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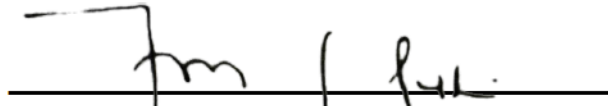
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PROCLAMATIONS • PROKLAMASIES

PROCLAMATION NOTICE 166 OF 2024**ELECTRONIC COMMUNICATIONS ACT, 2005****(ACT NO. 36 OF 2005)****NEXT-GENERATION RADIO FREQUENCY SPECTRUM FOR ECONOMIC DEVELOPMENT**

I, **Mondli Gungubele**, 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 Section 85 of the Constitution and Sections 3(1) of the Electronic Communications Act, (ECA), (Act No. 36 of 2005) for publication.



Mr. Mondli Gungubele, MP

Minister of Communications and Digital Technologies

**NEXT-GENERATION RADIO FREQUENCY SPECTRUM POLICY FOR
ECONOMIC DEVELOPMENT**

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1. Definitions

In this spectrum policy, unless the context indicates otherwise—

“Allocation” (of a frequency band) refers to an entry in the 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;

“Amateur – satellite service” – refers to a radiocommunication service using *space stations* on Earth *satellites* for the same purposes as those of the *amateur service*;

“Amateur service” – refers to a radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest;

“Assignment” (of a radio frequency or radio frequency channel) refers to the authorization given by the Authority for a radio station to use a radio frequency or radio frequency channel under specified conditions, and "assign" must be interpreted accordingly;

“Authority” refers to the Independent Communications Authority of South Africa established by section 3 of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000);

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

“Department” refers to 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 in the same frequency band;

“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 the Minister of Communications and Digital Technologies;

“National Radio Frequency Plan” refers to a plan that includes, but is not limited to a table of frequency allocations for all bands below 3000 GHz taking into account the ITU table of allotments, in so far as such allotments have been adopted and agreed upon by the Republic, which may include designations of certain utilisations;

“Public protection and disaster relief” refers to radiocommunications used by responsible agencies and organizations dealing with the maintenance of law and order, protection of life and property and emergencies; 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 a portion of the electromagnetic spectrum used as a transmission medium for electronic communications and broadcasting;

“Radiocommunication” refers to Telecommunication by means of *radio waves*;

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

“Sector-specific agencies” refers to government agencies such as South African Civil Aviation Authority (SACAA), South African Maritime Safety Authority (SAMSA) and South African Radio Astronomy Observatory (SARAO);

“Telecommunication” refers to any transmission, *emission* or reception of signs, signals, writings, images and sounds or intelligence of any nature by wire, *radio*, optical or other electromagnetic systems.

2. Acronyms

In this spectrum policy, unless the context indicates otherwise —

2G - The Second-generation mobile network or technology.

3G -The 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 – Republic of South Africa.

SMME - Small, Medium, and Micro-enterprises.

USO - Universal Service Obligations.

SDIC - State Digital Infrastructure Company.

3. Introduction

- (a) This document is the revised Radio Frequency Spectrum Policy of South Africa (SA) referred to as the Next Generation Radio Frequency Spectrum Policy ("Spectrum Policy"). Through this "Spectrum Policy", the government aims to advance long-term public interest in the use of spectrum as a finite natural resource. The Spectrum Policy also serves to facilitate and coordinate national spectrum management approaches for the implementation of electronic communications networks to enable the socio-economic development of its citizens.
- (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, and it has taken into consideration written comments from the Authority and interested persons in accordance with Electronic Communication Act (Act 36 of 2005). The policy seeks to utilise spectrum to drive broader and inclusive economic participation and development for all.

4. Context

- (a) Radio frequency spectrum is a finite natural resource that is crucial for developing the electronic communications network infrastructure and fostering the growth of South Africa's digital economy.
- (b) The right to use spectrum vests with the State and all sectors of the economy should benefit from its use. The spectrum should be used to provide all South Africans with access to a range of private, commercial, national security, scientific, public safety, and safety of life services.
- (c) The Spectrum Policy supports the allocation and licensing of spectrum for various services including fixed, land mobile, broadcasting, aeronautical and maritime, amateur, satellite, science, research and development, and community access services; It also supports vertical industries and sectors such as manufacturing, mining, agriculture, telehealth, education etc.

