
GENERAL NOTICES • ALGEMENE KENNISGEWINGS

DEPARTMENT OF COMMUNICATIONS AND DIGITAL TECHNOLOGIES**GENERAL NOTICE 1271 OF 2022****ELECTRONIC COMMUNICATIONS ACT, 2005****(ACT NO. 36 OF 2005)****INVITATION TO PROVIDE WRITTEN SUBMISSIONS ON THE PROPOSED NEXT GENERATION RADIO FREQUENCY SPECTRUM FOR ECONOMIC DEVELOPMENT**

I, **Khumbudzo Ntshavheni**, Minister of Communications and Digital Technologies (the Minister), hereby issue the Next Generation Radio Frequency Spectrum Policy for Economic Development (Spectrum Policy) in the schedule in terms of sections 3(1) read with section 3(5) of the Electronic Communications Act, (ECA), (Act No. 36 of 2005) for the purpose of public consultation.

Interested persons are invited to provide written comments on the proposed Spectrum Policy within 30 working days of the date of publication, addressed to –

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Comments received after the closing date may be disregarded.



Ms. Khumbudzo Ntshavheni, MP

Minister of Communications and Digital Technologies

NEXT GENERATION RADIO FREQUENCY SPECTRUM DRAFT POLICY

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Definitions

“Allocation” (of a frequency band) refers to Entry in the National Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services or the radio astronomy service under specified conditions. This term shall also be applied to the frequency band concerned.

“Assignment” refers to (of a radio frequency or radio frequency channel) refers to Authorization given by - the Authority for a radio station to use a radio frequency or radio frequency channel under specified conditions.

“Government services” refers to services provided in the national interest by entities established in terms of Chapter 11 of the Constitution.

“Department” refers the Department of Communications and Digital Technologies.

“Frequency coordination” refers to a regulatory process that removes or mitigates radio frequency interference between different radio systems that operate on the same frequency

“High demand spectrum” refers to spectrum where demand for access to the radio spectrum resource exceeds supply.

“Interference” refers to the effect of unwanted energy due to one or a combination of emissions, radiations, or inductions upon reception in a radiocommunication system, manifested by any performance degradation, misinterpretation, or loss of information which could be extracted in the absence of such unwanted energy.

“Land mobile service” refers to a mobile service between base stations and land mobile stations, or between land mobile stations

“Minister” refers to Minister of Communications and Digital Technologies

“National Radio Frequency Plan” refers to a plan that influence Spectrum Management, Frequency planning and Monitoring based on the Table of Frequency allocation which emanates from the preceding World Radio Conference.

“Public protection and disaster relief” refers to radiocommunications used by responsible agencies and organizations dealing with maintenance of law and order, protection of life and property and emergency situations; with a serious disruption of the functioning of society, posing a significant widespread threat to human life, health, property or the environment, whether caused by accident, natural phenomena or human activity, and whether developing suddenly or as a result of complex, long-term processes;

“Radio frequency spectrum” refers to portion of the electromagnetic spectrum used as a transmission medium for electronic communications

“Radiocommunication” refers to any transmission, emission or reception of signs, signals, writings, images and sounds or intelligence of any nature by means of radio waves

“Safety service” refers to any radiocommunication service used permanently or temporarily for the safeguarding of human life and property.

“Sector-specific agencies” refers to such as South African Civil Aviation Authority (SACAA) and South African Maritime Safety Authority (SAMSA).

Acronyms

2G - Second-generation mobile network or technology.

3G - Third-generation wireless mobile network or technology

4G - The fourth generation of mobile phone technology

5G - The fifth generation technology

AIP - Administrative Incentive Pricing

ECA – Electronic Communications Act (Act 36 of 2005)

