



National Information and Communications Technology Authority

DRAFT

Fees and Levy Review Consultation

NICT (Radio Spectrum) Regulations, NICT (Operator Licensing) Regulations & other Miscellaneous Fees



Document Ref. XXX.2025

© Copyright of NICTA, 2025

This document may be downloaded from the NICTA website at <http://www.nicta.gov.pg> and shall not be distributed without written permission from NICTA.

DOCUMENT REVISION DETAILS

Revision	Date	Who	Details
1	Oct 2025	Panny Yokope/Gibson Tito/ H Nwana	First Draft
2			
3			
4			
5			
6			
7			
8			
9			

Table of Contents

Invitation for Comments	4
LIST OF ABBREVIATIONS & GLOSSARY.....	5
1. Overview/Executive Summary.....	7
2. Introduction - Justifications for Reviewing the Fees in the main TWO 2010 NICTA Regulations & other fees - 1 -	
3. Principles underpinning the Fees Review.....	- 4 -
4. Legal Framework.....	- 7 -
4.1 The NICT Act (2009)	- 7 -
4.2 The NICT (Operator Licensing) Regulations 2010	- 8 -
4.3 The NICT (Radio Spectrum) Regulations 2010	- 8 -
5. Proposals for Fees Revisions	- 10 -
5.1 Proposals to Revise the Schedule 1 Fees (Radio Spectrum Regulations): Apparatus licence and fixed fees	- 10 -
5.2 Proposals to Revise the Schedule 2 Fees (Radio Spectrum Regulations): Annual variable fees for Spectrum and Apparatus Licences	- 14 -
5.3 Proposals to Revise the Schedule 3 Fees (Radio Spectrum Regulations): Fees payable in respect of examinations for certificates of proficiency	- 19 -
5.4 Proposals to Revise the Schedule 4 Fees (Radio Spectrum Regulations): Other Fees	- 20 -
5.5 Proposals to Revise Section 14 Fees [Licence Fees] of the Operator Licensing Regulations	- 22 -
5.6 Proposals to Revise the Schedule 2 Fees (Operator Licensing Regulations)	27 -
A. Equal (Flat) Cost Allocation	- 28 -
B. Activity-Based Allocation (Workload/Usage Approach)	- 28 -
C. Proportional Allocation by Market or Business Size.....	- 29 -
D. Tiered or Band-Based Allocation	- 29 -
E. Summary Methodology: NICTA Operator Licensing Cost Recovery Framework Steps	- 29 -
5.7 Proposals to Revise Cabling Licence and Inspection fees	- 30 -
5.8 Proposals for Type Approval fees	- 31 -
5.9 Proposals for Numbering fees	- 32 -
5.10 Proposal to Revise Section 22 (Universal Access & Service (UAS) Levy) of the Operator Licensing Regulations	- 35 -

Appendix I – PNG Inflation and FX Trends over the last 15 years.....	- 37 -
Appendix II – Methodology: DRAFT NICTA Operator Licensing Cost Recovery Methodology, using Hybrid Tiered-Proportional Allocation Model.....	- 38 -
Appendix III – Illustration of Use of the Methodology – FOR ILLUSTRATION PURPOSES ONLY	- 40 -

Invitation for Comments

NICTA invites comments on this document. Written representations or enquires may be in sent in writing or via email directed to: feesreview@nicta.gov.pg by no later than **Thursday 5pm on 05th February 2026**.

LIST OF ABBREVIATIONS & GLOSSARY

Apparatus Licence	An apparatus licence authorises, under the <i>National Information and Communications Technology (Radio Spectrum) Regulations, 2010</i> , (NICT Radio Regulation, 2010) the use of a particular service type, in a particular frequency range and at a particular geographic location for a period of 5 years.
Applicant	Means a person or company who has submitted an Application for a radio frequency spectrum licence in a manner prescribed by the NICT Radio Regulations, 2010 as well as eligible to hold a spectrum licence under Section 170 of the National ICT Act 2009 (NICT Act).
BWA	Broadband Wireless Access
CPI	Consumer Price Index
RPI	Retail Price Index
700 MHz band	The frequencies covered by the 700 MHz band plan, being 703-803 MHz
800 MHz band	The frequencies covered by the 800 MHz band plan, being 806-894 MHz
850 MHz band	The frequency segments within the 800 MHz band currently licensed via spectrum licence for the provision of 3G and 4G services (824-849/869-894 MHz), i.e. 3GPP Band 5.
800 MHz 'expansion' band	The FDD-paired frequencies lower-adjacent to the 850 MHz band that are standardised by the 3GPP for 4G technologies (3GPP bands 26 and 27). These are 814-849/859-894 MHz or 3GPP Band 26; and 807-824/852-869 MHz or 3GPP Band 27.
900 MHz band	The frequencies covered by the 900 MHz band plan, being 890-960 MHz.
2300 MHz band	The frequencies covered by the 2300 MHz band plan, being 2300-2400 MHz
2600 MHz band	The frequencies covered by the 2500 MHz band plan, being 2500-2570 MHz
3500 MHz band	The frequencies covered by the 3500 MHz band plan, being 3400-3600 MHz
APT	Asia Pacific Telecommunity
AVSF	Annual Variable Spectrum Fee
Band plan	Either an administrative or legislative instrument that sets out the allocations of frequencies to services within a specific radiofrequency band.
ECIA	Economic, Consumer & International Affairs
ERP	Engineering & Resource Planning
FDD	Frequency Division Duplex
Guard Band	A frequency band that is either deliberately vacant or has specific operating conditions to minimise intra-band interference between the two bands on either side (analogous to a 'buffer').
IMT	International Mobile Telecommunications: International Mobile Telecommunications (IMT) encompasses IMT-2000, IMT-Advanced, IMT-2020 and defines the requirements of 3rd generation (3G), 4th generation (4G), and

	fifth generation (5G) technologies.
ITU	International Telecommunications Union
L&E	Licensing & Enforcement
LTE	Long Term Evolution—a 3GPP technology standard for wireless communications including high-speed data for mobile devices
Market Basis	Means the allocation of spectrum using any ‘relevant allocation process’ identified in Section 36(1)(b) of the NICTA Act of 2009.
NICTA	National Information and Communications Technology Authority
PPDR	Public Protection and Disaster Relief
TDD	Time Division Duplex
TVSF	Temporary Variable Spectrum Fee
WRC - 19	World Radio Conference 2019
WRC - 23	World Radio Conference 2023

1. Overview/Executive Summary

1.1 This public consultation concerns the reviewing of ALL the Schedule 1, Schedule 2, Schedule 3, and Schedule 4 Fees of the 2010 NICTA Radio Spectrum Regulations¹ as well as the Schedule 2 Fees of the 2010 NICTA (Operator Licensing) Regulations². This consultation covers proposals to revise Section 22 (Universal Access & Service (UAS) Levy) of the Operator Licensing Regulations. It also covers the review of 2010 Cabling Licence and Inspection fees, as well as proposals to revise Type Approval and Numbering Fees.

1.2 None of these fees have been reviewed since their setting in 2010, even for inflation indexation.

1.3 So, in Q2/Q3 2025, the NICTA Board gave approval for the internal NICTA L&E, ECIA and ERP Teams to proceed with the research and production of these set of new fees proposals - that would need to be comprehensively consulted upon as stipulated by Section 230 of the NICT Act³.

NICTA invites comments on this document. Written representations or enquires may be in sent in writing or via email directed to: feesreview@nicta.gov.pg by **5 pm on Thursday 05th February 2026**.

¹ [Radio Spectrum Fees - National Information & Communications Technology Authority - https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/](https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/)

² <https://www.nicta.gov.pg/downloads/download-info/operator-licensing-regulation/>

230. COMMENCEMENT OF A PUBLIC INQUIRY.

(1) Where NICTA considers that it is appropriate and practicable to hold a public inquiry under this Part into any matter relating to the performance or exercise of any of NICTA's functions and powers, NICTA may hold such an inquiry into that matter.

2. Introduction - Justifications for Reviewing the Fees in the main TWO 2010 NICTA Regulations & other fees

2.1 This Section 230(1) public consultation concerns the reviewing of ALL 4 Fees Schedules of the 2010 NICTA Radio Spectrum Regulations⁴ and the Section 14 'Operator Licence Fees' and Schedule (Schedule 2) Fees of the 2010 NICTA (Operator Licensing) Regulations⁵. This consultation covers proposals to revise Section 22 (Universal Access & Service (UAS) Levy) of the Operator Licensing Regulations. It also covers the review of 2010 Cabling Licence and Inspection fees, as well as proposals to revise Type Approval and Numbering Fees.

2.2 The consultation is being carried out under the October 2014 'Revised Guidelines on the submission of written comments to public consultations and public inquiries'⁶. These guidelines were made by NICTA under Section 218 of the Act to provide guidance to ICT licensees regarding their submission of written comments and documents to any public consultation conducted by NICTA under Section 229 of the Act.

2.3 All regulated fees by NICTA must be reviewed periodically i.e., ascertaining whether the fees in force today either (i) recover the costs of NICTA administering these regulated assets/services, or (ii) reflect the opportunity costs of owning rights to scarce regulated assets, or (iii) both the latter. Some of the justifications for the review of specific fees follow.