- (d) The spectrum policy continues to recognise the provision of spectrum for government services, public protection and disaster relief (PPDR) services, as well as safety services, including safe operations of transport systems and state emergency interventions in response to disasters.
- (e) The spectrum policy resonates spectrum with the public good, as such its use should enable socio-economic development, support government's transformation objectives, and support for broad-based black economic empowerment, and universal service access.
- (f) The spectrum license should be granted to entities registered in South Africa.

5. Problem Statement

- (a) The rapid change in technology increases the demand for access to many segments of the spectrum. As the demand for spectrum increases, in certain spectrum bands, the demand for accessible spectrum exceeds supply due to competing interests for the spectrum resources, shortages and limitations on the availability of the scarce natural resource.
- (b) Sharing and compatibility of spectrum in the same or adjacent frequency bands and the same geographic areas is not always feasible. Hence, it creates a challenge to avail more or additional spectrum (for both allocation to services and licensing to users). Without additional spectrum, new services (e.g., mobile services offered through 5G technologies and beyond) cannot be deployed.
- (c) Expensive access data - the cost to communicate is not affordable.
- (d) The expansion of networks and services are not given priority in areas with lower returns on investment. This creates a connectivity divide leading to the exclusion of rural, remote, and underserved communities from critical services such as broadband access.

(e) The acquisition of spectrum bands tends to favour those with significant financial resources, to the detriment of small players, Small Medium and Micro Enterprises (SMMEs) and potential new entrants. For example, the March 2022 spectrum auction favoured big mobile operators, potentially leading to ongoing anti-competitive challenges as outlined in the ICT White Paper. These challenges result in a closed spectrum market promotes vertical integration, exclusion of SMMEs, prohibits new entrants and perpetuation of an exclusive spectrum licensing regime which promotes economic growth for a few dominant market players.

6. Purpose

(a) The primary purpose of this Spectrum Policy is to address the gaps and limitations that were identified in the ICT White Paper, which includes:

- i. **“Unclear roles and responsibilities”** between the Minister and the Authority contributing to institutional inefficiencies”,
- ii. **“Gaps in the spectrum management regime”** regarding spectrum coordination, spectrum fees, spectrum trading, sharing, spectrum re-farming and migration of services, and alignment of national universal service obligations to respond to government policy objectives,
- 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 include rural, remote and underserved areas;** and
- v. Failure to **“lower the cost of communications”**.

(b) The policy establishes a mechanism for creating a stable and predictable regulatory environment by:

- i. defining the validity period for the use of high-demand spectrum bands,
- ii. clarify rules and conditions for spectrum assignment and renewals ,
- iii. outlining the requirements for effective and efficient spectrum use,
- iv. promoting spectrum harmonisation nationally, and across borders of the country,
- v. facilitating the deployment of next-generation networks starting with 5G networks, and
- vi. providing means for the Authority to support and promote competition.

7. 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) Enabling affordable and accessible telecommunication services through its use for the maximum benefit of consumers,
- (b) Developing electronic communications network(s) which are essential infrastructure for stimulating South Africa's growth and social development,
- (c) Promoting market competition using spectrum,
- (d) Promotion of transparency and ensuring equitable and fair distribution of spectrum,
- (e) Enabling technology optimization, and
- (f) Generating moderate revenue for the government to serve the public interest.

