in the 92-94 GHz, 94.1-100 GHz, 102-109.5 GHz and 111.8 114.25 GHz ranges” at its meeting held on 1-2 December 2025. This draft Recommendation was developed by ITU-R Working Party 5C. Consultation with Member States for approval of this draft ITU-R Recommendation is open until 23 February 2026. A copy of the draft Recommendation is attached.

D-band: 130-134 GHz, 141-148.5 GHz, 151.5-164 GHz and 167-174.8 GHz

- **ECC REC 18(01)** “Radio frequency channel/block arrangements for Fixed Service systems operating in the bands 130-134 GHz, 141-148.5 GHz, 151.5-164 GHz and 167-174.8 GHz”, was also adopted on 27 April 2018 in Europe. These frequency bands were also included in the European Table of Frequency Allocations (“ECA Report 25”) on 27 June 2025.
- ITU-R Study Group 5 adopted **Draft new Recommendation ITU-R F.[D-BAND]** “Radio frequency channel and block arrangements for fixed service systems operating in the 130-134 GHz, 141 148.5 GHz, 151.5 164 GHz and 167-174.8 GHz ranges” at its meeting held on 1-2 December 2025. This draft Recommendation was developed by ITU-R Working Party 5C. Consultation with Member States for approval of this draft ITU-R Recommendation is open until 23 February 2026. A copy of the draft Recommendation is attached.

In addition to the above, **ECC Report 282** “Point-to-Point Radio Links in the Frequency Ranges 92-114.25 GHz and 130-174.8 GHz”, which was published on 14 September 2018, provides supporting information on the deployment of fixed radio links in the D-band and W-band. Report 282 deals with issues such as propagation, sharing and protection of other radiocommunication services, licensing aspects and technical matters.

The above-mentioned frequency bands support various Time Division Duplex (“TDD”), Frequency Division Duplex (“FDD”) and combinations of TDD/FDD frequency arrangements (such as Full Duplex (“FD”) and flexible FDD (“fFDD”). These new duplex arrangements are defined in the attached draft ITU-R Recommendations.

The above frequency bands are allocated to fixed services on a primary basis in the NRFP-25. Telkom therefore recommends that the use of these bands for fixed links be reflected in the 3rd column in NRFP-

25 as a “Typical Applications” in South Africa. This will ensure that South Africa remains aligned with global technology developments in the use of these high frequency bands for terrestrial wireless systems.

The W-band is considered an extension band for E-band (70/80 GHz), which will offer more spectrum for mobile backhaul, with commercial products available from 2028. Telkom understands that commercial equipment operating in the D-band will only be available after 2030 as the technology required for these systems (mainly radio frequency related components) is not yet mature. The D-band could be more suitable for other use cases, such as wireless fronthaul systems.

The ITU-R Recommendations provide several frequency channelling arrangement options (TDD, FDD, etc.) for the use of the D-band and W-band. Telkom is also of the view that these bands could be used on a licence exempted basis or frequency self-coordination. Telkom therefore recommends that the Authority include these bands in the Radio Frequency Spectrum Regulations (“RFSR”), like the approach adopted for the E-Band.

Technical standards for point-to-point equipment and antenna operating in the D-band and W-band were published by ETSI (EN 302 217-2 and EN 302 217-4) in July 2025. Both of these standards are included in the draft Official List of Regulated Standards (“Official List”) published by the Authority for public comment on 17 November 2025 (GG53679, Notice Nr. 3607). Telkom, as a member of the South African Bureau of Standards (“SABS”), will propose at its next meeting that the latest ETSI versions of these standards be adopted and published as South African National Standards (“SANS”).

2. European rules pertaining to the use of the 1900 MHz frequency band for Future Railway Mobile Communication System (“FRMCS”).

At the Public Hearings, the Authority requested that Telkom provide it with the European rules and information pertaining to the use of FRMCS in the 1900 MHz band (i.e. 1900-1920 MHz) in South Africa. The relevant information is:

- **ECC/DEC/(20)02** – “Harmonised use of the paired frequency bands 874.4- 880.0 MHz and 919.4- 925.0 MHz and of the unpaired frequency band 1900-1910 MHz for Railway Mobile Radio (RMR)”. The least restrictive technical conditions (“LRTC”) for wideband RMR in the 1900-1910 MHz (TDD) band is provided in Annex 3 of the ECC/DEC/(20)02.
- OFCOM is currently consulting on the use of the 1900 band, which includes the use of the band 1900-1910 MHz for FRMCS. The consultation notice, titled “Future authorisation of the 1900–1920 MHz band” is available at: [Statement and further consultation: Future authorisation of the 1900–1920 MHz band](#).

In the OFCOM consultation notice, information pertaining to the upper part of the 1900 MHz band (i.e. 1910-1920 MHz) is provided. As mentioned by Telkom during the Public Hearings, the power levels that may be considered for the upper part of the 1900 MHz band could be extracted from the OFCOM consultation notice. OFCOM proposes that the sub-band 1910-1915 MHz be used for Emergency Services Network (ESN) Gateways, which service may not be relevant to South Africa. With the correct power levels that apply to the sub-band 1910-1915 MHz, it may therefore be possible to use this sub-band for extending the FRMCS band, as proposed by the Passenger Railway Agency of South Africa (“PRASA”). The sub-band 1915-1920 MHz must act as a guardband

to protect International Mobile Telecommunication (“IMT”) systems deployed in the 2100 MHz band. The possibility of interference with IMT systems above 1920 MHz should nevertheless be assessed by the Authority.

Telkom trusts that the above additional information will assist the Authority in concluding the NRFT-25.

Yours Sincerely



Nozipho Mngomezulu

Group Executive: Regulatory and Legal Services