2.4 Spectrum pricing concerns using spectrum fees is a key tool in the efficient management of the nationally scarce resource of Electromagnetic Radio Spectrum. Any scarce resource that is not properly opportunity-cost tested tends to be inefficiently used. The same is true of radio frequency spectrum. Indeed, Section 36 of the Act refers to "Valuable State Resources" which covers, *inter alia*, numbers, spectrum, satellite orbital slots, content licenses, etc. – which need to be assigned and managed efficiently by NICTA for the benefit of PNG consumers and citizens. This involves NICTA setting and implementing fees that need to be updated over time.

2.5 The use of spectrum in the PNG is governed by the National Information and Communication Technology (NICT) Act of 2009. Section 35 of the NICT Act 2009 covers "*Licensing Fees*", and all radio spectrum users/apparatus using radio frequency spectrum in PNG are mostly subject to being licensed – hence likely to be subject to radio spectrum licensing fees or apparatus licence fees.

2.6 This means, periodically, all the fees for radio frequency spectrum bands in PNG must be reviewed for their true opportunity costs, i.e., ascertaining the opportunity costs to the next best alternative use/user of every spectrum band to ensure the current licensed user pays (at least) this opportunity cost as spectrum fee for that band.

⁴ [Radio Spectrum Fees - National Information & Communications Technology Authority - https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/](https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/)

⁵ <https://www.nicta.gov.pg/downloads/download-info/operator-licensing-regulation/>

⁶ <https://www.nicta.gov.pg/>

2.7 NICTA Licencees may operate an apparatus requiring an apparatus licence. The latter authorises the use of a particular service type, in a particular radio frequency range and at a particular geographic location for a period of years. Similarly, as with radio frequency spectrum fees, all the fees for apparatus licences in PNG must be reviewed periodically.

2.8 Schedules 1, 2, 3 and 4 of the NICT (Radio Spectrum) Regulations 2010⁷ specify the various Radio Spectrum-related fees and formulae in Papua New Guinea in force since 2010:

2.8.1 Schedule 1: Apparatus licence categories and fees covering Service Types including Fixed, Mobile, Broadcasting, Amateur, Space, Radiodetermination, Meteorological, etc.

2.8.2 Schedule 2: Annual variable spectrum fee for spectrum and apparatus licenses

2.8.3 Schedule 3: Fees payable in respect of examinations for certificates of proficiency

2.8.4 Schedule 4: Other fees

2.9 ALL the fees in these Schedules need urgent review.

2.10 Consider the Schedule 2 Annual Variable fee formula for example. A key *trigger* and justification to this set of proposals arose when NICTA formed the view that the current Spectrum Pricing formula of Schedule 2 of the Radio Spectrum Regulations 2010 is woefully out of date:

Annual Variable Spectrum Fee for Spectrum and Apparatus Licences use a formula of Annual variable fee payable = $V \times (2600 / F) \times B \times T \times L$ ⁸.

V is the Standard baseline value;

F is the Frequency;

B is the total Bandwidth in MHz;

T is the type of service licenced but specifically looking at opportunity cost;

L is for Location.

2.10.1 It is now in 2025, i.e., more than 14 years and 13 years since the establishment/promulgation of the NICT Act and the NICT Radio Spectrum Fees Regulations respectively. All the variables in Schedule 2's⁹ Annual variable fee payable formula above including V, F, T and L clearly need revising.

2.10.2 It is acknowledged that NICTA has a duty to advise the Minister to adjust the value of V. This is consistent with Schedule 2 of the Radio Spectrum Regulations which requires "*The Minister, acting on advice from NICTA, may make a determination to adjust the value of V*". **The Minister may want to consider relinquishing this role to the NICTA Board.**

⁷ [Radio Spectrum Regulations - National Information & Communications Technology Authority \(nicta.gov.pg\) - https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/](https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/)

⁸ *Ibid.*

⁹ *Ibid.*

-
- 2.10.3 Indeed, Section 6(7) of the NICTA (Radio Spectrum) Regulations 2010 states that “*in respect of the formula set out in Schedule 2, NICTA shall issue guidelines describing the rationale for, and setting the values of, Type (T) and Location (L) factors*”.
- 2.10.4 However, NICTA holds the view that reviewing the V, F, T, B and L parameters individually is *sub-optimal*. The Schedule 2 formula has clearly come under severe strain due to the emergence of usable midband and higher mmWave frequencies like 6GHz, 28GHz, 66GHz, etc.
- 2.10.5 It is clearly out-of-date and needs to be updated in these regulations. This existing formula suggests that 2600MHz was arguably the highest capacity, useable IMT/mobile/BWA spectrum band then in 2009/10. Clearly, the situation with IMT/Mobile/BWA spectrum has changed markedly since 2010, with even the midband 5925-7125MHz C-Band spectrums being highly valued, and much higher mmWave spectrums (including 26GHz, 28GHz, 38GHz, 40GHz) too – including even higher at V-band (like 57-71GHz).
- 2.10.6 For example, try pricing for large 1GHz blocks of 26GHz or V-band wherein B equals 10,000MHz. This yields a disproportionately high spectrum fee to be paid by operators.
- 2.10.7 The Schedule 2 formula clearly cannot be *sensibly and proportionately* used on these bands. **So, this consultation proposes to possibly move away from this entire formula as it is out of date and clearly no longer ‘fit-for-purpose’.**
- 2.11 All the Service types of fees of Schedule 1 of the Radio Spectrum Regulations¹⁰ clearly need revising, i.e. *Apparatus Licence Categories and Fixed Fees*.
- 2.12 Schedule 3 and Schedule 4’s¹¹ fees have not been revisited either since 2010 too, i.e. for 15 years.

2.13 None of the fees in Schedules 1, 2, 3 and 4 have been revised for inflation either since 2010 by NICTA.

- 2.14 It is relevant to also emphasise that NICTA would be *deviating* from its traditional administrative First Come First Serve (FCFS) approach to assigning some spectrum bands in PNG band designated as a High Demand Spectrum (HDS) Bands¹². This happened after NICTA concluded a [consultation](#)¹³ that it carried out through 2023 to 2025 on the assignment of some spectrums in PNG going forward.

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² HDS refers to specific radio frequency spectrum bands that are in high demand by mobile and wireless operators in the market (telecom operators). In 2023, NICTA carried out a [consultation](#) on the assignment of some spectrums in PNG going forward. It had adopted an approach that shifts away from the First Come First Serve (FCFS) to a market-based approach. In the medium to long term, implementation of the approach is expected to significantly reduce risks of inefficient use of HDS spectrums by ensuring they do not go into the wrong hands in the first place.

¹³ <https://www.nicta.gov.pg/pcn-0-58/>

-
- 2.15 So, NICTA has since adopted an approach that shifts away from the First Come First Serve (FCFS) to a market-based approach for some spectrums, namely HDS spectrums. In the medium to long term, implementation of the approach is expected to significantly reduce risks of inefficient use of HDS spectrums by ensuring they do not go into the wrong hands in the first place. *This is unquestionably the case today in PNG with key HDS spectrum in some "inefficient hands".*
- 2.16 "*Trading of Spectrum Licences*" is also already envisaged in Section 174 of the NICT Act of 2009 though the section is silent on the "market price" price of the spectrum licence, and any potential "windfall gains" on trading a high value "*Valuable State Resource*". Consider the following, can a PNG mobile operator trade its very valuable 2x5MHz of IMT 1800MHz or 2x10MHz of IMT 2100MHz without resorting to NICTA on the market valuation of the spectrum, thereby potentially raking in millions of \$USD dollars of windfall gains dues to the State of PNG? Whilst the said Operator is paying a very low administrative Annual Variable Spectrum-derived fee? This is yet another reason why more up-to-date spectrum and apparatus fees/prices is timely in PNG in 2025.
- 2.17 *Cable Licence and Inspection Fees*: these fees have also been in place since 2010, not even adjusted for inflation.
- 2.18 Similarly, there are fees in 2010 NICT Radio Spectrum Regulations^{14 15} that need reviewing and revising. Specifically, the Section 14 "*Operator Licence Fees*" and Schedule (Schedule 2) Fees of the 2010 NICT (Operator Licensing) Regulations.
- 2.19 It is, *inter alia*, for reasons like these above that NICTA is reviewing all the Schedule 1 to 4 fees of the Radio Spectrum Regulations, and the Section 14 "*Operator License Fees*" and Schedule (Schedule 2) of the 2010 NICT (Operator Licensing) Regulations – in addition to the Cabling Licence and Inspection fees, Type Approval Fees as well as Numbering Fees.
- 2.20 Lastly, this consultation makes proposals to revise Section 22 (Universal Access & Service (UAS) Levy) of the Operator Licensing Regulations.

NICTA invites comments on this document. Written representations or enquires may be in sent in writing or via email directed to: feesreview@nicta.gov.pg by **5 pm on Thursday 05th February 2026**.