8. Principles Guiding the Spectrum Policy

- (a) Spectrum should be made available to support the country's sovereignty, national security and public safety needs of its citizens.
- (b) South Africa's use of spectrum should be actively advanced at national and defended across international fora.
- (c) The use of spectrum must ensure maximum social, cultural and economic development benefits for all citizens.
- (d) Achieve optimum spectrum occupancy and effective frequency utilization.
- (e) Transparent allocation and assignment of spectrum.
- (f) Adopt spectrum management approaches that serve the public interest, promote SMME participation and transformation objectives, and the emergence of new entrants in the ICT sector.
- (g) Spectrum should be made available for a wide range of radiocommunication services that are in the public interest.
- (h) Minimise administrative burden and be responsive to changing technology and market demands.
- (i) Regulatory measures, where required, should be minimally intrusive, efficient, and effective.
- (j) Regulations must be open, transparent, and reasonable, 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 universal service obligations and privileges conveyed in spectrum authorizations,
- v. ensuring that appropriate interference protection measures are in place; reallocating and reassigning spectrum where appropriate, while taking into account the impact on existing services; and
- vi. applying enforcement timely, effectively, and commensurate with the risks posed by non-compliance.

9. Roles and Responsibilities of the Minister and the Authority

For the effective implementation of this spectrum policy, the current overlapping roles and responsibilities between the Minister and the Authority, including sector-specific agencies in relation to spectrum management functions, are addressed as follows:

(a) Mandate

- i. The Minister of Communications and Digital Technologies ("The Minister") representing the Government, 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 use and ensuring effective management of the spectrum resource.

- iii. The Minister represents the country at international policy functions, including the signing of international treaties and bilateral agreements. This also encompasses developing country contributions to international forums dealing with spectrum.

(b) Responsibilities of the Minister

- i. The Minister is responsible for developing and updating the National Radio Frequency Plan (NRFP) as part of the spectrum policy. The NRFP, established under the Electronic Communication Act (Act 36 of 2005 as amended), identifies spectrum allocations and provides guidance to users on the services that can be operated in each spectrum band and the conditions of operation. In line with this policy, spectrum allocation refers to the entry within the table of allocation in the NRFP.
- ii. The Minister is responsible for approving the National Radio Frequency Plan, including the allocation of spectrum for security services.
- iii. The Minister is responsible for international frequency coordination and harmonization obligations of the spectrum.
- iv. The Department will consult with the Authority on matters related to regional and sub-regional spectrum planning, as well as cases involving cross-border interference, to assist the Minister in fulfilling South Africa's international, multilateral, and bilateral spectrum coordination and harmonization responsibilities.
- v. The Minister develops the country's positions, frequency allocations for radiocommunication services, and international frequency coordination for spectrum use.

(c) Responsibilities of the Authority

The Authority will assign radio frequency spectrum and issue licenses in accordance with government policy and the regulatory framework. The Authority will effectively perform its regulatory functions by controlling, monitoring, evaluating, coordinating, licensing, and auditing spectrum licenses at a national level. The Authority will be responsible for

- i. Considering and implementing the spectrum policy and policy directions issued by the Minister in line with the ECA.
- ii. Making adjustments to radio regulations and regulatory frameworks to align with the National Radio Frequency Plan, ensuring spectrum usage complies with the ECA and related legislation.
- iii. The administration, management, assignment, and authorization of spectrum, as well as the issuing of licenses, as may be applicable.
- iv. Developing national frequency coordination, planning, administration, management, and licensing of the spectrum for use.
- v. Spectrum monitoring, evaluation, and interference control within the Republic.
- vi. Conduct periodic spectrum audits and development of the country's spectrum outlook.
- vii. Maintaining a high-quality and easily accessible database of frequency spectrum assignments, excluding assignments to security services.
- viii. Advising the Minister on current and future spectrum research and development, including developing national positions and plans to advance them at regional regulatory fora.

(d) ***Sector-specific agencies' responsibilities.***

This policy recognizes that spectrum assignment and licensing are conducted in accordance with appropriate regulatory reforms including the signing of a Memorandum of Understanding between the Authority and sector-specific agencies of the State, who will in turn:

- i. Ensure accurate and well-maintained information related to spectrum assignments, licensing, and utilization; and
- ii. Maintain databases of frequencies and spectrum users in their respective industries while ensuring that their database corresponds with that of the Authority.

