
GENERAL NOTICES • ALGEMENE KENNISGEWINGS

INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA**GENERAL NOTICE 1225 OF 2022****NOTICE**

THIS INFORMATION MEMORANDUM COMMUNICATES THE AUTHORITY'S INTENTIONS TO INITIATE THE SECOND PHASE OF THE LICENSING PROCESS AND TO MAKE AVAILABLE RADIO FREQUENCY SPECTRUM TO PROSPECTIVE LICENSEES TO PROVIDE MOBILE BROADBAND WIRELESS ACCESS SERVICES IN THE LOW AND MID RADIO FREQUENCY BANDS.

1. The Independent Communications Authority of South Africa ("the Authority/ICASA") hereby publishes a notice for the purpose of initiating the second phase of the licensing process and making available radio frequency spectrum to prospective licensees to provide mobile broadband wireless access services in the low and mid International Mobile Telecommunications (IMT) frequency bands within the designated frequency ranges outlined in the tables below ("the Designated Frequency Ranges").
2. On the 14th November 2014, the Authority published the final International Mobile Telecommunications (IMT) Roadmap 2014. In addition, on the 30th of March 2015, the Authority also published the Final Radio Frequency Spectrum Assignment Plans (RFSAPs) for the specific IMT frequency bands, setting out the rules for systems operating in specific frequency bands.

3. On 9 November 2019, the Authority published the Final IMT Roadmap in the Government Gazette No. 42829 (Notice No. 600 of 2019).
4. On 30 September 2021, the Authority published a notice on the inquiry for the implementation of the Radio Frequency Migration Plan and of the IMT Roadmap ("the Inquiry") in Government Gazette No. 45247 (Notice 580 of 2021) for public consultation in terms of Section 4B of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000).
5. On 24 December 2021, the Authority published a notice regarding the findings of the Inquiry and the Authority's position in Government Gazette No. 45690 (Notice No. 739 of 2021), inviting public comments on the draft Implementation of the Radio Frequency Migration Plan and of the IMT Roadmap.
6. Furthermore, on 31 March 2022, the Authority published the Draft Radio Frequency Spectrum Assignment Plans ("RFSAPs") for IMT Systems in Government Gazette No. 46160 (Notice No. 1961 to 1970) for public consultation.
7. The Authority is in the process of finalising the RFSAPs for IMT Systems.
- 8. The purpose of this Notice is to solicit views from interested stakeholders regarding the IMT radio frequency bands the Authority intends to licence during the second phase of the IMT licensing process.**
9. An electronic copy of the Notice will be made available on the Authority's website (www.icasa.org.za). Interested persons are hereby invited to submit written representations, including an electronic version of the representation in Microsoft Word and a signed pdf version, by no later than 16h00 on 19 September 2022. **No late submission will be considered.**

10. Written representations or enquiries may be directed to:

Contact person: Mr Kgosimolao Moshweunyane

Tel: +27 (0) 12 568 3497 E-mail: imtlicensing@icasa.org.za

Physical Address: 350 Witch-Hazel Avenue, Eco Point Office Park
Eco Park, Centurion.

Postal Address: Private Bag X10, Highveld Park 0169, South Africa

11. All written representations submitted to the Authority pursuant to this notice shall be made available for inspection by interested persons at the ICASA Library or website and copies of such representations and documents will be obtainable from the ICASA Library on payment of a fee.

12. The Notice and representations will be uploaded on the Authority's website;

13. Where respondents require that the representation or part thereof be treated as confidential, then an application in terms of section 4D of the ICASA Act, Act No. 13 of 2000, must be lodged during the submission of representations. **The application for confidentiality must be submitted simultaneously with the submission in response to this consultation document.** Respondents are requested to separate any confidential material into a clearly marked confidential annexure. If, however, the request for confidentiality is refused, the person making the request will be allowed to withdraw the representation or document in question.