3. Principles underpinning the Fees Review

- 3.1 For the reasons elaborated upon in the previous section (i.e., Section 2), NICTA commenced a significant review of the Fees specified in the four Schedules of the NICTA Radio Spectrum Regulations, the single Fee Schedule (Schedule 2) of the 2010 NICTA (Operator Licensing)

¹⁴ <https://www.nicta.gov.pg/downloads/download-info/operator-licensing-regulation/>

¹⁵ [Radio Spectrum Fees - National Information & Communications Technology Authority - https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/](https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/)

Regulations – in addition to the Cabling Licence and Inspection fees that NICTA oversees in Papua New Guinea. **This is the first time these *Schedules and series of fees will be reviewed and updated since the establishment of NICTA.***

3.2 The following best practice principles have been utilized by NICTA towards researching and generation of the proposals for this key NICTA Fees Review Consultation. These principles align with international best practices in regulatory fees setting and pricing frameworks from regulators like Ofcom (UK), ACMA (Australia) and the ITU¹⁶.

3.2.1 ***Inflation Indexation:*** Incorporating an inflation adjustment mechanism—such as annual indexation to CPI or RPI—would help maintain the real value of fees over time. This is standard practice in many jurisdictions. For example, the UK Telecoms and Media - Ofcom (UK) - has used CPI-based adjustments in its spectrum fee methodologies¹⁷ since its inception in 2003. So, fees should be periodically adjusted to reflect changes in the general price level, preserving their real economic value and ensuring consistent cost recovery over time. If fees, e.g. for spectrum, have *not* been adjusted since 2010, then inflation alone would have significantly eroded their real value. Figure A-1 in Appendix I depicts the cumulative inflation in PNG since 2009 to the end of 2024 of just under 110%. So, this means, as a result, the unadjusted 2010 NICTA fees that are still being applied in 2025 represent an approximate 110% reduction or erosion of their real values from 2010.

3.2.2 ***Cost Recovery:*** Fees should reflect the actual cost of managing and regulating the regulated assets and services: e.g., Apparatus licence categories¹⁸ (Schedule 1 of the Radio Spectrum Regulations¹⁹), spectrum licensees and licenses (Schedule 2), Fees payable in respect of examinations for certificates of proficiency (Schedule 3) and ‘Other Fees’ (Schedule 4). These four schedules are for the 2010 NICTA Radio Spectrum Regulations. This ensures that NICTA can sustainably fund its operations without overburdening users. Fees should normally cover the administrative costs that NICTA incurs in managing these regulated assets or services.

3.2.3 ***Efficient Spectrum Use:*** spectrum pricing and fees should encourage efficient use of spectrum. Higher fees for underused or hoarded spectrum can promote reallocation and reassignment to higher-value purposes, as NICTA is currently considering.

3.2.4 ***Market-Based Valuation (where feasible):*** for some spectrums, like NICTA’s designated High Demand Spectrums (HDS), demand exceeds supply. In such contexts, market-based pricing, auctions or other market-reflective pricing can help assign

¹⁶ <https://www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/Documents/Events/2018/PRW-18/Presentations/00%20Honiara%20Guidelines%20for%20the%20Review%20of%20Spectrum%20Pricing%20Methodologies%20BI%2020180904.pdf>

¹⁷ <https://www.ofcom.org.uk/siteassets/resources/documents/consultations/7959-900-1800-mhz-fees-cpi/summary/cpi.pdf?v=333095>

¹⁸ The Internal NICTA Staff and Systems costs to manage these licences

¹⁹ [Radio Spectrum Regulations - National Information & Communications Technology Authority \(nicta.gov.pg\) - https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/](https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/)

spectrum to its highest-value use and to the highest-value users (i.e., licensees). For example, Spectrum benchmarking is typical for market-based spectrum valuation. This involves using other countries' benchmark auction results or spectrum prices and adjusting them to the PNG Context.

3.2.5 ***Administrative Opportunity Cost***: for the vast majority of non-HDS spectrums, a new Annual Variable Spectrum Fee for Spectrum and Apparatus Licenses is needed.

3.2.6 ***Geographic and Service-Based Differentiation***: fees may or should consider the economic value of the area (urban vs. semi-rural vs. rural) and the type of service (e.g., commercial vs. community use), as reflected in the original NICTA guidelines²⁰. Division 3 [Radio Frequency Planning] Article 173(1) Spectrum Licenses states: "*Spectrum licenses may be issued by NICTA to authorize spectrum licensees ... to engage in regulated conduct in designated segments of spectrum in a designated geographic area*", i.e. **NICTA may license geographically and price fees as such.**

3.2.7 ***Transparency and Predictability***: the methodology and approach for calculating any regulatory fees should be clear, published, and consistently applied. These builds trust and allow stakeholders to plan long-term investments. This document strives to practice this too.

3.2.8 ***Equity and Non-Discrimination***: Similar users in similar circumstances should pay similar fees. This avoids market distortions and ensures fair competition.

3.2.9 ***Simplicity and Administrative Efficiency***: fee structures should be easy to understand and administer, minimizing compliance costs for users and enforcement costs for regulators.

3.3 **Using Multiple Best Practice Principles/Methods in order to derive Fees Proposals and Choosing**: for some of the fees' proposals for the Schedules being reviewed, NICTA has employed two or more of the above principles/methods (e.g. inflation indexation, cost recovery, benchmarking, etc.). These typically gives different numbers, and NICTA proposes which it recommends and why – or some value in between the numbers derived from the different methods.

²⁰ [Radio Spectrum Fees - National Information & Communications Technology Authority - https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/](https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/)

4. Legal Framework

Statutes and Statutory Instruments (Sis) are statements of the law itself. In PNG as in many other jurisdictions, statutes are primary or *primary legislation*, e.g. the National Information and Communication Technology Act (NICT) of 2009²¹, while Statutory Instruments ('SIs' or 'Regulations') are secondary or subordinate to the primary legislation.

PNG Spectrum and other regulations – *conforming to the NICT Act 2009* – come into force via Statutory Instruments. Following are the two most important Statutory Instruments *derived* from the NICT Act 2009 very relevant to this consultation.

1. *Statutory Instrument N° 9 (of 2010)* ²²*on National Information and Communication Technology (Operator Licensing) Regulation*: this set of regulations are the key laws that underpin all Licensing of Operators in PNG including *inter alia* types of licenses, Operator Licence fees and more.
2. *Statutory Instrument N° 10 (of 2010)* ²³*on National Information and Communication Technology (Radio Spectrum) Regulation* - this set of regulations are the key laws that underpin all Spectrum licensing in PNG including *inter alia* types, duration, renewal, trading, etc. of spectrum licenses, and more.

4.1 The NICT Act (2009)

4.1.1 Section 164 of the NICTA Act (2009) covers the following relevant to this consultation.

4.1.1.1 Section 164(a) - "*maximise, by ensuring the efficient allocation and use of the spectrum, the overall public benefit derived from using spectrum*" - this duty on "*ensuring the efficient allocation and use of spectrum...*" has rightly been interpreted in the PNG as a key basis for pricing spectrum, i.e., Spectrum Pricing – and revising spectrum fees periodically – as this consultation is doing. Spectrum pricing using spectrum fees is a key tool in the efficient management of the nationally scarce resource of Electromagnetic Spectrum – any scarce resource that is not properly opportunity-cost tested tends to be inefficiently used. In addition, the designation of HDS spectrum in PNG and their assignment using other approaches than first-come-first-serve (FCFS) as proposed in this consultation – are both aimed at ensuring the efficient use of spectrum.

4.1.1.2 Section 164(c) - "*provide a responsive and flexible approach to meeting the needs of users of the spectrum*" - this duty to "*provide a responsive and flexible approach to meeting the needs of users of the spectrum...*" also speaks clearly to Spectrum

²¹ <https://www.nicta.gov.pg/legislative/acts/>

²² <https://www.nicta.gov.pg/downloads/download-info/operator-licensing-regulation/>

²³ <https://www.nicta.gov.pg/downloads/download-info/radio-spectrum-regulation/>

Pricing. Spectrum pricing allows for a "*responsive and flexible approach*" to managing such changes in spectrum valuations over time. A market-based approach also provides for more responsiveness and flexibility in managing spectrum in PNG going forward.

- 4.1.1.3 Section 164(e) - "*provide an efficient, equitable and transparent system of charging for the use of spectrum, taking account of the value of both commercial and non-commercial use of spectrum*" - this duty and factor is more self-evident, and needs less interpretation.
- 4.1.1.4 Division 3 [Radio Frequency Planning] Article 173(1) [Spectrum Licences] of the 2009 NICT Act states: "Spectrum licences may be issued by NICTA to authorize spectrum licensees ... to engage in regulated conduct *in designated segments of spectrum in designated geographic areas*", i.e. NICTA may license geographically and price fees as such.
- 4.1.1.5 Article 173(2)(b) [Spectrum Licences] of the 2009 NICT Act states: "*Spectrum licences may be allocated by NICTA on a market basis ... (by a relevant allocation process under Section 36)*".