10. Spectrum Management Regime

- (a) The current legislative framework for managing the spectrum is over 20 years old. While there have been various reviews of regulatory frameworks and policy directions over the past two decades to advance the sector, this policy recognizes that several factors need to be considered to enable an effective spectrum management regime. These factors include rapidly evolving technologies, emerging technologies, the proliferation of new digital technologies, the evolution of electronic communications networks resulting in changing market demand and structures, globalization, localization, and an increased focus on public safety and security. The spectrum policy supports a review of the legislative framework governing the use of spectrum to respond to these changes.
- (b) The spectrum policy will continue to support the licensing of spectrum on a technology-neutral basis to ensure that South Africa and its citizens benefit from rapid technological changes, as these changes are essential for economic growth and sustainable development.

- (c) To fully benefit from rapid technological advancements, this policy recognizes the maturity and ageing of technology. It advocates for the creation and adoption of a technology retirement roadmap. This roadmap aims to ensure that the high-demand spectrum can be used to deploy newer technologies, especially in rural, remote, and underserved areas of the country. The roadmap should plan and propose the gradual phasing out and shutting down of older generation networks, such as 2G and 3G, in a coordinated and less disruptive manner.
- (d) This Spectrum Policy clarifies the roadmap to cease the utilization of spectrum for expansion and the shutdown of older next-generation networks. The policy recognizes that a spectrum license is required in addition to any services license and that the first batch of individual licenses will expire in 2028.
- (e) On expiry of the initial individual license(s) in 2028 and others afterwards, the spectrum license associated with such an individual license(s) shall expire. This does not apply to any spectrum licensed in March 2022 and later
- (f) The principle of negotiating new terms and conditions or renewing or conducting a new licensing process is not unique to the country. It is an international best practice to ensure that spectrum is used for public interest, at the appropriate economic value, and that spectrum use is efficient. Therefore, the spectrum used in line with individual licenses in (e) above shall as determined by the Authority be returned on expiry for renewal or re-negotiate new licensing terms and conditions, or implement a new licensing approach while ensuring sustainability, stability, and consideration of investments in the sector.
- (g) The deployment of alternative network infrastructure such as Wireless Local Area Network (WLAN) or Radio Local Area Network (RLAN) in particular Wi-Fi, vertical industry networks, and community networks for the provision of data and other services, in particular through SMME players and new entrants, is permitted.
- (h) Spectrum inventories and licensee databases, including a comprehensive mapping of all licensed and unlicensed spectrums, should be publicly accessible on a continuous basis.

11. Spectrum Outlook

- (a) The spectrum policy supports the development of a spectrum outlook for South Africa, through consultation with industry and interested persons in the use of spectrum. The policy recognizes that the Authority has published a “notice” of intention to conduct an inquiry into the spectrum outlook Government Gazette no. 45690, of 24 December 2021.

- (b) The spectrum outlook must be reviewed and updated every 5 years following publication of the country's first (1st) spectrum outlook. The Spectrum Outlook will provide the country with an overview of market trends that affect spectrum use. It will also inform the Government about the allocation of spectrum and advise the Authority on controlling, planning, and licensing of spectrum.

12. Spectrum Allocation

- (a) The goal of this spectrum policy is to support the allocation of frequency bands for the various radiocommunication services in the best interest of the public, government services, safety-of-life and advance government policy objectives through the use of spectrum. 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 policy recognizes that the provisions of ITU-R Radio Regulations shall enter into force at least a year after the previous World Radiocommunication Conference (WRC). It also recognizes that the outcome of the WRC has a likely effect to impact the NRFP. Thus, the NRFP published in the Gazette must be reviewed, updated, and approved after every WRC to keep it current.

13. Spectrum assignment/licensing and coordination

- (a) According to this policy, assignment or licensing of spectrum confers rights on license holders to use one or more specified frequency bands for any purpose

consistent with assignment conditions set by the Authority. Spectrum coordination impacts the Authority's daily functions and operations.