ECNS – Electronic Communications Network Services

ECS – Electronic Communications Services

ICT – Information Communications Technology

IMT - International Mobile Telecommunications

ITU - International Telecommunications Union

LDCs - least developed countries

MOU - Memorandum of Understanding

NGN – Next Generations Network

NRFP - National Radio Frequency Plan

PPDR - Public Protection and Disaster Relief

SA – South Africa

SMME - Small, Medium, and Micro-enterprises

USO - Universal Service Obligations

SDIC - State Digital Infrastructure Company

1. Introduction

- (a) This document is the revised Radio Frequency Spectrum Policy of South Africa (SA). Through this Next Generation Radio Frequency Spectrum Policy (“Spectrum Policy”), the government aims to promote long-term public interest derived from the use of spectrum as a finite natural resource. The Spectrum Policy is used to coordinate national spectrum management approaches to support the rollout of communications networks for socio-economic national development.
- (b) The Spectrum Policy derives its enabling principles and guidelines from the 2016 Integrated ICT White Paper policy (“ICT White Paper”), and the 2010 spectrum policy of South Africa. Without deviating from the generality of the ICT White Paper, this policy seeks to utilise the spectrum to drive broader and inclusive economic participation and development for all. The ICT White Paper section about the spectrum supports *the “growth and development of the electronic communication services”*.

2. Context

- (a) Radio frequency spectrum is a finite natural resource that is vital to the growth of South Africa's digital economy, and it is a vital element for development of the electronic communications network infrastructure.
- (b) The right of use of spectrum vests with the State and that all sectors should benefit from its use. The spectrum must provide all South Africans with access to a range of private, commercial, defense, national security, scientific and public safety applications.
- (c) To ensure social, cultural, and sustainable economic development within the country, this Spectrum Policy supports spectrum allocation and licensing of spectrum for fixed, land mobile, broadcasting, aeronautical and maritime, amateur, satellite, science, research and development, community access and other vertical industries and sectors such manufacturing, mining, agriculture, health, education etc.
- (d) The spectrum policy continues to recognize provision of spectrum for government services, public protection and disaster relief (PPDR) services, safety services and state emergency interventions in response to disasters.

3. Problem Statement

- (a) Shortage and limitations on availability of spectrum such that in certain spectrum bands, demand for spectrum exceeds supply.
- (b) Deployment of capital-intensive electronic communications network with a resultant to increase cost to communicate.
- (c) Connectivity divide, with a resultant to perpetuate exclusion of rural, remote and underserved communities
- (d) Exclusion of Small, Medium, and Micro-enterprises (SMMEs) and new entrants in sector.

4. Purpose

- (a) The primary purpose of this Spectrum Policy is to address the policy gaps and limitations that were identified in the ICT White Paper, which includes:
 - i. **“Unclear roles and responsibilities”** between the Minister and the Regulator resulting in institutional inefficiencies”,
 - ii. **“Gaps in the spectrum management regime”** with regard to the alignment between national universal service objectives and the licensing of frequency spectrum resources, the setting of spectrum fees, spectrum trading, sharing, re-farming and migration,
 - iii. **“An exclusive spectrum regime which promotes economic growth”** for a few market players at the expense of broader participation and limited socio-economic development, and therefore an inequitable assignment of spectrum which is in high demand,
 - iv. **“Extending broadband access to rural, remote and underserved areas”**; and
 - v. Failure to **“lower the cost of communications”**.
- (b) It establishes a mechanism for creating a stable and predictable regulatory environment for:
 - i. defining valid period for the use of high demand spectrum bands,

- ii. clear rules on license assignment and renewals including assignment conditions,
- iii. requirements to use spectrum effectively and efficiently,
- iv. spectrum harmonisation for wireless broadband networks and services,
- v. facilitating the deployment of next generation networks starting with 5G networks; and
- vi. providing more means for the authority and Minister to support competition.

5. Objectives of the Spectrum Policy

The objective of this spectrum policy is to ensure that spectrum resource is optimally utilised for the overall benefit of all South Africans by:

- (a) Controlling and encouraging the use of spectrum as an instrument for developing electronic communications network(s) which are an essential infrastructure for stimulating the economic growth and social development of South Africa,
- (b) Promoting competition in the assignment of frequencies in order to ensure innovative and efficient use of the radio spectrum (as a scarce resource),
- (c) Achieving optimum pricing of spectrum in order to discourage wastage or speculative acquisition of the scarce resource,
- (d) Ensuring equitable and fair allocation of spectrum to benefit the maximum number of users,
- (e) Optimising the age of technology, and
- (f) Generating moderate revenue for government.

6. Principles guiding the Spectrum Policy

- (a) Spectrum should be made available to support sovereignty, national security and public safety needs South Africans.
- (b) South Africa's use in spectrum should be actively advanced and defended internationally
- (c) The use of spectrum must ensure maximum social, cultural and economic development benefits for all citizens.