4.2 The NICT (Operator Licensing) Regulations 2010

- 4.2.1 The NICT (Operator Licensing) Regulation, 2010 outlines licensing procedures, fees, and rules for licensing telecommunications network service providers in PNG. Additionally, the Operator Licensing Rules, 2011 apply to *individual* network service licenses.
- 4.2.2 Pursuant to Sections 55 and 218 of the Act, NICTA has made Rules in relation to standard and special conditions of licence. They are published on NICTA's website at this location²⁴. The Rules were made in 2011 and are the subject of the broader review of licensing terms and conditions, as mentioned earlier.
- 4.2.3 Part VI (Operator Licence Fees) of the NICT (Operator Licensing) Regulations 2010 along with Schedules 1 and 2 of these regulations specify all the fees payable under existing licenses.

4.3 The NICT (Radio Spectrum) Regulations 2010

Relevant provisions from the NICT (Radio Spectrum) Regulations 2010 include²⁵:

- 4.3.1 Section 6(1) states that the fees payable in respect of a spectrum licence can (i.e., a

²⁴ <https://www.nicta.gov.pg/licensing/terms-conditions/>

²⁵ <https://www.nicta.gov.pg/downloads/download-info/radio-spectrum-regulation/>

-
- power) be issued
- 4.3.1.1 "On a market basis" and may be structured to include (i) an annual spectrum fee component to contribute to the maintenance of the spectrum allocated by the spectrum licence; and ii) a price component "set by the relevant allocation process" payable annually or in a lump sum. *This provision allows NICTA significant latitude to implement market-based spectrum fees in the PNG, particularly for high-demand IMT spectrums.*
- 4.3.1.2 "On an administrative basis" which shall be (i.e., a duty) as (i) a non-refundable application fee set out in Schedule 4 or (ii) an annual variable spectrum fee calculated abiding by Schedule 2.
- 4.3.2 Section 6(1) (a) and (b) clearly allows NICTA to determine *market-based or administrative cost-based* spectrum fees in the PNG.
- 4.3.3 Section 6(2) states that NICTA can recover "standard charges" (or fees) "*that would have been recovered by NICTA in respect of a spectrum licence if NICTA had followed its standard allocation process as set out in Subsection (1)(b)*".
- 4.3.4 Schedule 2 of the NICT (Radio Spectrum) Regulations – Annual Variable Spectrum Fee for Spectrum and Apparatus Licences uses the formula of Annual variable fee payable = $V \times (2600 / F) \times B \times T \times L$. V is the Standard baseline value; F is the Frequency; B is the total Bandwidth in MHz; T is the type of service licenced but specifically looking at opportunity cost; L is for Location. *NICTA has a duty to advise the Minister to make adjustments to the value of V, for example.*
- 4.3.5 Section 6(7) states that "*in respect of the formula set out in Schedule 2, NICTA shall issue guidelines describing the rationale for, and setting the values of, Type (T) and Location (L) factors*".
- 4.3.6 In this consultation, NICTA is currently revisiting and reviewing the entire formula in Schedule 2.
- 4.3.7 Section 6(8) states that "*the fees payable under this section shall be paid to NICTA by such means, at such times and in such a manner as NICTA may from time to time determine*". Therefore, NICTA has much latitude on the means and timing of payments of fees.

5. Proposals for Fees Revisions

The proposals in this section follow the four (4) fees Schedules (1, 2, 3 and 4) of the NICT (Radio Spectrum) Regulations²⁶ of 2010:

- a. Schedule 1: Apparatus licence categories and fees covering Service Types including Fixed, Mobile, Broadcasting, Amateur, Space, Radiodetermination, Meteorological, etc.
- b. Schedule 2: Annual variable spectrum fee for spectrum and apparatus licenses
- c. Schedule 3: Fees payable in respect of examinations for certificates of proficiency
- d. Schedule 4: Other fees

Then further proposals follow these latter ones - on the Schedule 2 the NICTA (Operator Licensing) Regulations²⁷ of 2010:

- a. Section 14: Operator Licensing Fees
- b. Schedule 2: Fees

Lastly, further:

- a. Proposals on Cabling Licence and Inspection fees.
- b. Proposals on Numbering fees.

5.1 Proposals to Revise the Schedule 1 Fees (Radio Spectrum Regulations): Apparatus licence and fixed fees

5.1.1 Table 5.1 shows NICTA proposals on revised Schedule 1 [of Radio Spectrum Regulations] fees. The revised fees in the new column(s) in the table in the table are based on EITHER

- 5.1.1.1 Inflation Indexation; OR
- 5.1.1.2 Costs recovery
- 5.1.1.3 **NICTA proposes the lower of the two where appropriate as the new set fee going forward.**
- 5.1.1.4 Going forward, NICTA proposes to inflation index adjust all fees every 2 or 3 years.

Based on preliminary internal cost analyses conducted by NICTA — particularly accounting for anticipated staffing costs within the soon-to-be-expanded Licensing Department — NICTA has concluded that inflation indexation yields the lower set of revised fees for these Schedule 1

²⁶ [Radio Spectrum Regulations - National Information & Communications Technology Authority \(nicta.gov.pg\) - https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/](https://www.nicta.gov.pg/licensing/licensing-fees/radio-spectrum-fees/)

²⁷ <https://www.nicta.gov.pg/downloads/download-info/operator-licensing-regulation/>

fees. Table 5.1 therefore presents the proposed Revisions to Schedule 1 Fees: Apparatus Licence Categories and Fixed Fees – all based on index inflation, rather than cost recovery that would have proved higher.

National Information and Communication Technology (Radio Spectrum)

SCHEDULE 1. – APPARATUS LICENCE CATEGORIES AND FIXED FEES.

Section 6.

FIXED FEES				
Service Type	Item No.	Apparatus Type	Application Fee K	Annual Fixed Apparatus Fee K
Fixed	1.	Point-to-point station (duplex)	100	1000
	2.	ISM point-to-point station (duplex)	50	500
	3.	Cellular Base Station	460	4600
	4.	Point-to-point station (simplex)	50	500
	5.	Point-to-multi-point station	110	1100
	6.	ISM point-to-multi-point station	60	600
	7.	Fixed earth station (< 2.4m dish)	95	950
	8.	Fixed earth station (> 2.4m dish)	250	2500
	9.	Satellite control(TT&C) station	250	2500
Mobile	10.	Aeronautical station	127	1266
	11.	Aircraft station	20	200
	12.	Cellular base station	460	4600
	13.	Coast station	125	1250
	14.	Limited coast station	25	250
	15.	Handphone station other than a cellular mobile access device	20	22
	16.	Land mobile station	20	60
	17.	Base station	25	245
	18.	Corporate station	70	700
	19.	Mobile earth station	30	300
	20.	Handheld earth station	20	65
	21.	Paging base station	20	100
	22.	Repeater station	20	120
	23.	Ship station	20	200
Broadcasting	24.	AM radio broadcasting transmitter station	28	275
	25.	FM radio broadcasting transmitter station	50	500
	26.	Television broadcasting transmitter station	250	2500
	27.	Narrowcasting station (sound)	23	230
	28.	Narrowcasting station (TV)	500	5000
Amateur	29.	Amateur station	20	22
Space	30.	Space station	5100	20000

FIXED FEES				
Service Type	Item No.	Apparatus Type	Application Fee K	Annual Fixed Apparatus Fee K
Radiodetermination	31.	Radiolocation station	22	220
	32.	Radionavigation station	30	300
Meteorological	33.	Meteorological station	29	290
Radio Dealer Full	34.	N/A	150	1500
Radio Dealer Limited	35.	N/A	50	500

Table 5.1 – Proposed Revisions to Schedule 1 Fees: Apparatus Licence Categories and Fixed Fees

Service Type	Item No.	Apparatus Type	Application fee (K)	Annual Fixed Apparatus Fee (K)	
Fixed	1	Point-to-point station (duplex)	210	2100	
	2	ISM point-to-point station (duplex)	105	1050	
	3	Cellular Base Station	966	9660	
	4	Point-to-point station (simplex)	105	1050	
	5	Point-to-multipoint station	231	2310	
	6	ISM point-to-multipoint station	126	1260	
	7	Fixed earth station (<2.4m dish)	200	2000	
	8	Fixed earth station (>2.4m dish)	525	5250	
	9	Satellite Control (TT&C) station	525	5250	
Mobile	10	Aeronautical station	270	2660	
	11	Aircraft station	42	420	
	12	Cellular Base station	966	9660	
	13	Coast station	263	2625	
	14	Limited coast station	53	525	
	15	Handphone station	42	47	

		other than a cellular mobile access device			
	16	Land mobile station	42	126	
	17	Base station	53	515	
	18	Corporate station	147	1470	
	19	Mobile earth station	63	630	
	20	Handheld earth station	42	137	
	21	Paging base station	42	210	
	22	Repeater station	42	252	
	23	Ship station	42	420	
Broadcasting	24	AM radio broadcasting transmitter station	60	580	
	25	FM radio broadcasting transmitter station	105	1050	
	26	Television broadcasting transmitter station	525	5250	
	27	Narrowcasting station (sound)	50	483	
	28	Narrowcasting station (TV)	1050	10500	
Amateur	29	Amateur station	42	47	
Space	30	Space station	10710	42000	
Radiodetermination	31	Radiolocation station	47	462	
	32	Radionavigation station	63	630	
Meteorological	33	Meteorological station	61	609	
Radio Dealer Full		N/A	315	3150	
Radio Dealer Limited		N/A	105	1050	

Issues for Consultation (Question 1)

Do you agree on the principles from Section 3 proposed by NICTA to update and revise these Schedule 1 fees of the NICT (Radio Spectrum) Regulations 2010? i.e. Inflation indexation and Cost recovery? Kindly justify your response.

