



Republic of Namibia
Annotated Statutes

REGULATIONS

REGULATIONS MADE IN TERMS OF

Communications Act 8 of 2009

sections 38(5), 101 and 129

**Regulations Setting out Fees for
Spectrum Licences, Certificates and Examinations**

General Notice 417 of 2020

[\(GG 7359\)](#)

came into force on 1 January 2021 (regulation 7)

These regulations were made by the Communications Regulatory Authority of Namibia.
General Notice 417/2020 repeals the previous Regulations Setting out Fees for Spectrum Licences,
Certificates and Examinations contained in General Notice 155/2017 [\(GG 6322\)](#)
with effect from 1 January 2021.

as amended by

General Notice 738 of 2023 [\(GG 8251\)](#)

came into force on date of publication: 6 November 2023

General Notice 135 of 2026 [\(GG 8856\)](#)

came into force on date of publication: 27 February 2026

ARRANGEMENT OF REGULATIONS

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ANNEXURE A (from General Notice 417/2020)

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Regulations Setting out Fees for Spectrum Licences, Certificates and Examinations

ANNEXURE A (from General Notice 738/2023)

ANNEXURE B (from General Notice 738/2023)

Definitions

1. In these Regulations, any word or expression to which a meaning is assigned in the Act, has the same meaning and -

“AM” means amplitude modulation;

“Authority” means the Communications Regulatory Authority of Namibia;

“certificate” means a certificate of proficiency referred to in section 101(3)(i) of the Act;

“DAB” is an acronym for Digital Audio Broadcasting;

“DRM” is an acronym for Digital Radio Mondiale;

“examination” means an examination referred to in section 101(10) of the Act;

“Frequency Band Plan” means the Frequency Band Plan of Namibia published under Government Gazette No. 7617, General Notice No. 448 dated 31 August 2021;

[The definition of “Frequency Band Plan” is substituted by General Notice 738/2023.]

“HF” is an acronym for high frequency, which is the ITU designation for radio waves between 3 MHz and 30 MHz;

“IMT” is an acronym for International Mobile Telecommunications, which is the generic term used by the ITU to designate broadband mobile systems;

“ITU” is an acronym for International Telecommunications Union, which is a United Nations specialised agency for information and communications technologies;

[Namibia is a party to the *Constitution and Convention of the International Telecommunication Union (ITU), 1992.*]

“licensee” means any person to whom a spectrum license has been issued in terms of the Regulations Pertaining to Spectrum Licenses;

“MHz” is an acronym for megahertz, which is the measurement used to indicate the transmission speed of electronic devices where a megahertz represents one million cycles per minute;

“non-urban area” means any location within the borders of the Republic of Namibia outside an urban area;

“Regulations Pertaining to Spectrum Licenses” means the Regulations Prescribing Procedures Regarding Application for, and Amendment, Renewal, Transfer and Cancellation of Spectrum Licenses published under General Notice No. 104 of 29 April 2019;

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[This refers to the “Regulations Prescribing Procedures Regarding Application for, and Amendment, Renewal, Transfer and Cancellation of Spectrum Licences”. These regulations were initially issued in General Notice 104/2019 (GG 6888), but they have been amended several times. The annotated version is entitled “Communications Act 8 of 2009 - Regulations 2019-104”.]

“satellite news gathering” means temporary and occasional transmission with short notice of television or sound for broadcasting purposes using portable or transportable uplink earth stations operating in the framework of a fixed satellite service;

“spectrum license” means a spectrum license conferred on a licensee in terms of the Regulations Pertaining to Spectrum Licenses;

“the Act” means the Communications Act, 2009 (Act No. 8 of 2009);

“VHF” is an acronym for very high frequency, which is the ITU designation for radio waves between 30 MHz and 300 MHz;

“UHF” is an acronym for ultrahigh frequency, which is the ITU designation for radio waves between 300 MHz and 3 GHz; and

“urban area” means any location within the area of a local authority established and declared under section 3 of the Local Authorities Act, 1992 (Act No. 23 of 1992).

Objects and application of Regulations

2. (1) The objects of these Regulations are to -

- (a) utilise spectrum fees to enforce efficient use of radio frequency spectrum through optimum occupancy thereof and implementation of more spectrally efficient equipment and services;
- (b) set spectrum fees to discourage hoarding of spectrum;
- (c) set spectrum fees by taking into account the demand for radio frequency spectrum in a given spectrum band and the impact of inflation as indicated by the annual consumer price index published by the Namibia Statistics Agency on its official website from time to time;
- (d) provide transparency in pricing of radio frequency spectrum;
- (e) introduce bandwidth-dependent spectrum licence fees by utilising formula-based pricing set out in these Regulations in respect of spectrum licences awarded for fixed services, mobile services, IMT services and fixed or mobile satellite services; and
- (f) achieve recovery of costs incurred by the Authority to execute its mandate in respect of spectrum management in terms of the Act.

(2) These regulations apply to all applicants for spectrum licenses, certificates or examinations contemplated in section 101 of the Act and licensees.

(3) These regulations do not apply to spectrum licences awarded in terms of regulation 6(1) of the Regulations Pertaining to Spectrum Licenses until the initial licence period has lapsed

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in terms of regulation 11(1)(b) of those Regulations and the Authority renewed the spectrum licence under regulation 13 of those Regulations.

General provisions

3. (1) A spectrum licence is issued and the right to utilise spectrum is conferred in accordance with the Regulations Pertaining to Spectrum Licenses.

(2) In accordance with regulations 11(1)(a) and 13(10)(a) of the Regulations Pertaining to Spectrum Licenses, a spectrum licence issued under Part 2 thereof automatically -

- (a) Expires on 31 December of the year of issue subject to subregulation 16(5) of those regulations;

[Paragraph (a) is substituted by General Notice 135/2026, which erroneously states that it is substituting paragraph (a) of subregulation 3(1) instead of subregulation 3(2); there is no paragraph (a) in subregulation 3(1). The word “expires” should not be capitalised.]

- (b) renews under regulation 13(10)(a) of those Regulations for the ensuing year upon settlement of the invoice that the Authority issued to the licensee.

(3) These Regulations prescribe the following fees payable to the Authority -

- (a) annual and other fees payable with regard to the authorisation to utilise radio frequency spectrum conferred under the spectrum licence;
- (b) fees payable for the issue of a certificate;
- (c) fees payable with regard to an examination.

(4) The Authority may, at the end of July of each calendar year adjust the fees referred to in subregulation (3) with the percentage representing the inflation rate per annum as indicated by the annual consumer price index published by the Namibia Statistics Agency on its official website from time to time.

(5) The Authority may not issue or renew a spectrum licence or a certificate, or allow a person to write an examination, unless the applicable fees as set out in these Regulations are fully paid in advance to the Authority.

(6) Where the Authority determines that radio frequency spectrum will be conferred on a competitive basis in terms of regulation 6(1) of the Regulations Pertaining to Spectrum Licenses, the spectrum fee payable is the amount to be paid by the licensee to the Authority in terms of regulation 10(1)(c) of those Regulations.

Flat fees relating to spectrum licence, certificate or examination

4. (1) The fees set out for items 1, 2, 3, 4, 5, 6 and 9 of Table 1 below are payable annually in advance and in full, and are not refundable in full or in part, regardless if a spectrum licence or the authorisation to utilise spectrum in terms of such licence pertaining to such fees -

- (a) is issued during the course of a specific calendar year; or
- (b) expires, is forfeited, lapses or is discontinued for whatever reason:

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Provided that licensees are bound to pay a minimum fee of N\$ 65.00 irrespective of the actual amount payable in terms of this subregulation.

[Regulation 4(1) is substituted by General Notice 738/2023.]

(2) A monthly fee is payable in respect of a spectrum licence for a mobile or fixed satellite news gathering station referred to item 7.4 of the Table 1 below, irrespective whether the month is a calendar month or a consecutive period of 30 days (the latter which, for purposes of this subregulation is deemed to be a month), subject thereto that -

- (a) the full monthly fee is payable per month or part thereof, regardless if radio frequency spectrum under the licence is utilised only for part of a month;
 - (b) if the licence is issued prior to the end of a calendar year and expires in the ensuing calendar year for which a higher monthly fee is payable, the licensee must pay the lower monthly fee for the duration of year in which the license is issued and pay the higher fee for the remaining months in the ensuing year; and
 - (c) a licensee desiring to continue to use radio frequency spectrum under a license due to expire must apply for renewal thereof in accordance with regulation 13 of the Regulations Pertaining to Spectrum Licenses.
- (3) (a) Unless radio frequency spectrum is conferred by means of a spectrum auction in terms of Part 3 of the Regulations Pertaining to Spectrum Licenses, fees in respect of any spectrum licence issued in relation to items 7.1 to 7.3 and 8 (excluding item 8.5) in Table 1 below are payable annually in advance and in full.
- (b) If such license is forfeited, lapses or is discontinued for whatever reason prior to its expiry in terms of the Regulations Pertaining to Spectrum Licenses, the licensee concerned may be refunded for any month during which it did not utilise radio frequency spectrum following such forfeiture, lapse, or discontinuance in terms of those Regulations.
- (c) For purposes of paragraph (a), a part of a month is regarded as a full month.