- (b) Licensing of spectrum should, where practically possible, include a hybrid spectrum licensing approach that incorporates both modern methods such as auctions and the traditional administrative assignment.
- (c) However, as a mechanism to ascertain which spectrum licensing method best suits the 'objectives of the spectrum policy', ensure public interest, and that assignment of spectrum does not entrench market dominance; this policy supports that the Authority must conduct regulatory impact assessments to inform proper decision making.
- (d) The Authority must develop procedures to coordinate spectrum usage to avoid harmful interference, including inter-band and intra-band use.
- (e) A Spectrum assignment/ license is valid for a maximum period of 20 years, however the Authority may through public consultation vary the validity period to give effect to radio regulations and in line with national priorities.
- (f) Prior to expiry of the spectrum assignment/license, a new licensing process must be undertaken. The Authority is required to notify the affected spectrum holder(s) at least twelve (12) months in advance of its plans to negotiate new spectrum license terms and conditions for renewal, reassignment, or re-award of the spectrum.
- (g) Holding of a spectrum assignment does not guarantee automatic renewal, or reassignment or re-award of the same spectrum assignment during the new process.
- (h) To support innovative approaches in spectrum licensing, the Authority must continuously review and design new spectrum licensing regimes.

14. Licensed spectrum bands

- (a) Services operating in the licensed spectrum bands provide *greater reliability and better performance*, and as such should be protected from interference of services operating in license-exempt spectrum bands.
- (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 Authority to implement spectrum sharing in a manner that preserves all the rights of the license holder, at the same time unlocking the potential of unused spectrum for sharing.
- (c) The Authority must provide protection and enforcement to the licensee and ensure that no other users transmit over the same spectrum band in the same geographic area without prior authorization.
- (d) The Authority must set the rules and regulations for new licensed spectrum such that the principle of “*use-it or sharing-it*” is allowed.

15. License-exempt spectrum bands.

- (a) The Devices or radio apparatus allowed to operate within license-exempt spectrum bands are still regulated by the Authority to prevent them from causing interference with licensed spectrum bands. These devices or radio apparatus will operate on a non-interference-non-protection basis.
- (b) The Authority must continuously set, review, and revise the rules and regulations to be met for the use of or operation in the license-exempt spectrum bands.
- (c) Devices or radio apparatus operating in license-exempt spectrum bands are not protected from interference. The 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 license-exempt spectrum bands, the Authority must continuously evaluate measures and options to enhance the effectiveness of Wi-Fi and to extend practically possible allocate more spectrum to support new Wi-Fi technologies.

16. 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, and
 - iii. To raise moderate revenue for the government.
- (d) In line with this spectrum policy, any spectrum occupancy relating to activities that are not for government purposes is considered private occupancy. The government as the owner of the spectrum, has the right to require private occupants of spectrum bands to pay spectrum fees.
- (e) The spectrum policy supports the use of the Administrative Incentive Pricing (AIP) tool to encourage efficient use of the spectrum through the application of pricing that reflects the economic value of the spectrum.
- (f) The Authority 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.

- (g) The Authority must apply appropriate measures to ensure that the use of AIP does not prohibit government service users from executing their public sector obligations, whilst preventing spectrum hoarding by public sector entities.
- (h) License-exempt spectrum users are not protected from interference and as such are not required to pay spectrum fees.
- (i) The Authority must develop and apply a framework that ensures a continuous adjustment of spectrum fees.

17. Liberalisation of spectrum use

- (a) In terms of this policy, 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 a "*service neutral basis*" or allow the spectrum licensees to decide what service to provide.

18. Hoarding of spectrum and managing unused licensed spectrum

- (a) The spectrum policy supports an effective and efficient utilization of spectrum resources and given the scarcity and value of spectrum to national development, hoarding of spectrum is not permissible.
- (b) The Authority should put measures in place that prevent hoarding of spectrum including mechanisms for the implementation of the "use it or lose it" principle.
- (c) The licensed spectrum that is unused for more than 24 months will be subjected to the use it or lose it principle unless prior arrangements are made with the Authority.