Issues for Consultation (Question 2)

Do you agree with the new fees derived? Kindly justify your response.

Issues for Consultation (Question 3)

NICTA proposes the lower of the two where appropriate as the new set fee going forward. And going forward, NICTA proposes to inflation index adjust all fees every 2 or 3 years? Do you agree? Kindly justify your response.

5.2 Proposals to Revise the Schedule 2 Fees (Radio Spectrum Regulations): Annual variable fees for Spectrum and Apparatus Licences

5.2.1 *High Demand Spectrum (HDS) Bands Valuation.* Article 173(2)(b) [Spectrum Licences] of the 2009 NICT Act states: "*Spectrum licences may be allocated by NICTA on a market basis ... (by a relevant allocation process under Section 36)*". As per Section 6 (1) of the NICT (Radio Spectrum) Regulations 2010, NICTA proposes to set the spectrum fees of designated HDS bands "*on a market basis*" and would be structured to include (i) an annual spectrum fee component and (ii) a price component "*set by the relevant allocation process*". This regulation allows NICTA significant latitude to implement market-based spectrum fees in the PNG, particularly for high-demand IMT spectrums.

5.2.1.1 *Spectrum benchmarking adjusted for PNG contexts for already-assigned HDS Spectrums.* benchmarking involves analysing the prices paid for spectrum internationally in spectrum auctions. By normalising the data to conditions in PNG, it is possible to establish a range of potential values for each band under consideration. NICTA proposes spectrum benchmarking as the appropriate method for setting – "*on a market basis*" – the spectrum fees for designated HDS spectrum bands that have already been assigned in PNG, e.g. 700MHz, 900MHz, 1800MHz, etc. This will be set the annual spectrum fee that would be subject to *inflation indexation*.

5.2.1.2 *Spectrum benchmarking adjusted for PNG contexts for to-be-assigned HDS Spectrums.* Recall that Article 173(2)(b) Spectrum Licences states: "*Spectrum licences may be allocated by NICTA on a market basis ... (by a relevant allocation process under Section 36)*". Article 36 Valuable State Resources under 36(b) states: "*... NICTA considers that an auction, tender, commercial negotiations, or market-based allocation process...*". NICTA therefore proposes that the [RESERVE] spectrum fee component for any new assigned designated HDS band price is "*set by the relevant allocation process*", e.g. a Simple Tender, auction or another market-based allocation process. The final price for the spectrum band would be a figure that results from the

competitive market-based allocation process.

5.2.1.3 NICTA is in the process of commissioning a Spectrum Consultancy to develop a set of internationally benchmarked, economically adjusted annual licence fees for the following designated high-demand spectrum bands in PNG: **Sub-1GHz Bands:** a. 700 MHz (Band 28) b. 850 MHz (Band 5) c. 850 MHz Expansion (Band 27) d. 800 MHz (Band 20) e. 900 MHz (Band 8); **AND Mid-Bands:** f. 1800 MHz (Band 3) g. 2100 MHz (Band 1) h. 2300 MHz (Band 40) i. 2600 MHz (Band 41) j. 3500 MHz (Band 42/78)

Issues for Consultation (Question 4)

Do you agree on the principles and proposals on setting the spectrum fees for already-assigned High Demand Spectrums? Kindly justify your response.

Issues for Consultation (Question 5)

Do you agree on the principles and proposals on setting the spectrum fees for the NICTA-designated High Demand Spectrums? Kindly justify your response.

5.2.2 *Spectrum Fees for Non HDS Bands*

5.2.2.1 Recall, the current Annual Variable Spectrum Fee for Spectrum and Apparatus Licences use a formula of Annual variable fee payable = $V \times (2600 / F) \times B \times T \times L$. In Section 2 of this consultation, the limitations of the current Schedule 2 Annual Variable Spectrum Fee formula are clearly articulated.

5.2.2.2 Therefore, NICTA has researched more than ten other formulae from other countries. **NICTA proposes a hybrid from three individual formulae used in Indonesia, Nigeria and Rwanda as shown in Table 5.2**

5.2.2.3 NICTA chose these aforementioned countries from amongst similar non-HDS formulae from a dozen countries that were studied, on the basis that it addresses, at least, one of the following areas and/or criteria:

- For different spectrum bands, there is a clear band and bandwidth factor
- In different bands, it allows for different prices in different geographic areas
- In different bands, charging additional usage fees per transceiver
- In different bands, allowing for reduction in fees if there is sharing

Indonesia	<p>Spectrum fee based on bandwidth = $N \times K \times I \times C \times B$ where</p> <p><i>N</i>: is a normalization factor to stabilize government revenue from the non-tax sector. The <i>N</i>, For the period year, the value of <i>N</i> will be adjusted every year by multiplying the value of (<i>N</i>-1) by the ratio between the Consumer Price Index in December a year before (<i>N</i>-1) and two years before (<i>N</i>-2).</p> <p><i>K</i>: is an adjustment factor for the frequency band considering the economic value of the spectrum used depending on the service and benefits;</p> <p><i>I</i>: is the basic price index that is adjustable with the propagation of the spectrum (IDR/MHz). The index is settled by government regulation;</p> <p><i>C</i>: is the last total population in a service area according to the spectrum bandwidth license (kilo population);</p> <p><i>B</i>: is the bandwidth occupied by the spectrum user, including the guard band (MHz).</p>	<p>Exclusive national spectrum assignments</p> $AVSF = V * 2600 / F * B * T * L$ <p>Where <i>V</i> = 454 <i>F</i> = midpoint Frequency <i>B</i> = Total bandwidth <i>T</i> = service type <i>L</i> = geographic location</p>
-----------	---	--

<p>Nigeria</p>	<p>Commercial Spectrum Fee (AIP)</p> <p>Spectrum Fee = $(U) * (B) * (K1) * (K2)$</p> <p>Where U = Unit Price – varies according to licence region/tier</p> <p>B = Assigned bandwidth (spectrum size) MHz</p> <p>K1 = Band factor K2 = Tenure duration factor Simplex/Duplex</p> <p>MICROWAVE FREQUENCY SPECTRUM</p>	<p>Exclusive national spectrum assignments</p> <p>Compared to AVSF = $V * \frac{2600}{F} * B * T * L$</p> <p>Where V = 454 F = midpoint Frequency B = Total bandwidth T = service type L = geographic location</p>
<p>Rwanda</p>	<p>IMT Services</p> <p>Annual Fee = $RF * Band Unit Fee + \sum(N * Transmitter Unit Fee * location factor)$</p> <p>Where RF = Bands Band</p> <p>Band Unit Fee = FRW 9,020,369</p> <p>N = is the number of transmitters</p> <p>Location Factor – Urban = 1: Semi-urban = 0.5: remote = 0.4: very remote = 0.1</p>	<p>Exclusive national spectrum assignments</p> <p>AVSF = $V * \frac{2600}{F} * B * T * L$</p> <p>Where V = 454 F = midpoint Frequency B = Total bandwidth T = service type L = geographic location</p>

Table 5.2 – Proposed New Schedule 2 Formula

The Annual Spectrum Licence Fee (ASLF) has considered the different formulae and combined a hybrid formula from the common parameters used with inclusion of specific parameters that are relevant to the current market. The most parameters chosen are to be stable and fixed over time whilst an equivalent adjustment is applicable from the market condition assessment during the review period.

Proposed New Spectrum Formula

$$\text{AVSF} = \text{Unit Price} \times \text{BWF} \times \text{FREQ} \times \text{DF} \times \text{L} \times \text{IDX}$$

Formula	Parameters	Comments
$AVSF = \text{Unit Price} \times BWF \times \text{FREQ} \times DF \times L \times \text{IDX}$	Unit Price – A fixed amount expressed in Kina per 1 MHz of bandwidth per year.	standardized pricing metric used in telecommunications to compare the cost of spectrum acquisitions across different frequencies, geographies, and markets (Commonly used)
	BWF – Bandwidth Factor (in MHz or thereof)	Price is proportional to the total amount of bandwidth assigned The Unit price for the high bands will be fractional to address this
	FREQ – Frequency Factor reflecting the frequency band of the Assignment/Allotment.	Accounts for the propagation characteristics of the frequency band, where higher frequencies with shorter ranges may cost less than lower frequencies with longer ranges.
	DF – Demand Factor	A multiplier that increases the fee for using a specific radio frequency band when it is in high demand
	L – Location Factor	Fees may be discounted for licenses that cover less-populated, low-density areas. (Commonly used)
	IDX - Inflation Index in percentage	fees using an inflation index typically involves adjusting base fees over time to account for inflation. This ensures that the

		regulatory body receives the same <i>real value</i> in revenue despite changes in the value of money.
--	--	---

Issues for Consultation (Question 6)

Do you agree on the principles and proposals on setting the spectrum fees for other non-HDS spectrums, replacing the current Schedule 2 Annual Variable Spectrum? Kindly justify your response.