(4) The fee payable by a licensee intending to use radio frequency spectrum in accordance with item 8.5 in the Table below, is a once-off non-refundable fee as specified in item 8.5.1 or 8.5.2, as the case may be.

TABLE 1

[Table 1 is substituted by General Notice 738/2023.
Minor formatting errors are corrected without annotation.]

SPECTRUM LICENCES, CERTIFICATES AND EXAMINATIONS FEES

TYPE OF SPECTRUM LICENCES, CERTIFICATE OR EXAMINATIONS		FEES (N\$)
1. AMATEUR RADIO		
1.1	All classes of amateur radio spectrum licences	112.00
1.2	Beacon	112.00
1.3	Examination	112.00
1.4	Guest or special event spectrum licence	112.00
1.5	Repeater station	112.00

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2. AERONAUTICAL			
2.1	Aircraft station		222.00
2.2	Glider / microlight		112.00
2.3	Ground station		133.00
2.4	Navigation aids / beacons		112.00
2.5	Operator certificate radiotelephony (including duplicate)		112.00
3. MARITIME			
3.1	Beacon		112.00
3.2	Operator certificate radiotelephony (including duplicate)		112.00
3.3	Ship Station		
	3.3.1	ITU assigned frequencies	334.00
	3.3.2	Any additional VHF or HF frequencies	1,112.00
3.4	Coast Station		
	3.4.1	ITU assigned frequencies	334.00
	3.4.2	Any additional VHF or HF frequencies	1,112.00
	3.4.3	Yacht and ski-boat stations	112.00
4. LAND MOBILE SERVICE			
4.1	Private alarm station (see item 6.1 for alarm systems)		371.00
4.2	Base Mobile Station		
	4.2.1	27/29 MHz band (including CB band)	112.00
	4.2.2	VHF/UHF per simplex frequency in urban areas	222.00
	4.2.3	VHF/UHF per simplex frequency in non-urban areas	133.00
4.3	Repeater (private and exclusive)		
	4.3.1	Duplex frequency urban areas	2,448.00
	4.3.2	Duplex frequency non-urban areas	890.00
	4.3.3	Simplex frequency (Parrot repeater)	401.00
	4.3.4	Any additional simplex frequency (per frequency)	222.00
4.4	Experimental Station		
	4.4.1	Experimental station valid for 6 months	222.00
4.6 [numbered as in Gazette]		National Occupancy (Base Mobile Station)	
	4.6.1	Not shared	1,780.00
	4.6.2	Shared	222.00
5. HIGH FREQUENCY (HF) RADIO			
5.1	Fixed/mobile Station		334.00
5.2	Fixed radio station above 400Watt		2,225.00
6. RADIO COMMUNICATIONS SYSTEMS			
6.1	Alarm		
	6.1.1	Urban complexes (per control room and per frequency)	7,417.00
	6.1.2	All other areas (per control room and per frequency)	1,854.00
6.2	Load management (including telemetry)		7,417.00
6.3	Paging (one-way)		
	6.3.1	Commercial	
		6.3.1.1 Application	2,318.00

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	6.3.1.2	Per control room	11,125.00
	6.3.2	Private	
	6.3.2.1	Per control room and per frequency	222.00
6.4	Radio trunking		
	6.4.1	For a maximum of one control channel per base station	1,112.00
	6.4.2	For each additional double frequency or if only one channel is used at a base station	5,562.00
6.5	Repeater (Community/Shared)		
	6.5.1	Urban area per duplex frequency (commercial use)	5,117.00
	6.5.2	All other areas per duplex (commercial use)	2,670.00
	6.5.3	All other areas per duplex (farmers associations only)	1,112.00
7.	SATELLITE SERVICES (LAND, MOBILE, MARITIME)		
7.1	Immarsat		
	7.1.1	A terminal	3,337.00
	7.1.2	B,C and M terminal (64 kbit/s)	1,336.00
	7.1.3	D terminal (data only) RB GAN	557.00
7.2	Uplink Broadcasting Signal Distribution Fixed Satellite Earth Station		39,606.00
7.3	Mobile or fixed satellite news gathering station (per month or part thereof)		3,961.00
8.	BROADCASTING SERVICES		
8.1	Analogue FM Radio Broadcasting Transmitter		
	8.1.1	0.000 up to 100.999 Watt (ERP)	792.00
	8.1.2	101.000 up to 999.999 Watt (ERP)	1,585.00
	8.1.3	1000 Watt (ERP) and above	2,376.00
8.2	Digital Terrestrial Television Broadcasting Transmitter		
	8.2.1	0.000 up to 100.999 Watt (ERP)	8,635.00
	8.2.2	101.000 up to 999.999 Watt (ERP)	10,615.00
	8.2.3	1000 Watt (ERP) and above	13,228.00
8.3	DAB Digital Radio Broadcasting Transmitter		(12 channels per frequency)
	8.3.1	Regional	10,738.00 per transmitter
	8.3.2	National Single Frequency Network	10,738.00 per transmitter
8.4	DRM30 Digital Radio Broadcasting Transmitter		(4 channels per frequency)
	8.4.1	0.000 up to 1000 kW (ERP)	9,504.00 per transmitter
8.5	Other broadcasting services		
	8.5.1	Special event broadcast spectrum licence maximum 10 Watt (fee per day up to a maximum capped fee equal to 30 days' daily fee. If period thereafter exceeds 30 days the maximum fee shall then apply)	792.00 Maximum fee: 23,764.00
	8.5.2	Outside broadcasting vehicle links (per event irrespective of duration)	5,281.00
9.	MISCELLANEOUS		
9.1	National Security Forces		87,133.00
9.2	Namibia Defence Force		87,133.00
9.3	Competency certificate (radios above 400 Watt)		112.00

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9.4	Duplicate spectrum licences	112.00
9.5	Amendment of spectrum licences	101.00
9.6	Photocopies per A4 sheet	2.00
9.10	Radio location	950.00

If Point to Point or Point to Multipoint is less than N\$500.00, a fee of N\$500.00 will be charged inclusive of studio links for broadcasting.

Formula-based fees

5. (1) For purposes of this regulation -
 - (a) “BV” is an acronym for base value measured in Namibian Dollars per MHz and is currently set at -
 - (i) N\$ 1,100.00 for mobile services;
 - (ii) N\$ 98.00 for fixed services; and
 - (iii) N\$ 550.00 for fixed and mobile satellite services;

[The introductory phrase of subregulation (1) and paragraph (a) are substituted by General Notice 738/2023.]

- (b) BV is calculated to fully recover the Authority’s spectrum management costs in accordance with the formula:

Total expected spectrum management costs – expected revenue raised from flat spectrum fees

$$BV = \frac{\text{Total expected spectrum management costs – expected revenue raised from flat spectrum fees}}{(BWF \times FBF \times CF \times SHRF \times GEOF \times TF)}$$

- (c) “BWF” is an acronym for bandwidth factor and refers to the bandwidth indicated in MHz, which is assigned to a licensee in terms of a spectrum licence;
 - (d) “CF” is an acronym for coverage factor, which indicates the extent to which access to the radio frequency spectrum assigned to a licensee under a spectrum license is denied to other licensees;
 - (e) “FBF” is an acronym for Frequency Band Factor, which sets out the spectrum fee for 1 MHz of similar usage in different spectrum bands as contained in the Frequency Band Plan specified in Tables 2 and 3;
 - (f) “GEOF” is an acronym for geographical factor, which indicates whether radio frequency spectrum is assigned for use in an urban or non-urban area, or assigned for an area that comprises both types of area;
 - (g) “SHRF” is an acronym for sharing factor, which indicates whether radio frequency spectrum is assigned exclusively or whether it is shared with another licensee or service as allocated in the Frequency Band Plan; and
 - (h) “TF” is an acronym for the time factor, consisting of a period of 12 months.

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(2) Subject to subregulation (3), in respect of spectrum licences for which a flat fee set out in regulation 4 is not payable, an annual fee must be paid calculated in accordance with the following formulas:

- (a) for mobile services and fixed services:
 $annual\ spectrum\ fee = BWF \times FBF \times CF \times SHRF \times GEOF \times BV$; and
- (b) for fixed and mobile satellite services:
 $annual\ spectrum\ fee = BWF \times FBF \times CF \times SHRF \times GEOF \times BV$

[Paragraph (b) is substituted by General Notice 738/2023.]

(3) Notwithstanding subregulation (1), spectrum licenses awarded by means of spectrum auctions in accordance with Part 3 of the Regulations Pertaining to Spectrum Licenses are not subject to the annual fee contemplated in that subregulation, provided that if any spectrum license awarded in accordance with the aforesaid Part 3 lapses or is not renewed, and is consequently awarded in a manner other than by a spectrum auction, those annual fees apply to the licensee to whom such license is awarded.