19. 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 Authority. The Authority must set standard operating rules, 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 Authority.
 - ii. Both the Authority and the Competition Commission SA should ascertain that an individual license holder acquiring spectrum in any manner prescribed in (a) above, will not have a negative impact on competition, hence impede lowering prices for services, such access to internet and have an unfair competitive advantage over smaller competitors.
 - iii. The Authority must scrutinise all transactions relating to the use or sharing of spectrum between licensees, regardless of how these transactions are portrayed or labelled. All transactions involving high demand spectrum must be investigated, irrespective of how the transactions are characterised.
- (b) The Authority must put in place a regulatory framework which clarifies spectrum trading rules between licensees and promotes approaches that prohibit monopolization of spectrum, dominance, and anti-competitive behaviours in the market.
- (c) Emerging technologies enable more efficient use of spectrum, either limiting the power to avoid interference to primary users; or tapping into spectrum that is 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 Authority.

20. 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 practically possible with the respective spectrum fees and obligations imposed accordingly.
- (c) Migration of services from one band to another or in-band is promoted for efficient use of spectrum.
- (d) To address potential costs to be likely incurred during the migration of users by licensees, the Authority will put in place transitional arrangements or measures to provide certainty for current users of spectrum to ensure minimum service interruption.

21. Spectrum in high-demand

- (a) Due to limitations in spectrum availability, and considering that in certain spectrum bands, demand for access to spectrum resources 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 Authority, may from time to time classify any other spectrum as “*high-demand spectrum*”.

22. Spectrum for community use

- (a) This spectrum policy supports the overarching principle of *“leave no one behind”*. Thus, the Authority 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, the government must implement measures to improve access to broadband infrastructure and high-speed internet for all its citizens, particularly 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 to access the internet, as an essential means for social and economic inclusion for all citizens.
- (d) Using the spectrum as a natural resource, the government can realize the principle of access *“data”* to allow end user to connect e.g. to the Internet as a basic need for all. The high cost of access *“data”* will continue to have an adverse effect on (a) above, which has the likelihood of affecting poor communities. To realize the principle of access *“data”* as a basic need, the Minister must develop 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 access *“data”* to be provisioned through the users of the spectrum for community use and the size of the free basic access *“data”* per household are to be determined by the Minister through a regulatory framework/policy directive in consultation with the Authority.

23. 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 WLAN/RLAN in particular Wi-Fi and Community Networks.

- (b) The alternative network infrastructure deployment will also be used to prevent data market dominance by a few dominant players and aid in addressing transformation objectives.

23.1 Wireless local area network (WLAN)/ radio local area network (RLAN) Deployments

- (a) With the rapid growth of WLAN/RLAN in particular Wi-Fi networks in complementing and off-loading mobile data traffic from fixed broadband, the Authority must continuously consider releasing of new spectrum for Wi-Fi services, including type approval to ensure proliferation of Wi-Fi services.
- (b) The Minister must from time to time consider incentives to stimulate investment for Wi-Fi network deployments in poor areas that facilitate access to financing and funding, and *access to spectrum* for use.

23.2 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 Non-profit organizations, SMMEs, 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 the proliferation of these networks, the Authority must develop a licensing framework for Community Networks in a manner that allows participation as prescribed in (b) above, and new entrants, enable commercial viability, and ensure geographic spread of participants. The Authority must, within one (1) year from publication of this spectrum policy, investigate and report with recommendation(s) to the Minister, a new licensing framework for community network deployment, type of services, access and licensing fees or exemptions that can be implemented to ensure proliferation and success of community networks.
- (d) The Authority must continuously identify and streamline or eliminate regulatory requirements that may impede the commercial viability and sustainability of community networks.
- (e) To aid in the development and ensure viability and sustainability of community networks; and considering the necessary technical expertise required in the deployment of these community networks, the policy supports the establishment of a community network's committee which amongst other things will develop a handbook for community networks. The community network's committee will include amongst others, the Authority, government and its related agencies, industry players, SMMEs etc.
- (f) To support the viability of community networks, the Authority must release spectrum for community use to community networks for purposes of basic data provision and facilitate community networks adoption, improve their access to financing opportunities and thus accelerate network infrastructure investment and deployment including in rural, under-serviced and remote areas.
- (g) The Authority must investigate and report with recommendation(s) to the Minister, a framework for the release of spectrum for community use and identify IMT

spectrum that can be designated for transformation objectives of community networks, including conditions for the distribution of free basic data to the determined beneficiaries, within a year (1) 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 of section 19 on '*spectrum sharing and spectrum trading*' also apply to users assigned spectrum for community use.