5.3 Proposals to Revise the Schedule 3 Fees (Radio Spectrum Regulations): Fees payable in respect of examinations for certificates of proficiency

5.3.1 Table 5.3 shows NICTA proposals on revised *Schedule 3* [of Radio Spectrum Regulations] fees. The revised fees in the new column(s) in the table are based on EITHER:

- 5.3.1.1 Inflation Indexation; OR
- 5.3.1.2 Costs recovery
- 5.3.1.3 NICTA proposes the lower of the two where appropriate as the new set fee going forward.
- 5.3.1.4 Going forward, NICTA proposes to inflation index adjust all fees every 2 or 3 years.

Item No.	Classes of Certificate of Proficiency	Fee per subject K	Certificate Fee K
	Operator's Certificates		
1.	GMDSS	200	100
2.	MROCP	200	100
3.	Amateur	0	100
	Certificate granted without examination		
4.	Holder of international qualification	0	100
5.	Granted on NICTA discretion	0	100

Based on preliminary internal cost analyses conducted by NICTA — particularly accounting for anticipated staffing costs within the soon-to-be-expanded Licensing Department — NICTA has concluded that inflation indexation yields the lower set of revised fees for these Schedule 1

fees. Table 5.3 therefore presents the proposed Revisions to Schedule 3 Fees ((Radio Spectrum Regulations): Fees payable in respect of examinations for certificates of proficiency) – all based on index inflation, rather than cost recovery that would have proved higher.

Table 5.3 – Proposed New Schedule 3 (Radio Regs) fees

Item No.	Classes of Certificate of Proficiency	Fee per subject (K)	Certificate Fee (K)
	Operator's Certificates		
1	GMDSS	420	210
2	MROCP	420	210
3	Amateur	0	210
	Certificate granted without examination		
4	Holder of international qualification		210
5	Granted on NICTA discretion		210

Issues for Consultation (Question 7)

Do you agree on the principles and proposals on Fees payable in respect of examinations for certificates of proficiency? Kindly justify your response.

5.4 Proposals to Revise the Schedule 4 Fees (Radio Spectrum Regulations): Other Fees

5.4.1 Table 5.4 shows NICTA proposals on revised *Schedule 4* [of Radio Spectrum Regulations] fees. The revised fees in the new columns in the table are based on:

- 5.4.1.1 Inflation Indexation; and
- 5.4.1.2 Costs recovery
- 5.4.1.3 NICTA proposes the lower of the two where appropriate as the new set fee going forward.
- 5.4.1.4 Going forward, NICTA proposes to inflation index adjust all fees every 2 or 3 years.

Item No.	Item	Fee K
1.	Application fee for spectrum licence allocated on an administrative basis	5000
2.	Application to vary conditions of licence	500
3.	Application to assign or transfer of licence	50% of the relevant application fee
4.	Change of particulars of licence	200
5.	Copies or extracts from public register	K2.50 per page

Item No.	Item	Fee K
6.	Replacement of licence, certificate or permit (lost, destroyed, etc)	K25 per page
7.	Examining apparatus submitted for approval under Section 30(3)(a)	K100 K150 per hour
8.	Re-examining apparatus submitted for approval under Section 30(3)(b)	K50 K75 per hour

Based on preliminary internal cost analyses conducted by NICTA — particularly accounting for anticipated staffing costs within the soon-to-be-expanded Licensing Department — NICTA has concluded that inflation indexation yields the lower set of revised fees for these Schedule 4 fees. Table 5.4 therefore presents the proposed Revisions to Schedule 4 Fees – mostly based on index inflation, rather than cost recovery that would have proved higher.

Table 5.4 – Proposed New Schedule 4 (Radio Regs) fees

Item No.	Item	New fee (K)
1.	Application fee for spectrum license allocated on an administrative basis	10500
2.	Application to vary conditions of license	1050
3.	Application to assign or transfer of license	50% of the relevant application fee
4.	Change of particulars of license	420
5.	Copies or extracts from public register	5.00 per page
6.	Replacement of license, certificate or permit (lost, destroyed, etc)	53 per page
7.	Temporary spectrum licence	Refer below
8.	Temporary spectrum fee for Special Events	Refer below
9.	Application Fee for Interference Investigation	420
10.	Interference Investigation Fee	70% of NICTA cost

Temporary Spectrum Licence

A Temporary Variable Spectrum Fee (TVSF) is, an amount of 1/12 of the AVSF will be charged monthly. The values of parameters of the TVSF are same as defined for AVSF and

the temporary assignment is one (1) calendar month, and maximum is eleven (11) calendar months, non-renewable.

The TVSF is based on the following formula:

$$\text{TVSF} = [(\text{Unit Price} \times \text{BWF} \times \text{FREQ} \times \text{DF} \times \text{L} \times \text{IDX})/12] \times \# \text{ months}$$

*The TVSF for Special Events is only available for private users and is applicable for non-renewable maximum period of four (4) weeks.

The corresponding Fee is set according to the following table:

Table 5.4a: Special events TVSF for private users

Bandwidth	Fee (K)
0-1 MHz	Kxxx per Assignment/Allotment
> 1 MHz	Kxxx per MHz per Assignment/Allotment

Issues for Consultation (Question 8)

Do you agree on the principles and proposals on Fees payable to 'Other Fees'? Kindly justify your response.

5.5 Proposals to Revise Section 14 Fees [Licence Fees] of the Operator Licensing Regulations

5.5.1 *Operator Licence Fees Review.* Section 14 (2) of Part VI of the NICT (Operator Licensing) Regulations 2010²⁸ states: "*The annual licence fee for an operator licence shall be an amount fixed from time to time by the Minister responsible for treasury matters in respect of that licence as an amount the Minister considers to be a reasonable contribution towards NICTA's forecast expenditure as estimated in the NICTA budget*". Section 14 (1) (a) clearly states that "*the annual licence fee shall be calculated in accordance with this section*", i.e. Section 14.

5.5.2 Sections 14 (3), (4), (5) and (6) of the same regulations follow, as they are relevant to this section.

²⁸ <https://www.nicta.gov.pg/downloads/download-info/operator-licensing-regulation/>

-
- (3) In fixing annual licence fees under Subsection (2), the Minister shall have regard to –
 - (a) the principles specified in Section 35 of the Act; and
 - (b) the NICTA budget; and
 - (c) the information provided under Subsection (4) and
 - (d) such other matters as the Minister considers relevant.
 - (4) For the purposes of fixing the applicable annual licence fee payable each individual licensee shall submit to NICTA –
 - (a) within three months from the end of its financial year, its latest annual financial statements audited by a registered company auditor or in such other form as approved by NICTA; and
 - (b) such other information as NICTA may request.
 - (5) The fee to be paid for the renewal of an individual licence is the applicable application fee.
 - (6) Other fees payable to NICTA in connection with operator licences are set out in Schedule 2.

5.5.3 NICTA proposes using the above principles and steps as prescribed in Sections 14 (2) – (6).

5.5.4 A future consultation in 2026 will provide detailed new proposed fees using actual NICTA costs, following the steps outlined in Sections 14 (2) – (6).

5.5.5 NICTA would therefore be working with (and will continue to work with) the Minister on the process of setting annual licence fee for an operator licence that "*shall be an amount fixed from time to time by the Minister*" as per Section 14 (2). [This process is still ongoing].

5.5.6 Table 5.5 presents original and proposed revised changes to the table for Schedule 1 of the Operator Licensing Regulations.

TABLE A. NETWORK LICENCES			
1. Facilities rights			
A network licence is required to construct, maintain, own, operate or otherwise make available any or all of the following facilities –			
Facility	Market Segment	Duration of Licence	Type of licence
Earth stations VSATs Satellite control stations Line links Radiocommunications links Switching centres Exchange nodes Towers, masts, antennas, tunnels, ducts, pits, or poles Other (not exempt under the Act)	International	Up to 15 years	Individual
	National		
	Provincial		
	District		
	Private use	N/A	Class
2. Network services			
A network licence is required to supply any of the following network services –			
Network service	Market Segment	Duration of Licence	Type of licence
Bandwidth services Public cellular mobile services Switching services International gateway services Facilities access services Broadcasting distribution services Space services Other (not exempt under the Act)	International	Up to 15 years	Individual
	National		
	Provincial		
	District		
	Private use	N/A	Class

TABLE B. APPLICATIONS LICENCES			
An applications licence is required to supply any of the following applications services –			
Applications service	Market Segment	Duration of Licence	Type of licence
International connectivity services	International	Up to 15 years	Individual
PSTN telephony services Public switched data services Public cellular services Internet access services IP telephony services Directory services Messaging services Audiotext hosting services Public payphone services Other (not exempt under the Act)	National		Individual
	Provincial		Individual
	District		Individual
	Community service	N/A	Class