- (4) FBF is as set out in Tables 2 and 3 below:

TABLE 2
FREQUENCY BAND FACTOR (FBF):
FIXED SERVICES (INCLUDING POINT-TO-POINT
AND POINT-TO-MULTIPOINT FIXED LINKS)

Frequency Range		FBF
From	To	
0 MHz	1350 MHz	0.5
1350 MHz	1427 MHz	0.75
1427 MHz	1675 MHz	1.5
1785 MHz	1805 MHz	1
2023 MHz	2300 MHz	1
2300 MHz	2400 MHz	1
2483.5 MHz	2500 MHz	1
2500 MHz	2690 MHz	1
3400 MHz	3600 MHz	2.5
3600 MHz	4200 MHz	1
4400 MHz	8500 MHz	0.75
10 GHz	15.35 GHz	0.75
17.7 GHz	100 GHz	0.5

TABLE 3
[Table 3 is substituted by General Notice 738/2023 and amended by General Notice 135/2026.]
FREQUENCY BAND FACTOR (FBF):
MOBILE SERVICES (Time Division Duplex and Frequency Division Duplex)

Frequency Range		FBF
From	To	
450 MHz	470 MHz	0.5

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694 MHz	790 MHz	1.5
790 MHz	862 MHz	1.5
862 MHz	960 MHz	1.5
1427 MHz	1675 MHz	0.75
1710 MHz	1785 MHz	0.75
1805 MHz	1880 MHz	0.75
1920 MHz	1980 MHz	0.75
2110 MHz	2170 MHz	0.75
2300 MHz	2400 MHz	1
2500 MHz	2690 MHz	1
3300 MHz	3600 MHz	2.25
3600 MHz	3800MHz	2.25
24.25 GHz	43.5 GHz	0.75

TABLE 7

[Table 7 is inserted by General Notice 738/2023, which directs “the insertion of Table 7 for sub-regulation 4”. However, subregulation (4) contains Table 2 and Table 3,* which is substituted by the same General Notice. Table 7 has been inserted at the end of subregulation (4), since it concerns FREQUENCY BAND FACTOR (FBF) like Tables 2-3, even though this placement is not in numerical order with respect to the other tables.]

FREQUENCY BAND FACTOR (FBF):
FIXED AND MOBILE SATELLITE SERVICES

Frequency Range	FBF
All fixed and mobile satellite spectrum bands	0.25

(5) CF is as set out in Table 4 below:

TABLE 4
COVERAGE FACTOR (CF)

	CF = 1	CF = 2	CF = 3	CF = 30
Coverage Area	Small Area Network $A \leq 5 \text{ km}^2$	Large Area Network $5 \text{ km}^2 < A \leq 600 \text{ km}^2$	Wide Area Network $600 \text{ km}^2 < A \leq 105,300 \text{ km}^2$	National network

(6) SHRF is as set out in Table 5 below:

TABLE 5
SHARING FACTOR (SHRF)

Exclusive Use	1
Shared	0.5

(7) GEOF is as set out in Table 6 below:

TABLE 6
GEOGRAPHICAL FACTOR (GEOF)

High density of population	1
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Low density of population	0.5
Mixed high/low density of population	1

- (8) (a) Unless radio frequency spectrum is conferred by means of a spectrum auction in terms of Part 3 of the Regulations Pertaining to Spectrum Licenses, spectrum fees calculated in accordance with this regulation are payable annually in advance and in full, subject thereto that if a spectrum license is forfeited, lapses or is discontinued for whatever reason prior to its expiry in terms of those Regulations, the licensee concerned may be refunded such portion of the fees the licensee paid for any period during which it did not utilise radio frequency spectrum following such forfeiture, lapse, or discontinuance

- (b) For purposes of paragraph (a), a part of the month is regarded as a full month.

6.

[Regulation 6, which contained transitional provisions, is deleted by General Notice 738/2023.]

Commencement

7. Subject to regulation 6(2) these regulations will become effective on 1 January 2021.

[The original General Notice 417/2020 contains an “ANNEXURE A” entitled
“Reply comments in respect of public comments received on Government Gazette No. 7216,
General Notice No. 187 published on 19 May 2020”

General Notice 738/2023 contains an “ANNEXURE A” entitled
“Comments received in terms of the notice of intention to make Regulations prescribing Fees for
Spectrum Licences, Certificates and Examinations in Government Gazette No. 8180, General
Notice No. 494, dated 21 August 2023” as well as an “ANNEXURE B”.

There is no direction regarding whether these Annexures are intended to form part of the regulations, or whether “ANNEXURE A” in General Notice 738/2023 was intended to be substituted for “ANNEXURE A” in General Notice 417/2020.

All of the Annexures from
both General Notices are reproduced below.]

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ANNEXURE A

[This Annexure A is contained in General Notice 417/2020.
Minor formatting errors in the table are corrected without annotation;
spelling, grammar and punctuation are reproduced as in the *Government Gazette*
without annotation.]

**REPLY COMMENTS IN RESPECT OF PUBLIC COMMENTS RECEIVED
ON GOVERNMENT GAZETTE NO. 7216, GENERAL NOTICE NO. 187
PUBLISHED ON 19 MAY 2020**

The table set out below reflects all comments received from stakeholders and the Authority's response thereto -

COMMENTS RECEIVED	RESPONSE FROM THE AUTHORITY
Paratus Telecommunications (Pty) Ltd	
Please indicate how the fees were calculated. Was a specific rate or percentage applied?	As set out in regulation 2(f), the fees are set to achieve recovery of costs incurred by the Authority to execute its mandate in respect of management in terms of the Act. As such the Authority calculated the fees as follows (taking into account that the Authority has not reviewed spectrum fees since June 2017, the fees were based on CPI increases up to 2015): (i) Flat fees for existing services as set out in regulation 4 is based on CPI for 2016, 2017, 2018 and 2019; However, after consideration of the comments at the oral hearing, the Authority capped the increase at 12%. (ii) Formulae based fees are based on the formula contained in regulation 5(4). After consideration of the oral and written comments, the base value was reduced by 23%.
Is it possible to delay or postpone the implementation of these fees to next year or as soon as we have fully recovered from the current status of emergency caused by Covid-19.	As set out in regulation 7, these regulations will become effective on 1 January 2021.
Please clarify 7.2 of Table 1. Will the spectrum be charged and paid in kbps.	Taken into consideration the comments of the licensees' spectrum for fixed and mobile satellite will be changed on formula-based fees.
Please indicate when point 7.2 has to be paid	All spectrum fees are payable on or before 31 December in advance for the forthcoming year as set out in regulation 3(2)

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What is the definition of the areas “CF” Wide Area Network? Must this be a single area, or can it be split over several patches across the country?	“CF” Wide area network comprises of a network of $600 \text{ km}^2 < A \leq 105,300 \text{ km}^2$ and may comprise of a single area or be made up of several areas which amount to the size of the network as specified and in accordance with the authorized area operation stated in the service licence e.g. Erongo region.
There are no frequencies indicated for mobile service over 3.6 GHz. Does that mean that there are no 5G networks possible for millimeter wave?	The current frequency band plan as published on 28 October 2016 does not allow for the implementation of MOBILE services above 3.6 GHz. Once the Authority has reviewed the Frequency Band Plan to ensure compliance with the Final Acts of World Radio Conference 2019 (WRC-19), the Authority will make a decision on the assignment method to be utilised for 5G spectrum as provided for in the spectrum licensing regulations. Note that the regulations under discussion only apply to spectrum assigned on a first-come-first-serve basis and not to spectrum assigned by way of auction.
ISM-Band is not clearly excluded from the cost	Although no spectrum fees are levied on licence exempt spectrum band, the Authority still incurs costs in managing the utilisation of this spectrum and enforcing adherence to technical requirements set out in the regulations. As such, the ISM-bands are not excluded from the cost of spectrum management.
Telecom Namibia Limited	
<u>Regulation 2(1) (c)</u> <i>“The objects and application of the regulation is to set spectrum fees by taking into account the demand for radio frequency spectrum in a given spectrum band and the impact of inflation as indicated by the annual consumer price index published by the Namibia Statistics Agency on its official website from time to time”</i> We submit that the proposed factors that will be considered in setting spectrum fees are too limited. There are various other factors that the Authority must consider in determining spectrum fees. This include, <i>inter alia</i> a. Anticipated management costs for the spectrum: The Authority must consider that the purpose of the fees collected from spectrum users on annual basis should be specifically geared to recover cost of spectrum management activities of the Authority, in an effort to defer expenses only and not for the purpose of generating profit from that activity. b. Promoting economic and technical efficiency: The Authority should consider	The Authority has specifically taken into account the total cost of spectrum management. The spectrum fees have also taken into account the tendency to hoard spectrum and inefficient utilisation of spectrum by licensees, and thus set fees to discourage this practice and encourage licensees to only hold the amount of spectrum necessary to provide their services. Spectrum is a finite resource and therefore it is important that the demand for certain bands of spectrum must be considered when determining the value and price of such spectrum. The Authority has taken into consideration the total cost of managing spectrum and has determined the prices and value of spectrum based on economic and technical factors.