14. The guidelines for confidentiality request are contained in Government Gazette Number 41839 (Notice 849 of 2018).



DR CHARLES LEWIS
CHAIRPERSON (ACTING)

DATE: 5 / 8 / 2022

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1. OVERVIEW

- 1.1. On 17 March 2022 the Authority concluded the licensing process of high demand radio frequency spectrum initiated by the Invitation to Apply ("2021 ITA") in the Government Gazette No. 45628 (Notice No. 717 of 2021).
- 1.2. Six (6) bidders responded to the ITA and qualified to participate in the licensing process, namely:
 - 1.2.1. Cell C;
 - 1.2.2. Liquid Telecoms;
 - 1.2.3. MTN;
 - 1.2.4. Rain;
 - 1.2.5. Telkom; and
 - 1.2.6. Vodacom.
- 1.3. The licensing process was carried out by way of an opt-in round and main auction followed by an assignment round which generated a total of R14.48 billion.
- 1.4. The ITA included 33 lots across four (4) radio frequency bands: 700 MHz, 800 MHz, 2600 MHz and 3500 MHz. All lots, except for the spectrum in Lot 9 (800MHz), were sold.
- 1.5. The Authority is embarking on the second phase of the licensing process with the intention to license the unsold lot in addition to the Designated Frequency Ranges (refer to Table 1). In anticipation of the upcoming licensing process, the Authority would like to obtain stakeholder inputs on the Frequency Bands in Table 1. Table 2 provides the current status of those bands and the processes that are currently under way before licensing of bands can commence.

2. INTRODUCTION

- 2.1. South Africa experiences continued growth in demand for more spectrum as a result of significant growth in data traffic. The limited availability of spectrum for IMT systems brings constraints and challenges in the provision of broadband services. In order to address South Africa's bandwidth deficiency, the current assigned bandwidth for IMT spectrum needs to be increased.
- 2.2. The requirement for IMT2020 spectrum places an additional demand for spectrum and therefore additional IMT Spectrum needs to be made available.
- 2.3. IMT2020 standards have been finalised by the International Telecommunication Union in ITU-R.M2150, "Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2020", and some of the key considerations are as follows:
- 2.3.1. *"That IMT-2020 systems include the new capabilities of IMT that go beyond those of IMT-2000 and IMT-Advanced and will interwork with and complement existing IMT-systems and their enhancements".*
- 2.3.2. *"That due to the large effective bandwidths required to support the very high data rates needed for the various services offered, allowances must be made for either much larger single carrier bandwidths (even as spectral efficiencies increase) or aggregation of RF carriers."*
- 2.4. In 2013, a broadband policy was published titled *South Africa Connect*. South Africa Connect gives expression to the vision set out in the National Development Plan of a *"seamless information infrastructure by 2030 that will underpin a dynamic and connected vibrant information society and a knowledge economy that is more inclusive, equitable and prosperous"*. The focus remains on education, health, and government services. It is further seen to

operationalise the New Growth Path and the Strategic Integrated Project¹ (SIP) 15, which deals with expanding access to communications technology by ensuring universal access and service to affordable and secure broadband services by all South Africans, prioritising rural and under-serviced areas, and stimulating economic growth.

- 2.5. South Africa Connect acknowledges that the slow deployment of fixed broadband services, and its relatively prohibitive cost, has meant that over the last five years mobile broadband rapidly became the primary form of broadband access rather than providing a complementary service to fixed broadband services as it has done in more developed economies.
- 2.6. Additionally, various econometric analyses have demonstrated that broadband has a positive impact on economic growth in both developing and developed markets. These analyses indicate that the impact on employment growth varies from 0.2% to 5.32% for every increase of 1% in broadband penetration².
- 2.7. According to the Econometric Modelling Report of June 2021, the percentage increment in per capita GDP, resulting from an increase in 10% broadband penetration worldwide, has remained stable both for the fixed (from 0.77% to 0.80%) and mobile broadband (from 1.5% to 1.6%)³. These indicators are critical to South Africa, which needs to breach the digital divide, improve its economic growth, and create new jobs.
- 2.8. The Authority recognised that mobile broadband technologies are a critical component in achieving the goal of 'broadband for all citizens' in South Africa.
- 2.9. The Authority aims to take advantage of the key capabilities of IMT2020 and recognises that global harmonisation is a key essential component for the achievement of economies of scale, supported by a technology neutrality regime