- (d) Secure both optimum spectrum occupancy and effective frequency utilization.
- (e) Transparent spectrum allocation and assignment
- (f) Adopt spectrum management approaches that promotes SMME participation and emergences of new entrants to the ICT sector.
- (g) Spectrum should be made available for a wide range of radiocommunication services that are in the public interest.
- (h) Spectrum management practices, including licensing methods, should minimize administrative burden and be responsive to changing technology and market demands.
- (i) Regulatory measures, where required, should be minimally intrusive, efficient and effective.
- (j) Regulation must be open, transparent and reasoned, and developed through public consultation, where appropriate.
- (k) Spectrum policy and management should support the efficient functioning of markets by:
 - i. permitting flexible use of spectrum to an extent practically possible,
 - ii. harmonizing spectrum use with international allocations and standards, except where South African interests warrant a different determination,
 - iii. making spectrum available for use in a timely fashion,
 - iv. clearly defining the obligations and privileges conveyed in spectrum authorizations,
 - v. ensuring that appropriate interference protection measures are in place; reallocating spectrum where appropriate, while taking into account the impact on existing services; and
 - vi. applying enforcement that is timely, effective and commensurate with the risks posed by non-compliance.

7. Roles and Responsibilities of the Minister and the Regulator

For the effective implementation of this spectrum policy, the currently overlapping roles and responsibilities of the Minister and the Regulator in relation to spectrum management functions are addressed as follows:

(a) Mandate

- i. The Minister of Communications and Digital Technologies ("*The Minister*") acts as the custodian of the spectrum on behalf of the people of South Africa.
- ii. The Minister's responsibilities are primarily derived from the objects of the Electronic Communication Act (Act 36 of 2005) (ECA) and thus holds the statutory responsibility for South Africa's radio frequency spectrum. As such, the Minister is responsible for developing national policies, policy directions and goals for spectrum resource use and ensure effective management of the spectrum resource.
- iii. The Minister represents the country at international policy functions dealing with spectrum including signing international treaties, multinational and bilateral agreements.

(b) **Responsibilities of the Minister of Communications and Digital Technologies**

- i. The Minister is responsible for the National Radio Frequency plan (NRFP), which is the statutory instrument under the Electronic Communication Act (Act 36 of 2005 as amended) (ECA) that identifies allocations and advise users about various services which can be operated in each spectrum band and their conditions of operation]. In terms of this Policy, allocation of spectrum refers to entry within the table of allocation of the NRFP. Whereas assignment of spectrum refers to authorization for use of a radio frequency or radio frequency channel under specified conditions.
- ii. The Minister is responsible for updating and approval of the National Radio Frequency Plan including the allocation of spectrum for the exclusive use by national security services.
- iii. To address issues relating to frequency coordination, the Minister is responsible for international spectrum frequency coordination and harmonization obligations.
- iv. For purposes of assisting the Minister to fulfill the Minister's international, multi-lateral and bi-lateral spectrum coordination and harmonization responsibilities as it pertains to South Africa, the Department will consult with the Regulator on such matters including regional and sub-regional spectrum planning, and cases concerning cross border interference.

- v. The Minister develops the country's positions, frequency allocations, and international frequency coordination for spectrum use.

(c) Responsibilities of the Regulator

This Policy recognizes that the Regulator will assign radio spectrum and issue licenses in line with Government policy and based on the NRFP that has been developed and approved by Government. The Authority will effectively perform its regulatory functions of controlling, monitoring, evaluating and auditing spectrum licenses at a national level by:

- i. Implementing the spectrum policy and policy directions issued by the Minister in line with ECA.
- ii. Making radio regulations and regulatory frameworks in line with the National Radio Frequency Plan and ensure the use spectrum is in accordance with the ECA.
- iii. The administration, management, assignment and authorizations of spectrum, and the issuing of licenses, as may be applicable.
- iv. National frequency coordination, planning, administration, management, and licensing for use of the spectrum.
- v. Spectrum monitoring, evaluation, and interference control within the Republic.
- vi. Periodic spectrum audits and development of spectrum outlook.
- vii. Maintaining a high quality and appropriately accessible database of frequency spectrum assignments. Assignments to security services shall, however, be excluded; and
- viii. Advising the Minister on areas for future spectrum research and development and planning.