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the impact that current and changing levels of fees will have on the viability of particular segments of the telecommunications/radio-communications sector as well as the overall economic climates of the Country. Spectrum fees set too high combined with income taxes, VAT, regulatory fees, and other charges can negatively impact growth, opportunities and attractiveness, sector evaluations and investment levels.	
<u>Regulation 3(3)(a)</u> <i>“These Regulations prescribe the following fees payable to the Authority – (a) annual and <u>other fees payable</u> (our own emphasis) with regard to the authorisation to utilise radio frequency spectrum conferred under the spectrum licence”</i> We submit that for the sake of transparency and fairness of what is payable, the Regulations must explicitly identify the <u>other fees payable</u>, as indicated in the aforesaid regulation.	Other fees payable are set out in the Table 1 under regulation 4. Point 9 titled “MISCELLANEOUS” refers.
Immarsat terminal fees as indicated in Table 1; Clause 7.1 indicate that the proposed annual, fee per terminal which is currently charged as N\$1,163.00 per terminal per annum, will increase to N\$1,425.00. This represents an increment of 18%, which in our opinion is extreme and unreasonable. While Telecom appreciates that the Authority must defer its costs for management of the spectrum, it is equally important to consider the financial impact that changing levels of fees will have on participants within segments of the telecommunications/radio-communications sector, particularly during these challenging economic times. Furthermore, it is important to understand that the determination of spectrum prices and establishment of spectrum fees are close linked to and must be informed by the economic and market conditions. Accordingly, Telecom requests the Authority to justify the 18% increment, which we maintain is extreme and unreasonable.	Administrative fees were initially set in accordance with the CPIs of 2016, 2017, 2018 and 2019 as well as the total cost of spectrum management. However, after considering the oral and written submission, the total increase was capped at 12%.
Regulation 4, Table 1, Item 7 Satellite Services (Land, Mobile, Maritime) Ad Item 7.2 We highlight that technology has changed to HTS (High Throughput Satellite) and Telecom has upgraded its satellite hub to higher throughput satellite, enabling it to provide faster internet access to end users on a cost effective basis. What is proposed by the Regulator will no longer allow these services to be cost effective, if a	The Authority has taken note of Telecom’s comment and accordingly reconsidered the proposed pricing of Item 7.2.

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satellite digital uplink is offered at 128 kbits/s at the cost of N\$ 3,959.00. Essentially to offer a customer the speed of 1 meg, we will have to pay the proposed payment (x) 8 to achieve the speed and service offered to customers as per our approved fee structure. The charges proposed are more than what we are currently charging our customers. We are assuming that the pricing and proposal was made in error without consideration of the actual current fees and consequences to end users, should this however not be the case then we note the not only creates major concerns, but also major challenges. Telecom cannot double the speed, the service or better the experience for customers without financially prejudicing customers if the proposal as it stands is upheld. The formula considered is normally the following: Price = costs <i>(which include the cost of the regulator which is now higher than the price to the customer)</i> +Profit <i>(which is no longer viable if the pricing proposed is intended to be passed on to operators).</i> We therefore request that this option be reconsidered in its entirety and we remain available for further inputs and/or queries.	
Regulation 5(a) <i>“BV” is an acronym for base value measured in Namibian Dollars per MHz and is currently set at N\$ 1,686.00 for mobile services and N\$118.00 for fixed services.”</i> Telecom appreciates the intentions of the Authority to ensure transparency within the sector as regards to the proposed regulations, however regulation 5(a) does not disclose how the base value which is set as N\$1686.00 was arrived at. Although the proposed regulations indicate the formula for BV as; $BV = \frac{\text{total expected spectrum management costs} - \text{expected revenue raised from flat spectrum fees}}{(BWF \times FBF \times CF \times SHRF \times GEOF \times TF)}$ Kindly explain and/or justify to ensure complete transparency. Telecom submits that the Authority is in a position to indicate at the very least the total expected spectrum management costs as	The base value was calculated taking into consideration that the total cost of managing spectrum over the next three years would be N\$ 92,397,268. The expected revenue from flat fees would be N\$ 47,264,881 resulting in N\$ 45,132,387 from which the base value was calculated.

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well as expected revenue raised from the flat spectrum fees as this has been one of the core functions of the Authority over the years (i.e to manage spectrum costs and raise revenue from the spectrum fees). Accordingly, for the sake of transparency, we insist that the formulae as contained in the proposed regulations contain actual values.	
<u>Regulation 5: Formula based fees:</u> In the 900 MHz band, Telecom has 10 MHz paired (905-915/950-960 MHz) for which Telecom currently pays N\$ 690 000.00 per annum. With the new envisage fees as per the formula contained in the proposed regulations, it is not clear whether this still refers to the paired bands. If the spectrum will not be paired as it is now, the charge will double to N\$ 758 700.00, which then results in an increment of 9%, which seems unreasonable considering that the spectrum charge currently is already high. In addition, we also note that in the 1800 MHz band, Telecom has 20 MHz paired (1775-1795/1870-1880 and 1765-1775/1860-1870 MHz) for which Telecom currently pays N\$1 104 000.00 per annum. With the new envisaged fees and as per the new formula ($BWF \times FBF \times CF \times SHRF \times GEO \times BV$), it is not clear whether the spectrum remains paired, although the Regulations also do not suggest otherwise, as this would be unfair in our view. However, if the spectrum will not be paired as it currently is, the charge will double to N\$ 1 517 400.00, which results in an increment of 27%. We submit that an increment of 27% is simply unsustainable for any business and accordingly, we beg for reasoning to accommodate these proposed modalities. We strongly object to the proposed fees and corresponding charges as contained in the proposed regulations, which we regard as extremely high and unreasonable to Operators such as ourselves. We are of the view that the costs/fees induced by the Authority herein will increase the costs of providing services to the consumers, and as such: especially considering that Operators are already subject to various other annual levies fees; the ripple effect of charges passing on to consumers cannot be evaded. In conclusion, Telecom appeals to CRAN to keep the current pairing of spectrum when charging spectrum fees and should, consequently, amend	As per Table 3 contained in regulation 5(5) the spectrum for 900 MHz and 1800 MHz is clearly indicated on different rows in the Table and is thus not paired. When assessing the impact of spectrum fees, it is not necessary to evaluate each spectrum band individually, but assess spectrum holdings (fixed and mobile services) in totality. The Authority has created a balance between spectrum fees to be paid for mobile and fixed services by setting separate base values. By doing, so the Authority was able to reduce spectrum fees for spectrum utilized for transmission/backhauling which has a positive effect on the overall cost of spectrum The Authority has also formulated the pricing, in line with the following objects: - i) The change in utilization of spectrum previously used for fixed services to IMT services (FDD and TDD) e.g. 2300 MHz, 2600 MHz and 3500 MHz; ii) To curb the tendency of licensees to hoard spectrum; iii) To discourage the continued use of old outdated technologies for a period of 5 years and more after the spectrum band has been allocated to a different service in and more spectrally efficient technologies in the Frequency Band Plan of Namibia; iv) To ensure that Licensees return spectrum to the Authority when no longer utilized thereby reducing their spectrum fees, which will allow the Authority to consider assignment of this spectrum to other Licensees The percentages referred to by Telecom Namibia were reduced by 23% after consideration of oral and written comments received from licensees.

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section 5(1)(a) to reflect paired or unpaired in order to clarify the charging formula.	
Multichoice Namibia	
<u>Reg.2: Object of the Regulations</u> Reg 2(1)(a) provides that one of the objects of this proposed regulations is to “utilized spectrum fees to enforce efficient use of radio frequency spectrum through optimum occupancy thereof and implementation of more spectrally efficient equipment”. We suggest that the Authority not confine the object of achieving efficient use of spectrum equipment alone, and recommend that spectrally efficient services be included as well. Spectrum efficiency is not only achieved through the deployment of equipment, but is also achieved through technologically advanced services that align with such equipment i.e. digital wireless services that accommodate several compression techniques deployed through various equipment According, we submit that reg. 2(1)(a) should be amended to include the words “and services” following the phrase “implementation of more spectrally efficient equipment”.	The Authority considered this recommendation and the change was made accordingly to add the words “and services” to regulation 2.
<u>Reg. 4(3): Refund of fees for paid forfeited, lapse or discontinued licences</u> In terms of reg. 4(3)(b), if a spectrum licences, other than a licence conferred by means of a spectrum auction, is forfeited, lapses or is discontinued prior to its expire, the licensee may be refunded for any month during which it did not utilise that radio frequency spectrum following such forfeiture, lapse, or discontinuance. It appears that this provision for a refund has been provided because reg. 4(3)(a) states that fees in respect of any spectrum licence, other than a licence conferred by a spectrum auctions, is payable annually in advance and in full. The possibility of a refund for fees paid in respect of a licence conferred by means of spectrum auction has not been provided for in the proposed regulations. While we appreciate that the terms and conditions for the payment of the auction price for spectrum conferred by means of an auction is	All conditions for a spectrum conferred by spectrum auctions are set out in the Request to Bid and subsequently the Award for the Bid and licence conditions to the successful bidder. This includes payment of licence fees and consideration of refunds on forfeiture, lapsing or discontinuance as pertaining to that specific spectrum licence. The proposed regulations thus correctly do not apply to spectrum licences conferred by means of an auction. The Authority takes note of the comments made in respect of the correct referencing of paragraph (b) under regulation 4(3).