¹ Expanding Access to Communications Technologies

² https://www.itu.int/ITU-D/treg/broadband/ITU-BB-Reports_Impact-of-Broadband-on-the-Economy.pdf

³ https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-EF.COV_ECO_IMPACT_B-2021-PDF-E.pdf

for national licensing that covers the entire territory of South Africa and that enables the uptake and deployment of various generations of technologies.

2.10. It is the Authority's view that the second phase of licensing of the available low and mid frequency bands within the Designated Frequency Ranges will contribute significant bandwidth towards meeting the requirements of IMT2020 systems and beyond as well as achieving the South Africa Connect targets.

2.11. The low and mid frequency bands within the designated frequency ranges outlined in the tables below have been identified worldwide for IMT services.

2.12. These bands complement each other in the sense that they fulfil the requirements for capacity and coverage which make them suitable for rural and urban areas and for bridging the digital divide.

2.13. It is for the above reasons that the Authority has decided on a phased approach to the licensing of the low and mid frequency bands within the designated frequency ranges, outlined in the tables below, to enhance competition and to increase broadband coverage, and in so doing bridge the digital divide and disparities between urban and rural access to broadband networks.

3. OBJECTIVES

3.1. The main aim of licensing the low and mid frequency bands within the designated frequency ranges is to increase nationwide broadband access for all citizens by 2025. This will be achieved by:

- 3.1.1. increasing universal access and service by ensuring rural connectivity,
- 3.1.2. giving consumers more choice,
- 3.1.3. promoting investment in the sector,
- 3.1.4. unlocking economic growth,
- 3.1.5. ensuring quality of service and experience, and
- 3.1.6. ensuring affordability of services.

4. LEGAL FRAMEWORK

- 4.1 This Notice is guided broadly by the provisions set out in the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000) (ICASA Act), Electronic Communications Act, 2005, (Act No. 36 of 2005) (ECA), National Radio Frequency Plan 2021⁴ (NRFP-21), Radio Frequency Spectrum Regulations⁵ 2015 (RFSRs), as well as the broader policy objectives of South Africa as set out in amongst other documents, the National Development Plan and South Africa Connect (National Broadband Policy), the Broadcasting Digital Migration Policy 2008 (as amended) and the Radio Frequency Spectrum Policy 2010⁶.
- 4.2 Section 31(3)(a) of the ECA mandates the Authority to develop regulations setting out the procedures and criteria for radio frequency spectrum licences in instances where there is insufficient spectrum available to accommodate demand.
- 4.3 The RFSRs apply generally to all areas of radio frequency spectrum and to all types of Radiocommunications services. The RFSRs established the framework through which the Authority may allocate and assign radio frequency spectrum under the NRFP. The RFSRs also set out the procedure and criteria for awarding spectrum licences in instances where there is insufficient spectrum available to accommodate demand. The RFSRs seek to ensure transparent, fair, and efficient procedures for radio frequency spectrum licence applications and allow greater flexibility such that special conditions and procedures for specific frequency bands may be applied.
- 4.4 On 04 April 2013, the Authority published the Radio Frequency Migration Regulations and Plan 2013⁷ which sets out the regulatory procedure and process

⁴ Government Gazette number 46088 (Notice number 911 of 2022)

⁵ Government Gazette number 38641 (Notice number 279 of 2015)

⁶ Government Gazette number 33116 of 16 April 2010

⁷ Government Gazette Number 36334 (Notice Number 352 and 353 of 2013)

for the migration of use and users of Spectrum, and on 30 March 2015 the Authority published the Radio Frequency Spectrum Assignment Plans⁸ (RFSAPs) for International Mobile Telecommunications (IMT) 2015 which sets out the technical conditions on the use of IMT spectrum.