TABLE C. CONTENT LICENCES			
A content licence is required to supply any of the following content services –			
Content service	Market segment	Duration of Licence	Type of licence
Free TV broadcast	National	Up to 10 years	Individual
	Provincial		
	District		
Subscription TV broadcast	National		
	Provincial		
	District		
Radio broadcast	National		
	Provincial		
	District		
TV or radio broadcast	Narrowcasting Service	N/A	Class
TV or radio broadcast	Community service		

TABLE A: NETWORK LICENCES			
1. Facilities rights			
A network licence is required to construct, maintain, own, operate or otherwise make available any or all the following facilities-			
Facility	Market Segment	Duration of Licence	Type of Licence
Earth Stations VSATs Satellite control stations Cables or Line links Radiocommunication links Switching centres Exchange nodes	International	Up to [10] years	Individual
	National		
	Provincial		
	District		
Towers, masts, antennas, tunnels, ducts, pits or poles Other (not exempt under the Act)	Private use	N/A	Class
2. Network services			
A network licence is required to supply any of the following network services -			
Network service	Market Segment	Duration of Licence	Type of Licences
Bandwidth services Public cellular mobile services Switching services International gateway services	International	Up to [10] years	individual

Facilities access services	National		
Broadcasting distribution services	Provincial		
Space services	District		
Other (not exempt under the Act)	Private use	N/A	Class

TABLE B. APPLICATIONS LICENCES

An applications licences is required to supply any of the following applications services -

Application services	Market Segment	Duration of Licence	Type of Licence
International connectivity services	International	Up to [10] years	Individual
PSTN telephony services	National		Individual
Public switched data services	Provincial		Individual
Public cellular services	District		Individual
Internet access services	Community service	N/A	Class
IP telephony services			
Directory services			
Messaging services			
Audiotext hosting services			
Public payphone services			
* Mobile Virtual Network (MVNO) services			
*Unified services			

TABLE C. CONTENT LICENCES

A content licence is required to supply any of the following content services -

Content service	Market segment	Duration of Licence	Type of Licence
Free TV broadcast	National	Up to [5] years	Individual
	Provincial		
	District		
Subscription TV broadcast	National		
	Provincial		
	District		
Radio broadcast	National	N/A	Class
	Provincial		
	District		
TV or radio broadcast	Narrowcasting service		
TV or radio broadcast	Community service		

Table 5.5 – Proposed New Section 14 Changes (Operator Licensing) [with specific fees to follow in a future consultation, calculated following the steps outlined in Sections 14 (2) – (6).]

5.6 Proposals to Revise the Schedule 2 Fees (Operator Licensing Regulations)

5.6.1 Table 5.6 shows NICTA proposals on revised *Schedule 2* [of Operator Licensing Regulations] fees. The revised fees in the new column(s) in the table in the table are based on EITHER:

- 5.6.1.1 Inflation Indexation; OR
- 5.6.1.2 Costs recovery
- 5.6.1.3 NICTA proposes the lower of the two where appropriate as the new set fee going forward.
- 5.6.1.4 Going forward, NICTA proposes to inflation index adjust all fees every 2 or 3 years.

Item	Fee K
Application fee (commercial, other than not for profit)	5000
Application fee (solely not for profit)	500
Application to vary conditions of licence	500
Change of particulars of licence	200
Copies or extracts from public register	K2.50 per page
Replacement of licence, certificate or permit (lost, destroyed, etc) certified by NICTA	K25 per page

5.6.2 Proposals on Schedule 2 Administrative Fees

Based on preliminary internal cost analyses conducted by NICTA — particularly accounting for anticipated staffing costs within the soon-to-be-expanded Licensing Department — NICTA has concluded that inflation indexation yields the lower set of revised fees for these Schedule 2 fees (Operator Licensing Regulations). Table 5.6 therefore presents the proposed Revisions to Schedule 2 Fees - **based on cost recovery**.

Table 5.6 – Proposed New Schedule 2 (Operator Licensing Regulations) fees

Item	New Fee (K)
Application fee (commercial, other than not for profit)	10500
Application fee (solely not for profit)	2100
Application to vary conditions of licence	1260
Change of particulars of licence	504
Copies or extracts from public register	5.00 per page
Replacement of licence, certificate or permit (lost, destroyed, etc) certified by NICTA)	5.00 per page
Annual Licence Fee	Nominal fee of xxx% of declared annual revenue in the subsequent

	years
--	-------

5.6.3 Proposals on Schedule 2 Annual Licence Fee specific to Individual Operator License

The Annual Licence Fee component is based on apportioned costs specific to Individual Operator License tasks and 2025 Budget costs (revenue/expenses) estimates.

Approaches to Cost Allocation to Licenses

Administering Individual Operator Licenses involves more complex processes and higher regulatory oversight than class or general authorizations — hence, cost recovery must reflect this.

When regulators determine how to allocate costs of administering *Individual Operator Licenses*, the goal is to ensure fairness, cost orientation, and non-discrimination, while ensuring that the regulator can sustainably recover its administrative and oversight costs.

These are the main methodological approaches regulators use to allocate regulatory and administrative costs across licensed operators:

A. Equal (Flat) Cost Allocation

Every licensee pays the same administrative fee, regardless of size, revenue, or service area.

This option is used when:

- Licensing activities require similar administrative effort per operator.
- Market participants are roughly equal in scale.

Formula example:

$$\text{Fee per license} = \frac{\text{Total recoverable cost}}{\text{Number of licensees}}$$

B. Activity-Based Allocation (Workload/Usage Approach)

Costs are allocated based on the *actual workload* or *regulatory effort* required for each license type or operator.

There are certain detailed steps involved that is necessary to consider when specifying costs:

- Identify regulatory activities (application review, inspection, monitoring, reporting, etc.);
- Estimate resources (staff hours, system time, etc.) used per operator;
- Allocate costs according to activity drivers (time, complexity, risk, etc.).

Example

If large operators require more complex compliance checks and audits, they receive a

proportionally higher cost allocation.

C. Proportional Allocation by Market or Business Size

Allocate total cost based on an operator's market share, turnover, number of subscribers, or spectrum holdings.

There are variants of this cost apportioning which may take the form of:

- Revenue-based: each operator pays a % of annual gross revenue (e.g., 0.5 - 1%).
- Subscriber-based: cost per subscriber or per active SIM.
- Spectrum-based: allocation proportional to MHz holdings or bandwidth.

Formula example:

$$\text{Fee}_i = \text{Total recoverable cost} \times \frac{\text{Revenue}_i}{\sum \text{Revenue of all licensees}}$$

D. Tiered or Band-Based Allocation

Operators are grouped into tiers (e.g., national, regional, small/local) with different fee levels set administratively.

Example tiers:

1. Tier 1 – National operators
2. Tier 2 – Regional operators
3. Tier 3 – Niche or rural operators
4. Tier 4 - Others

E. Summary Methodology: NICTA Operator Licensing Cost Recovery Framework Steps

Following internal costs analyses and deliberations, NICTA has concluded on a broad methodology based on **cost recovery** as shown in Appendix II - which broadly draws from C and D above, i.e. **allocation of these total costs to licensees** based on a combination of (C) - proportional allocation by market or business size and (D) also based on a defined Tiered or Band-Based Allocation.

The methodology detailed in Appendix II can therefore be summarised as follows:

1. *Define & Calculate Total NICTA Operator Licensing Recoverable Costs*: include all direct regulatory activities and internal resource costs from NICTA's audited budget.
2. *Segment Licensees into Tiers & Bands*: group operators by service scope (e.g., national, regional, local, others) to reflect regulatory effort.
3. *Assign Tier-Based Cost Weights*: allocate a portion of total costs to each tier based on average support burden and operational complexity.
4. *Distribute Costs Proportionally Within Tiers*: use weighted indicators (revenue, subscribers, spectrum holdings) to apportion each tier's cost among its members.
5. *Review and Adjust Annually, biennially (once every 2 years) to every Three Years at the*

most. recalibrate cost pool, tier weights, and scaling factors based on actual expenditures and market data.

Based on preliminary internal cost analyses conducted by NICTA — particularly accounting for anticipated staffing costs within the soon-to-be-expanded Licensing Department — stakeholders would note that the TOTAL recovery costs for Individual Operator Licences are likely to be much higher than what has been levied since the methodology was last revised in 2013, i.e. 12 years ago!

This means that Annual Licence Fees apportioned to each individual licensee is likely to be much higher going forward.

Issues for Consultation (Question 9)

Do you agree on the principles, methodology [and illustration] of Appendices II and III Revised Schedule 2 Fees for the Operator Licensing Regulations? Kindly justify your response.

Issues for Consultation (Question 10)

Do you agree to the principles and proposals on the approaches to applying the cost allocations to Licensees? Kindly justify your response.

5.7 Proposals to Revise Cabling Licence and Inspection fees

5.7.1 Table 5.7 shows NICTA proposals to revise *Cabling Licence and Inspection fees*. The revised fees in the new columns in the table in the table are based on EITHER:

- 5.7.1.1 Inflation Indexation; OR
- 5.7.1.2 Costs recovery
- 5.7.1.3 NICTA proposes the lower of the two where appropriate as the new set fee going forward.
- 5.7.1.4 Going forward, NICTA proposes to inflation index adjust all fees every 2 or 3 years.