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likely to differ from bid to bid, and will be included in the Award for the Bid, reg. 10(2) of the regulations pertaining to spectrum licences provides that the spectrum licences will only be issued to the successful bidder once the auction price is paid. In other words, reg. 10(2) of the regulations pertaining to spectrum licences contemplates that fees for spectrum licences conferred by means of an auction are paid in advance.

Accordingly, we submit that the provision for a refund following a forfeiture, lapse, or discontinuation of a spectrum licence should be extended to include spectrum conferred by means of an auction.

In addition, we note that the reference to “paragraph (a)” in reg. 4(3)(c) should in fact read “paragraph (b)”.

Para 8.2 of Table 1: Fees payable for spectrum utilised for broadcasting services

Para 8.2 of Table 1 of the proposed regulations prescribes the following fees for digital terrestrial television broadcasting transmitters (“DTT spectrum fees”)

- (i) N\$ 9 251 for 0.000 to 100.999 Watt (ERP)
- (ii) N\$ 11 373 for 101.000 to 999.999 Watt (ERP)
- (iii) N\$ 14 173 for 1000 Watt (ERP) and above

This represents a 23% increase in fees from those that are prescribed in the Regulations Setting out Fees for Spectrum Licences, Certificates and Examinations, 2017.

We support the inclusion of reg 2(1)(c) of the proposed regulations which contemplates that the setting of spectrum fees must take into account the demand for spectrum and the impact of inflation. We believe that this is important and necessary to contained the fees for spectrum licences.

We do not know how the Authority arrived at the increase in fees of 23% in the DTT spectrum fees. While we are cognizant of the objectives in reg. 2(1) of the proposed regulations to, among other things, encourage the efficient use of spectrum, discourage spectrum hoarding and recover costs incurred by the Authority, that an increase of 23% is excessive and not justified.

According to the Namibia Statistics Agency, the annual inflation rate was 2.1% as at May 2020. We submit that the current demand for spectrum

The spectrum fees published in 2017 were based on CPI up to 2015. The Authority has not implemented annual increases since 2017, but kept the spectrum fees at the same level for 4 years. The proposed fees will only come into effect 1 January 2021.

Administrative fees have been set in accordance with the CPIs of 2016, 2017, 2018 and 2019 amounting to 23%, but the increase is 23% cumulatively, as well as the total cost of spectrum management. The Authority has however taken into consideration the oral and written input from licensees and capped the total increase to 12%. Spectrum fees will be adjusted annually by the CPI as published by NSA.

The migration from analogue to digital terrestrial television services did not lower the cost of spectrum management in that the Authority still has to manage spectrum in the spectrum band 174-230 MHz and 470-694 MHz now allocated to DTT television services. The Authority is thus of the opinion that the aforementioned migration has no effect that requires a reduction in spectrum fees.

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in Namibia and the current inflation rate does not warrant a 23% increase in DTT spectrum fees. Additionally, the move of broadcasters from providing analogue to digital services, has opened up a considerable portion of spectrum to be utilized by other services and reduced the Authority's cost of managing spectrum. Accordingly, we request that the Authority reconsider the percentage increase in DTT spectrum fees.	
We request that the Authority consider the impact of a flat fee for spectrum licences (as opposed to a formula based fee that is applicable to telecommunications service providers) on the incentive for broadcasters to provide services in non- urban areas with low population density in terms of the proposed regulations. Broadcasters may pay a flat fee regardless of whether their services are provided in urban or non-urban areas. Providing services in areas with low population density is costlier and it takes longer to achieve a return on investment, since the costs are spread across lesser number of subscribers than in urban areas. A flat fee regardless of whether services are provided in urban or non-urban areas potentially has the effect of discouraging broadcasters from rolling out equipment and services to non-urban areas.	The Authority is of the opinion that flat fees are appropriate for the broadcasting industry in that provision has been made for higher and lower power output. Broadcasting licensees thus have the opportunity to apply for a spectrum licence with a lower power output when it serves a smaller community e.g. community broadcasters or a spectrum licence with a higher power output to service multiple communities or a major town e.g. commercial broadcasters. Furthermore, the introduction of digital sound broadcasting allows for the use of a single frequency to broadcast up to 12 different channels thereby reducing spectrum licence cost <i>versa via</i> broadcasting one channel per frequency utilising analogue broadcasting technology
Editors' Forum of Namibia	
The Editor's forum of Namibia (EFN) speaking on behalf of its broadcast members, believes that an increase of spectrum and other regulatory fees at this stage would impact negatively on the industry. It is also our view that CRAN has existing regulatory measures at its disposal, in the current legislation, to enforce efficient use of spectrum and manage hoarding of spectrum. Any closure of or further capacity reductions at private radio or television stations would not only work against free expression and the vibrant democracy in our country, but would probably see Namibia lose its number one spot in Africa on the Reporters without Borders indexes, these ratings, among others are based on the plurist media that allowed to flourish in any given country. We wish to emphasize that since the downturn of the Namibian economy three years ago, the majority of broadcasters have had to significantly	The spectrum fees published in 2017 was based on CPI up to 2015. The Authority has not implemented annual increases, but kept the spectrum fees at the same level for 4 years. The proposed fees will only come into effect 1 January 2021. Administrative fees has been set in accordance with the CPIs of 2016,2017, 2018 and 2019 as well as the total cost of spectrum management. The fees have however been capped at 12% taking into account the oral and written submissions from stakeholders. In addition, the Authority is introducing spectrum fees for digital sound broadcasting in alignment with the publication of the frequency channelling plan for digital sound broadcasting. Not only will digital sound broadcasting provide for more efficient use of spectrum but also give the broadcasting industry the opportunity to share spectrum resources and adopt more innovative business models for digital radio <i>in lieu</i> of legacy analogue broadcasting.

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reduce their costs and look for innovative ways to deal with the declining revenues. We can only hope that the regulatory authority will do the same. Based on the above, we kindly request CRAN to shelve the proposed increase in spectrum fees and replace this with amendments that are cognizant of the economic realities of the broadcasting industry that CRAN is mandated to uphold.	
Namibian Broadcasting Corporation	
The proposed fees for the spectrum licences, certificates and examinations falls outside the current CPI which stands at 2.1 percent for the month of May 2020. Currently the corporation is paying an annual amount of N\$1,439,805, with the current proposed fee adjustment, the corporation will be paying an annual amount of N\$1,669,786, which is 16 percent more compared to the previous fees.	The spectrum fees published in 2017 was based on CPI up to 2015. The Authority has not implemented annual increases, but kept the spectrum fees at the same level for 4 years. The proposed spectrum fees will only come into effect 1 January 2021. The increase has now been capped at 12%. The spectrum fees have also taken into account the tendency to hoard spectrum and inefficient utilization of spectrum by licensees, and thus set fees to discourage this practice and encourage licensees to only hold the amount of spectrum necessary to provide their services, while at the same time also allowing the regulator to defray the cost of spectrum management
Mobile Telecommunications Limited	
<u>Ad Regulation 2 – Objects and application of Regulations</u> Although these objects read fairly, it is advisable to add “achieving economic and social development goals and spectrum users paying for actual spectrum resource usage” to the list of objects. Radio Frequency Spectrum serves and end result and it is important that the fees charged for spectrum also speak to the purpose for which the licensee would need spectrum	The Authority is of the opinion that the objects as stated already provides for efficient utilisation to ensure that licensees only utilise the minimum spectrum necessary to provide services and not hoard or use spectrum inefficiently to serve as a barrier to entry for other licensees. The formulae based fees ensures that the fees charged speaks to the purpose for which the licensee will need the spectrum e.g. fixed spectrum for fixed services will be charged as per Table 2 and mobile spectrum for mobile services will be charged as per table 3. Rollout obligations to achieve targets set for economic and social development forms part of spectrum license conditions as is thus not part of the spectrum fee regulations. The Authority thus does not accept the proposed change to regulation 2.
<u>Ad Regulation 3 – General Provisions</u> These provisions are in line with the Regulations Prescribing Procedures regarding Application for, Amendment, Renewal, Transfer and Cancellation of Spectrum Licenses, safe for a typo at Regulation 3(b) which incorrectly references	The Authority takes note of the comments submitted and the error has been corrected accordingly.