- 4.5 Section 192 of the Constitution of the Republic of South Africa, 1996⁹, read with section 2 of the ICASA Act, gives the Authority the sole mandate to regulate broadcasting and electronic communications in the public interest. Furthermore, Section 30(2) of the ECA mandates the Authority to control, plan, administer, manage, license, and assign the use of radio frequency spectrum. In executing the aforementioned exclusive mandate, the Authority must ensure compliance with applicable standards and requirements of the International Telecommunication Union's (ITU) Radio Regulations, and the National Radio Frequency Plan.
- 4.6 It is important to adopt globally harmonised channel arrangements and alignment with other regional agreements on the appropriate channel plans for the low and mid frequency bands within the designated frequency ranges for the ITU Regions to achieve economies of scale, global roaming, and the maturity of the ecosystem.
- 4.7 The Southern African Development Community (SADC) Frequency Allocation Plan (FAP) of 2020 creates a framework for harmonisation across SADC on the use of the radio frequency spectrum. The 2020 SADC FAP was developed considering international best practice in the development of Frequency Band Plans and considering the needs of the SADC Members.

⁸ Government Gazette Number 38640 (Notice 270 to 278 of 2015)

⁹ Section 192; of the Constitution of South Africa

5. STATUS OF IMT FREQUENCY BANDS EARMARKED FOR THIS PROCESS

5.1. The status of the IMT spectrum bands as provided in Table 1 are available for licensing in the current process.

Table 1: Available IMT spectrum bands

Item	Band	Available Bandwidth	Regulatory Framework	Current Occupancy	Dependency	Spectrum Availability for Licensing (2022-23 FY)
1	IMT800 790 - 862 MHz	2 x 10 MHz FDD 791-801// 832-842 MHz	Government Gazette Number 38640 (Notice 273 of 2015) Government Gazette Number 38640 (Notice 390 of 2015) Government Gazette Number 45247 (Notice 580 of 2021) Government Gazette Number 45690 (Notice 739 of 2021) Government Gazette Number	Broadcast TV transmissions are predominantly found in these spectrum band and have not yet been migrated below 694MHz This band is allocated for Mobile Services on a Primary basis and identified for IMT ¹⁰ .	Completion of DTT migration Finalisation of the RFSAP	Unsold Lot in the 2021 Auction. Completion of migration of the current broadcasting services is likely in the in the short term. Analogue TV Switch-off date is still to be determined by the Minister. The Authority will avail the status of the coverage maps on the IMT800 band in collaboration with the DCDT before the auction commences and apply proportional payment formulae for the IMT800 should the end of dual-illumination be after the

¹⁰ Government Gazette Number 46088 (Notice 911 of 2022)

Item	Band	Available Bandwidth	Regulatory Framework	Current Occupancy	Dependency	Spectrum Availability for Licensing (2022-23 FY)
2.	IMT2100 2010 - 2025 MHz	15 MHz (TDD) 2010 - 2025 MHz (TDD)	46160 (Notice 1964 of 2022) The Final Radio Frequency Spectrum Assignment Plan comes into effect upon publication in the Government Gazette	Not occupied	No Dependency	Available auctioning and licensing of this band.

5.2. Table 2 indicates the IMT Spectrum bands that the Authority is to license subject to the ongoing consultation processes on the bands provided here below.

Table 2: IMT Spectrum bands available in the medium term

Item	Band	Targeted Bandwidth	Regulatory Framework	Current Occupancy	Dependency	Spectrum Availability for Licensing (2022-23 FY)
1	IMT450 450 – 455 & 455 – 456 & 456 – 459 & 459 – 460 & 460 – 470 MHz	2 x 5 MHz FDD	Government Gazette Number 38640 (Notice 270 of 2015) Government Gazette Number 38640 (Notice 387 of 2015) Government Gazette Number 45247 (Notice 580 of 2021) Government Gazette Number 45690 (Notice 739 of 2021) Government Gazette Number 46160 (Notice 1961 of 2022) The Final Radio Frequency Spectrum Assignment Plan comes into effect on 1 st April 2023.	Government Entities (Ministry of Defence, Transnet SOC, SAA SOC, etc.)	Migration of the current services Finalisation of the RFSAP	Completion of migration of the current services is underway.