(d) Sector-specific agencies responsibilities

This policy recognizes that spectrum assignment or licensing is made in line with appropriate regulatory reforms including Memorandum of Understanding between the Regulator and Sector-specific agencies of the State, who will in turn:

- i. Ensure availability and maintenance of quality information related to spectrum assignments, licensing, and utilization; and
- ii. Maintenance of a database of frequency spectrum users in their respective industries and ensuring that their database corresponds with that of the Regulator.

8. Spectrum Management Regime

- (a) The current legislative framework for the management of spectrum is over 20 years old. Although there are piecemeal reviews of regulatory frameworks, this policy recognizes that there are several factors, such as rapid evolving technologies, proliferation of new digital technologies and communication network services resulting in changing market demand and market structures, globalization, localization and increased focus on public safety and security, which needs to be taken into account in an effective spectrum management regime. The spectrum policy supports review of the legislative framework governing the use of spectrum.
- (b) As technological changes are essential for economic growth and sustainable development, this spectrum policy will continue to support licensing of spectrum on a technology neutrality basis to ensure that South Africa and its citizens benefit from rapid technological changes.
- (c) To ensure that the benefit of rapid technological change is realized, this policy acknowledges technology maturity and aging, and thus requires the development and adoption of technology retirement roadmap to ensure high demand spectrum drives deployment of newer technologies such as 5G and beyond. The roadmap must plan and propose the path of ceasing expansion and shutting down older next generation networks such as 2G, and 3G etc., in a planned, coordinated and less disruptive manner.
- (d) This Spectrum Policy clarifies the roadmap to cease utilization of spectrum for expansion and the shutdown of older generation networks which is in line with expiry of existing licenses or consulted timeframes with license holders in the interest of national technological advancements.
- (e) The spectrum used in line with expiry of electronic communication networks licenses will be returned to the Regulator to negotiate new licensing terms and conditions, or new re-licensing approach while ensuring sustainability, stability, and future technology investments in the sector.
- (f) The deployment of alternative network infrastructure such Wi-Fi, vertical industries networks, and community networks for the provision of data and other services in particular through SMME players and new entrants is permitted.
- (g) Licensing of spectrum should include, where practically possible, a hybrid spectrum licensing approach which includes both a modern approach such as auctions and the traditional administrative assignment.

- (h) Spectrum inventories and licensee database including an exhaustive mapping of all spectrums (licensed and unlicensed), should be made public on an easy to access and continuous basis.

9. Spectrum Allocation (Allocation of spectrum)

- (a) The primary effort of this spectrum policy is the allocation of frequency bands to the various radiocommunication services. Allocation of frequency bands refers to *entry* within the table of allocation and designation of frequency bands for specific uses in the National Radio Frequency Plan (NRFP).
- (b) The NRFP published through *Gazette* must be reviewed and updated after every World Radiocommunication Conference to keep it current.

10. Spectrum Outlook

- (a) This spectrum policy supports the development of spectrum outlook for South Africa, through consultation with industry and interested persons. The spectrum outlooks must be reviewed and updated every 5 years. The spectrum outlook will provide the country with an overview of market trends that affect spectrum use and inform Government on allocation of spectrum and the Regulator on controlling, planning and licensed use of spectrum.

11. Spectrum assignment/licensing and coordination

- (a) Assignment/licensing of spectrum which confer rights on electronic communications network services licence holders to use one or more specified frequency bands for any purpose consistent with assignment conditions set by the Regular, and coordination of spectrum affects the daily functions and operations of the Regulator.
- (b) In terms of this spectrum policy the Regulator must develop coordination procedures to ensure avoidance of harmful interference *inter alia* in inter-band and intra-band use of spectrum.
- (c) A Spectrum assignment/ license is valid up to a maximum period of 20 years and the Regulator may vary the validity period to give effect to radio regulations and national spectrum priorities in line with the spectrum outlook.
- (d) The varying of the spectrum assignment/ license validity period is done after the Regulator has followed a public consultation period.

- (e) Upon expiry of the spectrum assignment/license, a new licensing process must be undertaken, and the Regulator must inform the affected spectrum holder(s) of its plans to negotiate new spectrum license terms and conditions for renewal, or for reassignment, or re-award of the spectrum, at least twelve (12) months in advance.
- (f) Holding of a spectrum assignment does not guarantee automatic negotiation of new spectrum terms and conditions for renewal, or reassignment or re-award of the *same* spectrum assignment during the new process.
- (g) To support innovative approaches in spectrum licensing, the Regulator must continuously review and design new spectrum licensing regimes.