24. Reservation of spectrum

- (a) The Minister, in consultation with the Authority, may allocate and reserve certain spectrum for Government services for present and future use, for Public Protection & Disaster Relief (PPDR) services and for public good or community use or for responding to any national emergencies including pandemics.

24.1 Spectrum for Government Services use

- (a) Government service users of spectrum provide government services that offer significant benefits to society, including the safety of life services, and they must receive their spectrum administratively.
- (b) The Authority must continue with implementing lower spectrum fees or administrative fees for government services. The sole purpose of lower spectrum fees or administrative fees should be to pay for the administrative services rendered by the Authority.
- (c) Government spectrum users that hold spectrum must regularly report the value of their spectrum holdings to the Authority.
- (d) Within a year of gazetting this Policy, the Authority in consultation with government spectrum users, must investigate and recommend to the Minister,

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 Authority.

24.2 Spectrum for Public Protection and Disaster Relief (PPDR)

- (a) To enable the provision of a secure, reliable, resilient, and dedicated radiocommunication network, the policy supports the allocation of spectrum for both narrowband and broadband PPDR services, including the necessary quality of service required for PPDR applications.

24.3 Spectrum for use by the State Digital Infrastructure Company

- (a) The government recognizes the challenges it faces in connecting rural, underserved and remote areas of the country including government facilities. It further recognizes a market structure which perpetuates the exclusion of SMMEs, hinders new entrants and promotes the economic exclusion of a broader citizenry, but promotes a few market players.
- (b) This policy considers access to spectrum amongst the enablers to aid the government in addressing challenges in (a) above. Thus, the Authority must set aside spectrum for use by the State Digital Infrastructure Company (SDIC) to enable its objectives, strategies, regulatory and national policies of government through the fulfilment of the following imperatives:
- i. To provide the backhaul for state connectivity, support the government's responsibility to bridge the digital divide and connectivity divide through building and expansion of its network to rural, underserved, and remote areas as part of ensuring universal connectivity,

- ii. To utilize its digital infrastructure to support transformation objectives, enable participation of SMMEs in the industry on a transparent, reasonable, and favourable commercial terms as part of reducing barriers to entry to the industry, and
 - iii. To provide and preserve public interest obligations in relation to broadcasting.
- (c) The Authority will administer the spectrum for use by the SDIC in line with the policy provisions of spectrum for government use.
- (d) The provisions of spectrum management as provided for in this policy in clauses 12; 13; 16; 17 and 18 equally apply to the spectrum for use by the SDIC.

25. Spectrum to support broadcasting services.

- (a) This spectrum policy recognizes that broadcasters need to be provided with certainty of access to the spectrum to deliver broadcasting services.
- (b) The application of Clause 24.3 (b)(iii) above does not seek to change the current broadcasting spectrum allocation. The current regime of licensing broadcasting services without spectrum fees still prevails.
- (c) Given the evolution and convergence of technology that might impact broadcasting in the future, this policy supports the non-exclusivity use of spectrum bands reserved for broadcasting.

26. Universal Service Obligations

- (a) The Authority should within 12 months of gazetting of this policy, review or develop a Universal Service Obligations (USOs) regulatory framework which will ensure that the state and the society at large fully realize the intended positive outcomes from USOs given to Mobile Network Operators.

- (b) The Authority should develop or review or and continuously update a USO regulatory framework in line with the spectrum assigned and align USOs according to the new spectrum award.
- (c) The USOs must always be designed to support national objectives and initiatives aimed at facilitating the achievement of South Africa's developmental agenda.
- (d) To support government's efforts to bridge the digital divide and connectivity divide, the Authority must ensure that the process of assigning or licensing the "*high demand spectrum*" is accompanied by coverage obligations to enable rural and under-developed areas coverage/connectivity. The coverage obligations must be aimed at increasing the prospects of service providers rolling out modern broadband services or the latest next-generation technologies also in rural, under served and remote areas of the country.
- (e) The USO's regulatory framework must ensure stricter enforcement measures by the Authority and allow compliance by a licensed spectrum holder(s).