Item	Band	Targeted Bandwidth	Regulatory Framework	Current Occupancy	Dependency	Spectrum Availability for Licensing (2022-23 FY)
2	IMT750 733 – 758 MHz (700MHz Guard frequency bands)	25 MHz Supplementary Downlink	Government Gazette Number 38640 (Notice 272 of 2015) Government Gazette Number 38640 Government Gazette Number 45247 (Notice 580 of 2021) Government Gazette Number 45690 (Notice 739 of 2021) Government Gazette Number 46160 (Notice 1963 of 2022)	Broadcast TV transmissions are predominantly found in these spectrum band and have not yet been migrated below 694MHz This band is allocated for Mobile Services on a Primary basis and identified for IMT.	Completion of DTT migration Finalisation of the RFSAP	Completion of migration of the current service is underway.
3	IMT1500 1452 - 1492 MHz	40 MHz TDD	Government Gazette No. 36334 (Notice 352 of 2013) Government Gazette No. 42337 (Notice 166 of 2019) Government Gazette Number 45247 (Notice 580 of 2021)	No services licensed in the band	The finalisation of the RFSAP to be finalised in the current financial year.	RFSAP to be finalised. The Eco System has matured and 3GPP Standard is in place.

Item	Band	Targeted Bandwidth	Regulatory Framework	Current Occupancy	Dependency	Spectrum Availability for Licensing (2022-23 FY)
4	IMT2300 2300 - 2400 MHz	40 MHz TDD	Government Gazette Number 45690 (Notice 739 of 2021) Government Gazette Number 46160 (Notice 1967 of 2022) There are no current Services to be migrated in the Frequency Band	Fixed Services and Outside Broadcast links	Migration of Fixed Services and Outside Broadcast links out of the Band is to be completed by 31 March 2024. The Authority received an application from Telkom SA SOC Limited for the amendment of its Radio Frequency Spectrum Licence in the 2300 – 2360 MHz ("2300 MHz") and 2307 – 2387 MHz bands paired with the 2401 – 2481 MHz	Completion of migration of the current services is underway.

Item	Band	Targeted Bandwidth	Regulatory Framework	Current Occupancy	Dependency	Spectrum Availability for Licensing (2022-23 FY)
5	IMT3300 ¹¹ 3300 - 3400 MHz	100 MHz TDD	(Notice 1968 of 2022) The Migration of Fixed Links to the destination Out of the Frequency Band is to be completed by 31 March 2024. Government Gazette No. 36334 (Notice 352 of 2013) Government Gazette No. 42337 (Notice 166 of 2019) Government Gazette Number 45247 (Notice 580 of 2021) Government Gazette Number 45690 (Notice 739 of 2021) Government Gazette Number 46160 (Notice 1969 of 2022) The Radio Frequency Spectrum Assignment	No services licensed in the band	(~2400 MHz") band which is currently under consideration by the Authority Spectrum availability depends on WRC 23 outcome on agenda item 1.2. The finalisation of the RFSAP to be finalised by end of March 2023 Obtaining the agreement of neighbouring countries	RFSAP to be finalised. The Eco System has matured and 3GPP Standard in place.

¹¹ 5.429B Footnote ITU RR

Item	Band	Targeted Bandwidth	Regulatory Framework	Current Occupancy	Dependency	Spectrum Availability for Licensing (2022-23 FY)
6	4800 – 4990 MHz	190 MHz	National Radio Frequency Plan 2021 published on 25 March 2022, in Government Gazette Number 46088 (Notice Number 911 of 2022)	Government services occupy parts of this band.	Feasibility Study to be undertaken and the RFSAP yet to be developed	Feasibility Study to be undertaken and the RFSAP yet to be developed.