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regulation 13(1)(a). It should read regulation 13(1) instead.	
<u>Ad Regulation 4 – Flat fees relating to Spectrum Licences, Certificates or Examinations</u> Apart from the fact that ITU standards allow for formulae based fee calculations, the Authority must point out the short comings of sticking to the current spectrum fee method and substantiate the need to introduce a formulae based method, which introduction will increase the current fees quite considerably as will be detailed hereinafter by show of current spectrum fees vs proposed formula-based calculations There is no indication that the formula-based method is the singular way to reach the stated objectives.	The Authority is of the view that formula based fees provide more flexibility in that the formula provides for variation in fees when spectrum is assigned for- (i) A smaller geographical area vs national use; (ii) Exclusive use vs shared use (iii) High demand vs low demand spectrum, etc. Furthermore, it allows the Authority to ensure optimal use of spectrum and discourage utilisation of spectrum for legacy services when bands have been allocated to new services, hoarding of spectrum and geographical license sharing of spectrum. The fees to be charged will not differ irrespective of the method of calculation.
<u>Ad Table 1 – Spectrum Licences, Certificates and Examination Fees</u> The prices in table 1 under Regulation 4 principally increase by 23%. How does the authority justify this increase given that one of the objects under regulation 2 refers to the annual consumer price index published by the Namibia statistics Agency? That index currently stands at 2.1% in stark contrast ICASA increase the fees by 4.6%, in 2017, in 2018 by 5.3% and 4.7% in 2019. All increase were in line with the consumer price index. It is noted that the fee for Satellite Digital uplink per 128 kbits (VSAT spectrum) reduced to N\$ 3,595.00. Although gazetted, this fee was never invoiced to MTC. This fee should not be charged to start with as VSAT spectrum does not belong to the Authority and is instead allocated by the Satellite Operators: (i) As it stands, and because VSAT is only deployed in very remote areas of extremely low-density population, the licensees subsidize up to 80% of the end product to the customer, by paying the satellite operators. It is not revenue generating, but merely and economic development responsibility' to satisfy and insure coverage for the remote areas. (ii) With the Authority also charging for VSAT spectrum, it will simply cause a licensee to	The spectrum fees published in 2017 was based on CPI up to 2015. The Authority has not implemented annual increases, but kept the spectrum fees at the same level for 4 years. Thus in contrast with ICASA, the Authority has not increased fees for the period 2016-2019. Administrative fees have been set in accordance with the CPIs of 2016 (6.7%),2017 (6.2%),2018 (4.3%) and 2019 (3.7%) as well as the total cost of spectrum management. The fees have however been capped at 12% taking into account the oral and written submissions from stakeholders. MTC has not been charged for fixed satellite spectrum (VSAT) because MTC does not hold a spectrum license for fixed satellite. (Government Gazette 5037 and all subsequent gazette notices refers.) MTC applied for fixed satellite spectrum in 2020. The allocation of spectrum, including satellite spectrum is set out in the Frequency Band Plan of Namibia indicating which satellite service may be provided within which band as well as whether the service to be offered is on an Earth-to-space, space- to-Earth or space-to-space basis. The Authority is the only entity mandated by sections 99-101 of the Communications Act to issue spectrum licences for assignment of spectrum for use by licensees. Satellite operators have no mandate to assign spectrum for fixed satellite services in Namibia. Namibia grants permission to satellite operators to beam over Namibia as per ITU procedures. The

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cease VSAT services and for MTC that means cutting approximately 15000 customers as the cost of running the service is not commensurate of the revenue generated from those customers. (iii) It remains unclear why the Authority seeks to recover fees from a resource they do not manage. It is our understanding that Satellite spectrum is an international resource. The following is a practical example should this fee remain: a. At N\$3,959.00 per 128Kbits to CRAN 36 MHz will then cost $3959 \times 36 / 0.128 = 1,113,468.75$ per annum b. Spectrum at US\$600/Mbps to satellite operators 36 MHz translates to roughly 108 Mbps $600 \times 108 = \text{US\\$ } 59\,400/\text{month}$ which translates to about 1m NAD per month and 12m per year	Authority is mandated to manage this spectrum resource for the terrestrial segment of satellite. Licensees lease facilities from satellite operators for the space segment in that they do not operate their own satellites. Fixed satellite services comprises of a space segment and a terrestrial segment. Be that as it may , the cost of satellite will now come down by 23% due to the consideration of the input made by licensees																																								
<u>Ad regulation 5 – Formula-based fees</u> Proposed formula: A practical application of the proposed formula to existing spectrum allocated to MTC is as follows: <table><tr><td colspan="5">Annual Spectrum fee = $\text{BFW} \times \text{FBF} \times \text{CF} \times \text{SHRF} \times \text{GEOF} \times \text{BV}$</td></tr><tr><td>Spectrum</td><td>900MHz</td><td>1800MHz</td><td>2100MHz</td><td>Comments</td></tr><tr><td>BWF</td><td>18</td><td>35</td><td>20</td><td>MTC BW allocation</td></tr><tr><td>FBF</td><td>0.75</td><td>0.75</td><td>0.75</td><td>Table 3</td></tr><tr><td>CF</td><td>30</td><td>30</td><td>30</td><td>Table 4</td></tr><tr><td>SHRF</td><td>1</td><td>1</td><td>1</td><td>Table 5</td></tr><tr><td>GEOF</td><td>1</td><td>1</td><td>1</td><td>Table 6</td></tr><tr><td>BV</td><td>30.348</td><td>59,010</td><td>33,720</td><td>@1686.00</td></tr></table> Annual spectrum fee (900MHz) 12,290,940 Annual spectrum fee (1800MHz) 46,470,375 <u>Annual spectrum fee (2100MHz) 15,174,000</u> Total for RAN spectrum (new) 73,935,315 The proposed formula will thus result in an increase of 1632%. It is simply not feasible economically. An increase of 73% is equally unreasonable and cannot be justified, which percentage is obtained by using a coverage factor of 3 instead of 30 and totaling the spectrum fee at N\$7,393,531.50. Spectrum should be priced at a value commensurate to its use and potential for revenue generation. The proposed increase is untenable and cannot be justified even by the objectives set by the proposed regulation.	Annual Spectrum fee = $\text{BFW} \times \text{FBF} \times \text{CF} \times \text{SHRF} \times \text{GEOF} \times \text{BV}$					Spectrum	900MHz	1800MHz	2100MHz	Comments	BWF	18	35	20	MTC BW allocation	FBF	0.75	0.75	0.75	Table 3	CF	30	30	30	Table 4	SHRF	1	1	1	Table 5	GEOF	1	1	1	Table 6	BV	30.348	59,010	33,720	@1686.00	The Authority is of the view that MTC did not apply the formula correctly. It seems MTC is under the mistaken belief that the Authority is charging spectrum fees on a monthly basis. This is not the case. The correct application of the formula is that the annual spectrum fee for mobile services as per spectrum licence awarded to MTC will amount to N\$ 5,538,510 per annum and not N\$73,935,315 as shown in MTC's comments. The remainder of the comments by MTC are similarly based on the incorrect application of the formula. Spectrum fees for fixed services are based on the bandwidth assigned to the licensee as well as the geographical area, within which the licensee may utilize spectrum. In the case of MTC, it is assigned for national use within the borders of Namibia. MTC may also re-use the same frequencies in different geographical areas within the borders of the Republic of Namibia without incurring additional spectrum fees. Spectrum fees are thus not based on a case by case scenario of implementation carried out by the Licensee. The choice of technology and implementation thereof is at the discretion of the Licensee.
Annual Spectrum fee = $\text{BFW} \times \text{FBF} \times \text{CF} \times \text{SHRF} \times \text{GEOF} \times \text{BV}$																																									
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BV	30.348	59,010	33,720	@1686.00																																					

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The proposed formula for point-to—multipoint does not cover a scenario that is used by MTC currently. MTC uses this technology to connect multiple customers from a specific sector on the tower. A point-to-multipoint sector has a limitation of the number of customers it can connect. It is not about the coverage, but about the capacity it has.	
<u>Ad table 4 – Coverage Factor</u> Kindly advise what informed the Authority’s decision on a factor of 30 for National network. This discrepancy between coverage factor 3 and coverage factor 30 is rather great, which has significant cost impact on a dominant operator.	The coverage factor is not based on classification of a licensee as being dominant. The coverage area refers to the geographical area within which a licensee may provide services utilising the assigned spectrum. Spectrum assigned on a national basis thus authorises a licensee to provide services anywhere within the borders of the Republic of Namibia, with no restriction on the number of customers from which it generates revenue, whilst spectrum assigned within a specific geographical area e.g. between 5km² and 600 km² authorised the licensee to provide service only within that specific area e.g. a community network.
<u>Ad table 5 – Sharing Factor</u> In the absence of express definitions for the words- “exclusive” and “shared”, one is left to use their normal meaning. It is not certain what the Authority’s intention is with the term “sharing” as it could include shared roaming or MVNO. Clarity is required in this regard.	The Authority’s definition of the words ‘exclusive’ and ‘shared’ is based on the Oxford Dictionary. For clarity in as far as the words applies to spectrum use- (i) Exclusive” means that the spectrum license is award for the <u>sole use</u> of a single licensee within the geographical area set out in the spectrum licence. as in the case of MTC. (ii) Shared” means the specific frequencies is awarded to more than one licensee albeit in different geographical areas or tiered licensing of spectrum allowing for use of different services in the same spectrum band as set out in the frequency band plan National roaming and MVNO’s have no bearing on spectrum regulations but is addressed in the Authority’s infrastructure sharing regulations in that both constitutes forms of active infrastructure sharing.