12. Licensed spectrum bands

- (a) Licensed spectrum bands are protected from interference of unlicensed or license exempt spectrum bands, and they provide *greater reliability and better performance*.
- (b) This policy supports the determination that in licensed bands a “*right to exclusivity*” in spectrum licensing be transformed into a “*right to protection from interference*”. In spectrum licensing, the principle will enable the Regulator to implement spectrum sharing in a manner that preserves all the rights of the license holder, at the same time unlock potential of unused spectrum for sharing.
- (c) The Regulator must provide protection and enforcement to the licensee and ensure that no other users transmit over the same spectrum band in the same geographic without prior authorization.
- (d) The Regulator must set the rules and regulations for the holders of licensed spectrum such that the principle of “*use-it or sharing-it*” is allowed.

13. Unlicensed or license exempt spectrum bands

- (a) The unlicensed or license exempt spectrum bands are still regulated by the Regulator to prevent them from interfering with licensed spectrum bands.
- (b) The Regulator must continuously set, review, and revise the rules and regulations that must be met for the use of unlicensed or license exempt spectrum on a license exempt basis.

- (c) Unlicensed or license exempt spectrum bands are not protected from interference. The unlicensed or license exempt spectrum bands will be mostly used by short range devices which have low power and low capability to cause interference to other radio equipment.
- (d) To support the advancement of Wi-Fi technology as a broadband connectivity option in unlicensed or license exempt spectrum bands, the Regulator must continuously evaluate measures and options to enhance effectiveness of Wi-Fi and to extend practically possible allocation of spectrum must be considered to support new Wi-Fi technologies.

14. Spectrum licence fees

- (a) All users of **licensed spectrum** are liable for the payment of spectrum fees unless the spectrum user is exempted from payment through appropriate policy directions issued by the Minister.
- (b) Any deviation from prescribed spectrum fees and exemptions from the payment of spectrum fees are addressed through appropriate regulatory instruments in the implementation of this spectrum policy.
- (c) Spectrum license fees are set for three main purposes:
 - i. To promote economic efficiency in the use of spectrum.
 - ii. To discourage spectrum hoarding and misuse.
 - iii. To raise moderate revenue for government. For this purpose, any spectrum occupancy relating to activities that are not for government purpose is considered to be private occupancy. Government, as the owner of the spectrum, has the right to require private occupants of spectrum bands to pay spectrum fees.
- (d) The spectrum policy supports the use of Administrative Incentive Pricing (AIP) tool to encourage efficient use of the spectrum through application of pricing that reflects the economic value of the spectrum.
- (e) The Regulator must distinguish between spectrum fee payment for commercial use and non-commercial use and apply appropriate measures to ensure that non-commercial users are not charged excessively.
- (f) The Regulator must apply appropriate measures to ensure that the use of AIP does not prohibit government service users to execute their public sector obligations, whilst preventing spectrum hoarding by public sector entities.

- (g) Unlicensed or license exempt spectrum users are not protected from interference and as such are not required to pay spectrum fees.
- (h) The Regulator will development and apply a framework that ensures a continuous adjustment of spectrum fees.

15. Liberalization of spectrum use

- (a) A spectrum licensee has the discretion to use the spectrum which has been assigned or awarded.
- (b) The spectrum will be licensed on a “*technology neutral basis*” or allow the spectrum licensees the choice of what technology to use to provide a specified service, and on “*service neutral basis*” or allow the spectrum licensees to decide what service to provide.

16. Hoarding of spectrum and managing unused licensed spectrum

- (a) The spectrum policy supports an effective and efficiency in utilization of spectrum resource and give the scarcity and value of spectrum to national development, hoarding of spectrum is not permissible.
- (b) The Regulator should put measures in place that prevents hoarding of spectrum including mechanisms for the implementation of the “use it or lose it” principle.
- (c) Licensed spectrum that is unused for a period of more than 24-months will be subjected to the use it or lose it principle.

17. Spectrum sharing and spectrum trading

- (a) To promote economic development, market-based approaches such as spectrum trading spectrum sharing, dynamic spectrum access use, and spectrum ‘sub-letting’ and/or sharing between licensees which ensures public policy gains in the use of spectrum are permitted with prior approval of the Regulator. The Regulator must set standard operating rules, and terms and conditions applicable for trading, sharing, and sub-letting of spectrum.
 - i. The spectrum holder must follow the rules, and terms and conditions in consultation with the Regulator.