27. Structure and Coordination

- (a) Spectrum management activities in the country are performed by the government, the Authority, and sector-specific entities.
- (b) The spectrum relationship between the Authority and a sector-specific entity is governed through a Memorandum of Understanding which gives the sector-specific entity the mandate to manage spectrum band(s) in the specific sector.

28. Shutdown of Obsolete and Inefficient Networks

- (a) In line with other policies of the government, the spectrum policy recognizes that older-generation networks or technologies will not aid the government in meeting the requirements of broadband for its citizens.

- (b) The spectrum policy recognizes Section 17 above and notes how it can impede elementary technological developments such as the transfer of spectrum from an older generation network(s) to newer generation networks which are spectrum efficient and beneficial to citizens.
- (c) To promote spectrum efficiency, and utilization of the "*high-demand spectrum*" and enable service benefit to its citizens, the government through this policy supports a continuous review and shutdown of inefficient networks to free up the "*high-demand spectrum*" for utilization by newer generation network technologies that are more spectrum efficient.
- (d) To promote spectrum efficiency and enable service benefit to its citizens, the government with this policy supports efficient utilization of the "*high demand spectrum*" through continuous review and shutdown of older inefficient networks to free up "*high demand spectrum*" for use by newer generation network technologies which are more spectrum efficient.
- (e) The policy also recognizes that the ICT industry has been planning and preparing for the shutdown of the older generation networks such as 2G and 3G and that other sectors of the economy still offer services and applications which rely on and utilize these networks. However, the policy recognizes the 'opportunity cost' of not shutting down these older-generation networks. Thus, the policy proposes that an economic and regulatory impact assessment study be conducted within one (1) year from the publication of this policy, to ascertain and mitigate *any* potential *risk* to the economy and end users of such services and applications.
- (f) To ensure a smooth transition from older to newer generation networks supported by an economic and regulatory impact assessment in (e) above, a phased approach to the shutdown of older generation networks shall be considered within two (2) to three (3) years of publication of the policy.
- (g) The Minister, , will issue a policy direction for the shutdown of old next-generation networks after consultation with the Authority and industry stakeholders.

- (h) The Minister will continuously review, update, and publish a roadmap with a revised timeline for the shutdown of older-generation and inefficient networks.
- (i) In a situation where the network shutdown is not complete due to unforeseen circumstances but coincides with the expiry date(s) of individual license(s), the Authority will consult with the affected license holder(s) and further determine the best mechanism for use of the spectrum currently utilized by these older generation networks.
- (j) When re-assigning the spectrum, the relevant regulatory framework including provisions of this policy and other relevant policies and policy directions of the government will apply.

29. 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) **Annexure A** provides the roadmap towards the sunset of older-generation networks. The revision and updating of **Annexure A** of this Policy does not require a revision and republishing of the full spectrum policy.
- (c) The policy shall be reviewed at any time as determined by the Minister.

Annexure A: Roadmap towards the Sunset of Older Generation Networks

1. Context

- (a) Clause 28 of the Spectrum Policy supports the path of shutting down older generation networks such as 2G and 3G to enable the country to realize the benefits of technological changes in telecommunications and ensure efficiency in the spectrum.
- (b) This annexure sets down a roadmap for the shutdown of older-generation networks in a coordinated manner while ensuring minimal disruption to existing services.

2. Sunset of 2G and 3G Networks

The following section provides preliminary dates for the sunset of 2G and 3G Networks. The sequencing for sunsetting of 2G and 3G networks and their related dates will be determined by the Authority subject to conducting an economic and regulatory impact assessment.

- (a) The prohibition of type approval of 2G and 3G only devices – **30 September 2024.**
- (b) Prohibition of activation of 2G and 3G only devices on networks - **31 December 2024.**
- (c) Commencement for the shutdown of 2G and 3G services - **01 June 2025.**
- (d) Total shutdown of 2G and 3G networks - **31 December 2027.**

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