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ANNEXURE A

[This Annexure A is contained in General Notice 738/2023.
Minor formatting errors in the table are corrected without annotation;
grammar and punctuation are reproduced as in the *Government Gazette* without annotation.]

Comments received in terms of the notice of intention to make Regulations prescribing Fees for Spectrum Licences, Certificates and Examinations in Government Gazette No. 8180, General Notice No. 494, dated 21 August 2023.

Operator Comments	Authority Response
Paratus Telecommunications (Pty) Ltd	
1. Paratus Telecommunications welcomes the decrease in the base vale for fixed and mobile satellite services from N\$ 5,844 to N\$ 650. 2. Paratus did the calculation based on the new formula and the updated figures and still comes to the conclusion that it is economically unfeasible to provide satellite services in remote areas in Namibia. 3. Paratus would therefore be interested in seeing how the calculations are done by the Authority. 4. There are a few drafting errors that need to addressed.	The Authority changed the previous formula to the new formula to allow for geographic use of VSAT spectrum that was not previously possible. This would allow for lower spectrum fees since operators will be able to share spectrum and use spectrum only in rural areas. It became apparent that the bandwidth factor was erroneously omitted from the draft regulations. This factor will be 0.25. Kindly see some calculation below, which demonstrate the reduction after the 0.25 factor has been considered. The Authority reviewed the regulations to correct all drafting errors.
Mobile Telecommunications Limited	
1. MTC notes the amendments to the Spectrum Fees Regulations and welcomes the intention of the amendments 2. The proposed amendment to the satellite formula results in an increase 40%. 3. MTC refers to the amendment of the Frequency Band Factor (FBF) for spectrum in the 694 MHz to 960 MHz and 3300 MHz to 3600 MHz range from 0.5 to 2.25. This amendment results in an increase of triple the fees, despite the reduction of the base value from N\$ 1 607 to N\$ 1 210. 4. MTC acknowledges that the Regulator has relied on the Guidelines for the review of spectrum pricing methodologies and the preparation of spectrum fee schedules as published by the International Telecommunications Union (ITU), these guidelines also require the consideration of issues with setting spectrum prices. The	The bandwidth factor was erroneously omitted from the draft regulations. This factor will be 0.25. Once the 0.25 factor has been considered, the formula will indeed result in a reduction of the satellite fees. As per calculation below: MTC Satellite: Formula for fixed and mobile satellite = $BV \times FBF \times CF \times SHRF \times GEOF \times BW$ $5 \times 0.25 \times 30 \times 1 \times 1 \times 550 = 20,625.00 \text{ NAD}$ as opposed to the current N\$ 29 220.00. The fees for the 900MHz spectrum band will increase to ensure that the scarcity and demand for the band is reflected. This is required to ensure efficient use of the spectrum and avoid the hoarding of excessive spectrum resources which are limited. The 3300 MHz to 3600Mhz band will be offered on auction and there the FBF will only be utilised to determine the auction input value and the fees from year 2 onward.

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Regulator has an obligation to consider the fiscal context; relevant principles and objectives for certain types of spectrum fees; funding regulator operations; demand and supply for spectrum; technological change; type and duration of the spectrum authorization and renewal options. 5. In considering these factors it is important to note that "Spectrum fees set too high combined with income taxes, VAT, excise, regulatory fees, and other charges can negatively impact growth opportunities and attractiveness, sector valuations, investment levels, and compliance with authorisations."2 The Regulator's document primarily focuses on the Regulator's administrative/ operational costs, no consideration is visible on the impact the amendment will have on the industry and the end consumer. 6. Recent research has found that high spectrum prices can have a causal effect in reducing the coverage and quality of mobile services in both developing and developed markets. This is because spectrum fees raise the average cost of mobile services, reducing longterm returns on investment and weakening incentives to expand and upgrade mobile networks, negatively affecting coverage and network speeds for consumers. 7. Across countries in Africa, we find that Morocco and Tunisia have lower spectrum prices for coverage spectrum and relatively higher coverage, and have among the fastest networks on the continent. Meanwhile, Mauritania, Niger and Sao Tome and Principe have some of the highest spectrum prices, and as a result have lower coverage levels and slower download speeds 8. The formula based charging is a common industry practice, however, the countries utilizing the formula do not have a frequency band factor of higher than 1 to 1.5. Some countries have a congestion factor for each frequency band and a separate high demand measurement like Eswatini. Their value demand is depended on the amount of spectrum left in the band. The Regulator should advise how the 2.25 frequency band factor was determined.	The Authority has done some extensive modelling to determine the lowest impact on telecommunications licensees in the mobile bands and other bands. The FBF was reduced to 1.5, as recommended by MTC, The base fees was further reduced to N\$ 1,100. This would result in a decrease of 18% in mobile spectrum fees and a total overall decrease of 17% in spectrum fees which would reduce the negative impact on MTC's expenses and financials overall. The new spectrum bands also allow for more coverage and therefore customers and usage, as well as QoS, will increase. Higher amounts of spectrum and lower spectrum prices are strongly linked to higher population coverage, download speeds and adoption. The Authority is committed to offer more spectrum to licensees to enable increased coverage, speed and adoption but the prices have to reflect the value of the spectrum in question. Morocco and Tunisia cannot be compared to Namibia. Both countries have very mature telecommunications markets compared to Namibia. These two countries also do not have the same jurisdiction and frameworks as Namibia. Fees in Namibia are cost based and other services are not used to cross subsidise spectrum management. There are also no fees received or paid to treasury. This differs from countries in the region and therefore Namibia currently has the lowest fees in the SADC region for mobile services. The FBF reflects the characteristics of the Namibian market which also differs from other markets in terms of maturity, demography, typography, and jurisdiction. The 1.5 refers to the scarcity of the spectrum allocated and therefore, the Authority is of the opinion that a factor of 1.5 reflects the Namibian conditions and market dynamics. The requirement for continuous spectrum blocks from 80 to 100 MHz to support newer technologies affects spectrum scarcity.
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9. It is worth noting that the countries utilizing the formula base approach have a separate formula for mobile/fixed services and satellite services, countries like Eswatini, Nigeria, Botswana, Kenya but to name a few. This is due to the fact that these services differ and so do the management of them.	The formulae utilised addresses the specific conditions in Namibia. Furthermore, the Authority is cognisance of the differences between mobile, fixed and satellite services as is evident in the separate frequency band factors applied to each of these services depending on the characteristics of such services and inclusion of a geographical factor to provide for lower formulae values in cases where rural populations are served
Calculations considering omitted factor of 0.25	
Formula for fixed and mobile satellite = $BV \times FBF \times CF \times SHRF \times GEOF \times BW$ - National licence (1000 MHz bandwidth, low and high population density) $1000.25 \times 1 \times 1 \times 30 \times 550 = 4,125,000.00 \text{ NAD}$ - National licence (1000 MHz bandwidth, low population density) $1000 \times 0.25 \times 0.5 \times 1 \times 30 \times 550 = 2,062,500.00 \text{ NAD}$ - Large geographical area (1000 MHz bandwidth, low and high population density) $1000 \times 0.25 \times 1 \times 1 \times 3 \times 550 = 412,500.00 \text{ NAD}$ The calculations indicate that licensees can choose from different options most applicable to their different business cases. If a large geographical area is chosen and not national coverage the total spectrum fees for VSAT for 1000MHz bandwidth would only be N\$ 412,500 whereas the current fees for 54 MHz bandwidth N\$ 315, 576 for national coverage. This provides licensees with flexibility in how they apply for and utilise spectrum efficiently. MTC Satellite: - Formula for fixed and mobile satellite = $BV \times FBF \times CF \times SHRF \times GEOF \times BW$ $5 \times 0.25 \times 30 \times 1 \times 1 \times 550 = 20,625.00 \text{ NAD.}$	

ANNEXURE B

**FINAL POSITION PAPER ON THE AMENDMENT TO THE REGULATIONS
SETTING OUT FEES FOR SPECTRUM LICENCES, CERTIFICATES
AND EXAMINATIONS**

[This Annexure is reproduced as it appears in the *Government Gazette*, without annotation.]

1. INTRODUCTION

The Communications Regulatory Authority of Namibia (CRAN) was tasked in terms of section 2(h) of the Communications Act, 2009 (Act No. 8 of 2009) to “stimulate the commercial development and use of the radio frequency spectrum in the best interests of Namibia”. Spectrum is a limited resource and therefore the main rationale for charging a price for spectrum, whether through upfront fees or annual charges (or both), is to promote its efficient use.

CRAN reviews spectrum fees every three to five years to ensure certainty and transparency of fees. The purpose of this paper is therefore to explain how CRAN derives spectrum fees and the principles used in doing so. The following principles are taken into consideration when spectrum fees are determined:

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- Simplicity in charges to ensure that they are easy understandable, practical and minimise collection cost;
- consider the inflationary impact by means of the CPI since 2020;
- achieve the aims of cost recovery, cost-reflectiveness, efficiency, fairness and cost consciousness; and
- The demand for, and applicant profile involved in the different spectrum licences and spectrum use.