- ii. The Regulator, together with the Competition Commission SA, should ascertain that an ECNS holder acquiring spectrum in any manner prescribed in (a), for example in mergers and acquisitions will not have a negative impact on competition and have an unfair advantage over smaller competitors.
- (b) The Regulator must put in place a regulatory framework which clarifies spectrum trading rules between licensees, and promote approaches that prohibits monopolization of spectrum, dominance, and anti-competitive behaviors in the market.
- (c) Emerging technologies are enabling more efficient use of spectrum, either limiting the power to avoid interference to primary users; or tapping into spectrum that are unused at a given time and geographic location. To promote spectrum efficiency, coordination for the purpose of spectrum sharing and the use of technologies that will enable greater spectrum sharing amongst different users is permitted with the prior approval of the Regulator.

18. Spectrum re-farming and migration

- (a) To harness rapid technological advances and changes, the re-farming of spectrum for use by a different technology is permitted.
- (b) The re-farmed spectrum will be treated in terms of its new use to the extent possible and respective spectrum fees and obligations imposed accordingly.
- (c) Migrations of services from one band to another and/or in-band is promoted for efficiency of spectrum use and other national interests.
- (d) To address costs incurred during migration of users, the Regulator will put in place transitional arrangements or measures to provide certainty for current users of spectrum to ensure minimum service interruption while acknowledging that a change in technology may have cost implications for licensed users.

19. Spectrum in high demand (High demand spectrum bands)

- (a) Due to limitations in spectrum availability, and considering that in certain spectrum bands, demand for access to spectrum resource exceeds supply, such spectrum bands shall be deemed as "*high demand spectrum*".
- (b) The International Mobile Telecommunications (IMT) spectrum bands as updated from time to time in the National Radio Frequency Plan are classified as "*high demand spectrum*" in line with (a) above.

- (c) The Minister, in consultation with the Regulator, may from time to time classify any other spectrum as “*high-demand spectrum*”.

20. Spectrum for community use

- (a) This spectrum policy supports the overarching principle of “*leave no one behind*”. Thus, the Regulator must review conditions for licensed spectrum to include “*the spectrum for community use*”.
- (b) This spectrum policy recognizes that as part of bridging the digital divide, government must implement measures to improve access to broadband infrastructure and high-speed Internet by all citizens, in particular at the poor communities.
- (c) Access to digital infrastructure and the internet by citizens requires access to “*data*” and therefore the government deems access “*data*” as a basic need for all citizens.
- (d) Through the use of spectrum as a natural resource, the government can realize the principle of “*data*” as a basic need for all. High cost of access “*data*” will continue to have adverse effects on the (a) above, which has the likely hood of affecting poor communities. To realize the principle of access “*data*” as a basic need, the Minister must implement a regulatory reform to facilitate for indigent households of citizens and other qualifying beneficiaries that are to be determined through Regulations, to receive a monthly allocation of free basic data.
- (e) The free basic data to be provisioned through the users of spectrum for community use and the size of the free basic data per household to be determined by the Minister through a regulatory framework/policy directive.

21. Alternative Network Infrastructure

- (a) To bridge connectivity gaps, extend broadband access and provide reliable data services for rural, remote and under-served communities including all low-income areas, and secondary cities and towns, this policy supports the “*development of alternative infrastructure*” such as Wi-Fi and Community Networks.
- (b) The alternative network infrastructure deployment will also be used to prevent data market dominance by the oligopoly and to address transformation objectives.

21.1 Wi-Fi Deployments

- (a) With the rapid growth of Wi-Fi in complementing and off-loading mobile data traffic from fixed broadband, the Regulator must continuously consider and review more protection of spectrum use for Wi-Fi services, including possible licensing and permits.
- (b) The Minister must from time to time consider incentives to stimulate investment for Wi-Fi deployments in poor areas that facilitate access to financing and/ or funding, and *access to spectrum* for use or share.