Spectrum management includes activities such as planning spectrum utilisation, allocating and assigning spectrum licences, coordinating shared spectrum use, harmonising regional and global spectrum standards and monitoring and controlling its actual use. High-level economic, technical and social objectives (mainly related to universal access/service) associated with spectrum use have evolved with the spectrum management reform trend prevalent in the past ten years with less focus on the traditional command and control approach and greater emphasis on market-based systems. High-level policy objectives require consistency in regulatory approaches to matters such as access, competition, non-discrimination, user protection, equity and fairness in the manner spectrum is allocated and assigned to users. Today, the largest competitive enabler in the market is spectrum.

The determination of spectrum prices and establishment of spectrum fees are closely linked to economic and market conditions, technical factors such as which technologies and services are being used or deployed, the efficiency and quality of those technologies and services, and how spectrum is assigned to spectrum users.

2. COST RECOVERY

CRAN is mandated in terms of section 99 of the Act with the full scope of activities related to spectrum management. CRAN is self-funded and therefore needs to recover its operational and capital costs in respect of spectrum management based on the following aspects:

- Capital costs related to spectrum monitoring equipment.
- Operational and maintenance costs related to spectrum monitoring and enforcement of spectrum licence conditions.
- Administrative expenses such as staffing, training and development costs, costs in respect of adhering to regulatory processes and legislation, office rental, planning and implementation of spectrum allocations and assignments in adherence to ITU regulations, licensing and investigations.

CRAN started with a process to allocate the different costs to the various revenue streams utilised by CRAN to cover its costs. The previous review of spectrum fees was done in 2020.

3. INTERNATIONAL BEST PRACTICE AND TRENDS IN CHARGING SPECTRUM FEES

Spectrum management is the combination of administrative and technical procedures necessary to ensure the efficient utilisation of the radio-frequency spectrum by all radio-communication services.

The telecommunication sector, including radio-communications, is organised internationally within the framework of the International Telecommunication Union (ITU), which provides the basic framework for the global coordination and management of the radio-frequency spectrum. National spectrum management principles should reflect economic and behavioural aspects as follows:

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- Spectrum should be allocated to the highest value use or uses to ensure maximum benefits to society are realised.
- Mechanisms should be put in place to enable and encourage spectrum to move to its highest value use.
- Greater access to spectrum will be facilitated when the least cost and least restrictive approach is chosen in achieving spectrum management goals and objectives.
- To the extent possible, regulators and spectrum managers need to promote both regulatory certainty and flexibility in how spectrum is used.
- Balance should be achieved between the cost of interference and the benefits obtainable from greater spectrum utilisation.
- Fairness and objectivity require that fees are based on objective factors and all licence holders in each frequency band should be treated on an equitable basis. This would preclude, for example, different treatment of different users in each frequency band.
- Transparency requires that the basis on which fees are calculated should be made clear in a published document resulting from consultation with stakeholders and that all fees should be set based on a published schedule.
- Administrative costs will be lower if the fee schedule is simple to administer. The simplest fee schedule would be one involving a flat fee payment; however, this may not promote efficient spectrum use.
- Administrative simplicity needs to be balanced against the requirement to encourage efficiency of spectrum use if fees are set taking account of parameters such as bandwidth, frequency band or coverage.

Some additional principles such as the following could also be considered:

- Spectrum fees should be reviewed at suitable intervals to cater for changes in economic KPIs (key performance indicators) or advancement in technologies resulting in increased demand of a particular band.
- Mechanisms should be in place to avoid, detect and where necessary prevent spectrum hoarding, which will deter competition.
- A balance should be established between financial approach and other key facets such as regulatory (competition), and social (universal service).

CRAN uses a number of these to allocate spectrum including but not limited to the following:

- Administrative fees;
- Formulae based fees to promote the efficient use of spectrum; and
- Spectrum Auctions

4. COST CALCULATIONS

CRAN determines the administrative fees for spectrum every 3 to 5 years as previously mentioned. In order to determine the fees, the cost of managing spectrum was taken into consideration for the three years 2021/2022 to 2023/2024. The total budgeted cost was estimated as follows:

Table 1: Projected Budget as per 2020 Spectrum Fee Determination				
BUDGET	2021/2022	2022/2023	2023/2024	Total
Total Capex allocated to Spectrum Management	9,850,000	10,000,000	10,150,000	30,000,000
Total Opex allocated to Spectrum Management	18,681,362.08	20,701,895	23,014,011	62,397,268.08

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<i>Total Projected Cost for Spectrum</i>	28,531,362.08	30,701,894.99	33,164,010.68	92,397,267.75
<i>Total Budget for Spectrum as Approved</i>	14,933,288	27,426,875	30,349,190	72,709,353
OPEX	13,193,627	11,916,915	17,868,636	42,979,178
CAPEX	1,739,661	15,509,960	12,480,554	29,730,175

The total budgeted cost for spectrum management over the three years was therefore N\$ **92,397,267.76**. According to the Audited Financial Statements and provisional financial statements of CRAN the following was budgeted and spent on the management of spectrum.

Table 2: Actual Expenditure and Revenue on Spectrum 2021/2022 to 2022/2023			
	2021/2022	2022/2023	Total
Total Costs	19,363,370	27,050,861	46,414,231
OPEX	13,374,999	15,594,629	28,969,628
CAPEX	5,988,371	11,456,232	17,444,603
Revenue Received	31,721,847	21,496,979	53,218,826
Revenue Budgeted	26,243,421	27,293,158	53,536,579
<i>Over/Under recovery on revenue</i>	5,478,426	(5,796,179)	(317,753)
<i>Over/Under-recovery</i>	12,358,477	(5,553,882)	6,486,842
AFS 2021/2022 and provisional AFS 2022/2023			

The over-recovery in 2021/2022 was due to the litigation on the regulatory levy resulting in CRAN not spending the full capital amount as was anticipated to ensure business continuity. The budget, as was approved, was therefore also substantially less. This means that the N\$ 6.5 million over-recoveries would have to be subtracted from the next periods' projected budget. At the same time the revenue received was projected N\$ 53,536,579. The actual revenue received was N\$ 53,218,826. There was thus an under-recovery of N\$ 317,753 bringing the total over-recovery to N\$ **6,486,842**.

Table 3: Budgeted Revenue Requirement 2023/2024 to 2026/2027				
	2023/2024	2024/2025	2025/2026	Total
Total Costs	30,349,190	42,163,634	33,518,756	106,031,580
OPEX	17,868,636	14,850,242	11,382,809	44,101,687
CAPEX	12,480,554	27,313,392	22,135,947	61,929,893
<i>Over/Under-recovery</i>				(6,486,842)
<i>Total Budgeted Revenue Requirement</i>				99,544,738

The projected revenue requirement for the next three years is therefore N\$ 99,544,738. To determine the base values, the revenue received from spectrum auctions and the revenue that would be received from fixed spectrum must be subtracted for the budgeting period in order to determine the base values. The total revenue requirement therefore is N\$ 81,462,509 for the three-year period up to 2025/2026.

This therefore results in the following:

1. Fixed spectrum fees will be increased by 2.5% inflationary increase;
2. Mobile spectrum (2G, 3G and IMT) will have a new base value of N\$ 1,100.00
3. Point-to-Point will have a new base value of N\$ 98.00
4. VSAT will have a new base value of N\$ 550.00. the formulae for VSAT will change to

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Cost of spectrum management

BWx FBFx CFx SRHFx GEO x TF

This will reduce spectrum fees for VSAT significantly and allow VSAT to be utilised in rural areas for backhaul connectivity and therefore faster broadband services to unserved and under-served communities.

Table 4: Budget for 2023/2024 to 2026/2027				
	2023/2024	2024/2025	2025/2026	Total
Total Costs	30,349,190	42,163,634	33,518,756	106,031,580
OPEX	17,868,636	14,850,242	11,382,809	44,101,687
CAPEX	12,480,554	27,313,392	22,135,947	61,929,893
<i>Over/Under-recovery</i>				<i>(6,486,842)</i>
<i>Spectrum auction and fixed fees</i>	5,937,436.03	5,937,436.03	5,937,436.03	17,812,308
				81,732,430
<i>Total projected Revenue</i>	27,166,755	27,166,755	27,166,755	81,500,265
<i>Total Budgeted Revenue Requirement</i>				232,165

Over the three-year period there will be an over-recovery of N\$ 232,165 which will then be subtracted from the revenue requirement during the next spectrum fee determination.

Note: The final position of this paper has duly considered all written input made to the notice of intention to amend the regulations as published in Government Gazette No. 8180, General Notice No. 494 dated 21 August 2023, and oral submissions made at the oral hearings held on 20 September 2023 and 3 October 2023, respectively.

REFERENCES

https://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Documents/Publications/Guidelines_SpectrumFees_Final_E.pdf