21.2 Community Networks

- (a) This spectrum policy acknowledges that the current market failure as reported in the State of Broadband Report 2021, "*in 2019, nearly 87 per cent of individuals in developed countries were using the Internet versus only 19 per cent in least developed countries (LDCs), as well as by households where nearly 89 per cent of households in developed economies were using the Internet versus less than 10 per cent in low-income countries*", can be addressed through supporting the viability of community networks.
- (b) Given the inability of community networks to take off in South Africa, this policy adopts a variation of the implementation model of community networks to those led by SMMEs to allow the development of Mobile Virtual Network Operators (MVNOs), Internet Service Providers (ISPs), Wireless Access/ Internet Service Providers (WASPs/ WISPs) as competitive and viable data service providers.
- (c) To address challenges that can impede the development of community networks including proliferation of these networks, the Regulator must develop a licensing framework for Community Networks in a manner that allows participation of new entrants, commercial viability, geographic spread of participants.
- (d) The Regulator must, within a year from publication of this spectrum policy, investigate and report with recommendation(s) to Minister, a new licensing framework for community network built, services, access and licensing fees or exemptions that can be implemented to ensure proliferation and success of community networks.
- (e) The Regulator must continuously identify and streamline or eliminate regulatory requirements that may impede the commercial viability and sustainability of community networks.

- (f) To support the viability of community networks, the Regulator must release spectrum for community use to community networks for purposes of free basic data provision and facilitate community networks adoption, improve their access to financing opportunities and thus accelerate network infrastructure investment and built including in rural, under-serviced and remote areas.
- (g) The Regulator must investigate and report with recommendation(s) to the Minister, a framework for the release of spectrum for community use and the other IMT spectrum that have be designated for transformation to community networks, including conditions for the distribution of free basic data to the determined beneficiaries, within a year of publication of this spectrum policy.
- (h) The policy provisions to prevent the hoarding of spectrum and managing unused licensed spectrum also apply to users assigned spectrum for community use.
- (i) The policy provisions on spectrum sharing and spectrum trading also apply to users assigned spectrum for community use

22. Reservation of spectrum

- (a) The Minister, in consultation with the Regulator, may reserve certain spectrum whether for public protection & Disaster Relief (PPDR), government use for present or future use, for public or community use or for responding to any national emergencies including pandemics.

22.1 Spectrum for Government use

- (a) Government service users of spectrum provide services that offer significant benefits to society, and they must receive their spectrum administratively.
- (b) The Regulator must continue with implementing lower spectrum fees or administrative fees for government spectrum users. The sole purpose of the administrative fees should be to pay for the administrative services rendered by the Regulator.
- (c) Government spectrum users that hold spectrum must regularly report the value of their spectrum holdings to the Regulator.
- (d) Within a year of gazetting of this Policy, the Regulator in consultation with government spectrum users, must investigate and make recommendations to the Minister, on the options for possible consolidation of government user networks to gain efficiency which will result in less spectrum requirements. on land mobile

systems in dealing with national security, public safety and emergency challenges.

- (e) While the status quo remains, any government spectrum users who intend to use the spectrum shall continue to apply for spectrum assignment from the Regulator.

22.2 Spectrum for use by of State Digital Infrastructure company

- (a) The Regulator must set aside spectrum for use by the State Digital Infrastructure Company (SDIC) to enable the fulfillment of three of its key mandate, namely:
- i. To provide the backhaul for state connectivity and support the government responsibility to bridge the digital divide through the expansion of core network to underserved and remote areas as part of ensuring universal connectivity,
 - ii. To utilize its digital infrastructure to support the participation of SMMEs in the industry on transparent, reasonable, and favorable commercial terms as part of reducing barriers to entry to the industry, and
 - iii. To provision for online broadcasting in the era of technology convergence and innovation, and to avoid future dependence of broadcasters on telecommunications mobile operators and preserve related public interest obligations to broadcasting without burden of spectrum fees
- (b) The Regulator will administer the spectrum for use by the SDIC in line with the policy provisions of spectrum for government use.
- (c) The provisions of spectrum management as provided for in this policy in clauses 12; 14; 15; 16 and 17 equally applies to the spectrum for use by the SDIC.

23. Spectrum to support broadcasting services

- (a) This spectrum policy recognizes that broadcasters need to be provided with certainty of access to spectrum to deliver broadcasting services in the future where broadcasting is rapidly shifting online.
- (b) The application of the provisions of Clause 21.2 (a)(iii) above, does not seek to change current broadcasting spectrum allocation regime. The current regime of licensing of broadcasting services without spectrum fees will prevail.
- (c) Given the evolution and convergence of technology that impacts on broadcasting to the future, this policy supports the non-exclusivity of spectrum bands reserved

for broadcasting and informs South Africa's position to the World Radiocommunication Conference.

24. Universal Service Obligations

- (a) The Regulator should, within 12 months of gazetting of this policy, review or develop a Universal Service Obligations (USOs) regulatory framework which will ensure the intended positive outcomes from USOs given to Mobile Network Operators are fully realized by the state and the society at large.
- (b) The Regulator should review or develop and continuously update a USO regulatory framework in line with spectrum assigned and align USO according to the new spectrum award
- (c) The USOs must always be designed to support national initiatives aimed at facilitating the achievement of South Africa's developmental agenda.
- (d) To support government efforts to bridge the digital divide, the Regulator must ensure that the process of assigning or licensing "*high demand spectrum*" is accompanied by service obligations to ensure rural and under-developed areas coverage/ connectivity. The service obligations must be aimed at increasing the prospects of service providers in rolling out modern broadband services to rural, under-developed urban or peri-urban areas and community development in general.
- (e) The USOs regulatory framework must ensure stricter enforcement measures by the Regulator and ensure compliance by a licensed spectrum holder.

25. Structure and Coordination

- (a) Spectrum management activities in the country are performed by government, the Regulator, and sector-specific entities.
- (b) The Regulator and a sector-specific entity relationship is governed through a Memorandum of Understanding (MoU) that give the specific-sector entity authority to manage the relevant spectrum.

26. Shutdown of Obsolete and Inefficient Networks

- (a) To promote optimum spectrum occupancy and effective utilization of high demand spectrum, the Policy supports a continuous review and shutdown of inefficient networks to free "*high demand spectrum*".

- (b) The Minister, after consultation with the Regulator and industry, will issue policy direction for the shutdown of old generation and inefficient networks.
- (c) The Minister, through an Annexure to this Policy, will continuously review, update and publish a revised Roadmap for the shutdown of old generation and inefficient networks
- (d) The Regulator will determine the best mechanism for the re-assignment of spectrum released from the shutdown of old generation network, in situation were after consultation, the shutdown date coincide with the end of ECNS and ECS licenses.
- (e) When re-assigning the spectrum, the relevant regulatory framework including provisions of this policy will apply.

27. Conclusion

- (a) This spectrum policy is issued in supersession of the 2010 “radio frequency spectrum policy for South Africa”, **Government Gazette No. 33119** and Chapter 9, Section 9.2 “Radio Frequency Spectrum Policy” and any related portions of the 2016 National Integrated ICT Policy White Paper, **Government Gazette No. 40325** dealing with radio frequency spectrum.
- (b) The revision and updating of an Annexure of this Policy does not require a revision and republishing of the full policy.

Annexure A: Roadmap towards the Sunset of older generation Networks

1. Context

- (a) Clause 26 of the Spectrum Policy supports the path of shutting down older global wireless standard networks such as 2G and 3G to ensure the country realize the benefits of rapid technological changes in telecommunications.
- (b) This annexure sets down a roadmap for the shutdown of older network shutdown in a way in a coordinated manner that causes minimal disruption to services.

1.1 Sunset of 2G Network

The following section provides preliminary dates for sunset of 2G Networks

- (a) The prohibition of the licensing of 2G devices – **30 June 2023**
- (b) Prohibit of new connections or activation of 2G devices on networks - **31 December 2023**
- (c) Shutdown of 2G services - **31 March 2024**
- (d) Shutdown of 2G network - **30 June 2024**

1.2 Sunset of 3G Network

The following section provides preliminary dates for sunset of 3G Networks

- (a) The prohibition of the licensing of 3G devices - **31 March 2024**
- (b) Prohibition of connections or activation of 3G on networks – **30 September 2024**
- (c) Shutdown of 3G services – **31 December 2024**
- (d) Shutdown of 3G network – **30 March 2025**

Annexure B: Roadmap towards new round of Spectrum Licensing

- (a) 4G and 5G Roll-Out or Deployment Roadmap to be concluded by **31 December 2022**
- (b) Licensing of Community Networks and remainder of IMT spectrum designated for SMMEs by **31 July 2023**
- (c) Licensing of the Millimeter wave spectrum by **31 December 2023**