Based on preliminary internal cost analyses conducted by NICTA — particularly accounting for anticipated staffing costs within the soon-to-be-expanded Licensing Department — NICTA has concluded that inflation indexation yields the lower set of revised fees for these Cabling Licence and Inspection fees. Table 5.7 therefore presents the proposed Revisions: Apparatus Licence Categories and Fixed Fees – all based on index inflation, rather than cost recovery that would have proved higher.

Table 5.7 – Proposed New Cabling Licence and Inspection fees

Cabling	Licence	New Fee(s) K	Late Renewal Fee (<i>within 30-</i>
----------------	----------------	---------------------	--

Type		<i>days grace period</i>
Restricted Licence	K900.00 for 3 years	K75.00
	K750.00 for 2 years	
	K500.00 for 1 year	
Open Licence	K1,500.00 for 3 years	K100.00
	K1,000.00 for 2 years	
	K750.00 for 1 year	
Lift Licence	K1000.00 for 3 years	K120.00
	K750.00 for 2 years	
	K500.00 for 1 year	

Licence Variation and related fee

Item	New Fee(s) K
Registration fee	K75.00
Licence Variation Fee (e.g., Upgrade to open)	K100.00
Duplicate License Certificate	K50.00
Reconsideration of Rejected Application	K50.00

Inspection and Compliance Fee

Item	New Fee(s) K
Inspection fees (No. of Ports/Outlets 20 - 50)	K300.00
Inspection fees (No. of Ports/Outlets 51 - 100)	K600.00
Inspection fees (No. of Ports/Outlets 101 - 500)	K1,200.00
Inspection fees (No. of Ports/Outlets 501 and above)	K1,800.00
Initial Cabling Inspection Fee (per site/project)	K174.00
Follow-up/Re-inspection	K145.00
Additional Hourly Inspection Fee	K200.00 per hour

5.8 Proposals for Type Approval fees

5.8.1 Table 5.8 shows NICTA proposals to revise *Type Approval fees*. The revised fees in the new columns in the table in the table are based on EITHER:

- 5.8.1.1 Inflation Indexation; OR
- 5.8.1.2 Costs recovery
- 5.8.1.3 NICTA proposes the lower of the two where appropriate as the new set fee going forward.
- 5.8.1.4 Going forward, NICTA proposes to inflation index adjust all fees every 2 or 3 years.

Based on preliminary internal cost analyses conducted by NICTA — particularly accounting for anticipated staffing costs within the soon-to-be-expanded Licensing Department — NICTA has concluded that inflation indexation yields the lower set of revised fees for these Type Approval fees. Table 5.8 therefore presents the proposed Revisions: Apparatus Licence Categories and

Fixed Fees – all based on index inflation, rather than cost recovery that would have proved higher.

Table 5.8 Proposed Type Approval fee

	Item	Local ICT Dealers & Business	International Certification Body & Client	Individual
1	REGISTRATION			
	Client Registration	K500.00/year (NICTA Licensee Free)	USD250.00 (for 3 years), USD100.00/year or equivalent	K100.00 (NICTA Licensee Free)
	Non-Refundable Application Processing Fee	K150.00	USD150.00/hr or equivalent	
2	EXAMINATION			
	Sample testing & re-testing	K150.00/hr	USD150.00/hr or equivalent	K150.00/hr
3	CONFORMITY ASSESSMENT			
	Device Declaration of Conformity Certificate	K300.00	USD200.00 or equivalent	K300.00
	Device Test Report			
	Device Specification			
	General Assessment			
	TA Certificate re-issuance	K300.00	USD200.00 or equivalent	K100.00
4	TRADE REQUIREMENT			
	Product Import Permit Fee	RDL <ul style="list-style-type: none"> • K150.00/100 units/model/import Non-RDL <ul style="list-style-type: none"> • K150.00/20 units/model/import 	NOT Applicable	Individuals: K150.00/2 units/model/import

5.9 Proposals for Numbering fees

5.9.1 Table 5.9 shows NICTA proposals to revise *Numbering fees*. The revised **administrative** fees [not the Annual Fees] in the new column(s) in the table in the table are based on EITHER:

5.9.1.1 Inflation Indexation; OR

5.9.1.2 Calculations based on a best-practice annual fee formula for number ranges.

5.9.1.3 Going forward, NICTA also proposes to inflation index adjust all **administrative** [not the Annual Fees] fees every 2 or 3 years.

Table 5.9 therefore presents the proposed Numbering Fees Revisions.

Table 5.9 – Proposed New Numbering fees

Item	New Fee(s) (K)
Application Fee	100
Processing Fee	500
Proposed Annual Fee	Calculated using formula [see

The Numbering fees in the table above shall apply in each case when the National Numbering Plan is introduced.

Proposed Annual Fee Formula

Item#	Number Category	Formula	Key for parameters
1	Cellular and Geographic numbers	$F = N \times B \times C \times 10^{(8-x)}$	B: Block Quantity C: Basic Charge N: Number of blocks X: Number length 8: Current Maximum Number Length
2	Short Code	$F = N/10 \times B \times C \times 10^{(8-x)}$	

Example 1: Assignment of a single block of 10,000 Cellular Mobile Numbers

$$F = 1 \times 10,000 \times K1 \times 10^{(8-8)}$$

$$F = 1 \times 10,000 \times K1 \times 10^{(0)}$$

$$F = 1 \times 10,000 \times K1 \times 1$$

Amount Payable annually = K10,000

Example 2: Assignment of a single block of 10,000 Geographic Numbers

$$F = 1 \times 10,000 \times K0.50 \times 10^{(8-7)}$$

$$F = 1 \times 10,000 \times K0.50 \times 10^{(1)}$$

$$F = 1 \times 10,000 \times K0.50 \times 10$$

Amount Payable = K50, 000

5.10 Proposal to Revise Section 22 (Universal Access & Service (UAS) Levy) of the Operator Licensing Regulations

- 5.10.1 In Section 107 of the Act, NICTA is empowered to levy charges on licensed operators for contributions to the UAS Fund, and operators are required to cooperate with NICTA by providing relevant information and paying the designated amounts.
- 5.10.2 Section 107 (2)(b) of the Act states NICTA shall set the UAS Levy as a percentage of the net revenues of each operator licensee at a level, to be determined annually, to apply from the beginning of each fiscal year not exceeding a maximum percentage as prescribed in the regulations.
- 5.10.3 Section 107 (2)(a) also states that the Levy shall be set to achieve the desired level of funding for the Universal Access and Service Fund for that year as advised to NICTA by the UAS Board
- 5.10.4 Section 22 of the Operator Licensing Regulations states that the Universal Access and Levy shall be set by NICTA at a level that does not exceed 2 percent of net revenues
- 5.10.5 NICTA proposes using the above principles as per Section 107 of the Act
- 5.10.6 Going forward NICTA also proposes a UAS Levy in the amount of **3% of net revenues** or below shall be considered **presumptively reasonable** for purposes of financing any given year's UAS Fund Projects.
- 5.10.7 NICTA is proposing an increase in the Universal Access and Service (UAS) Levy from 2% to a presumptively reasonable ceiling of 3% of net revenues to ensure sufficient and predictable financing for annual UAS Fund projects. Whilst Section 22 of the Operator Licensing Regulations currently caps the levy at 2%, NICTA argues that evolving infrastructure demands, expanded service obligations, and the strategic guidance of the UAS Board necessitate a more flexible funding framework. The proposed 3% threshold would allow NICTA to respond to growing connectivity needs without requiring immediate regulatory amendments, while any levy above 3% would trigger formal budget justification and board approval, preserving transparency and proportionality.
- 5.10.8 This presumptive increase from 2% to 3% of net revenues aligns with the PNG Government's (GoPNG) ambitious Digital Transformation Policy²⁹, national digital transformation agenda and long-term development goals. This adjustment is justified by the urgent need to expand mobile Internet connectivity—critical for realizing the Digital Transformation Policy 2020, Vision 2050, and the Development Strategic Plan 2010–2030, all of which emphasize universal access to ICT services,

²⁹ <https://www.ict.gov.pg/digital-transformation-policy-2020/>

satellite infrastructure, and e-government delivery. Efficient spectrum management and increased funding through the UAS Levy are essential to meet targets such as 70% Internet penetration and full national coverage by 2030, while enabling public-private partnerships under the Alotau Accord III to deliver affordable, inclusive digital services.

5.10.9 Any proposed Levy amount above 3%, however, shall require a budget forecast demonstrating the need for such an amount, and approval by the UAS Fund Board, subject to limitations and procedures in the Regulations.

Issues for Consultation (Question 11)

Do you agree on the principles, reasons and proposal on increasing the levy – presumptively - to 3% of net revenues? Kindly justify your response.

Issues for Consultation (Question 12)

Do you agree that any increase above 3% shall require a budget forecast demonstrating the need for such an amount, and approval by the UAS Fund Board? Kindly justify your response.

Appendix I – PNG Inflation and FX Trends over the last 15 years

Using data from the World Bank, Figure A-1 depicts the cumulative inflation since 2009 to the end of 2024. It shows that the cumulative inflation observed in PNG from 2009 to 2015 topped 100% - at just under 110%.

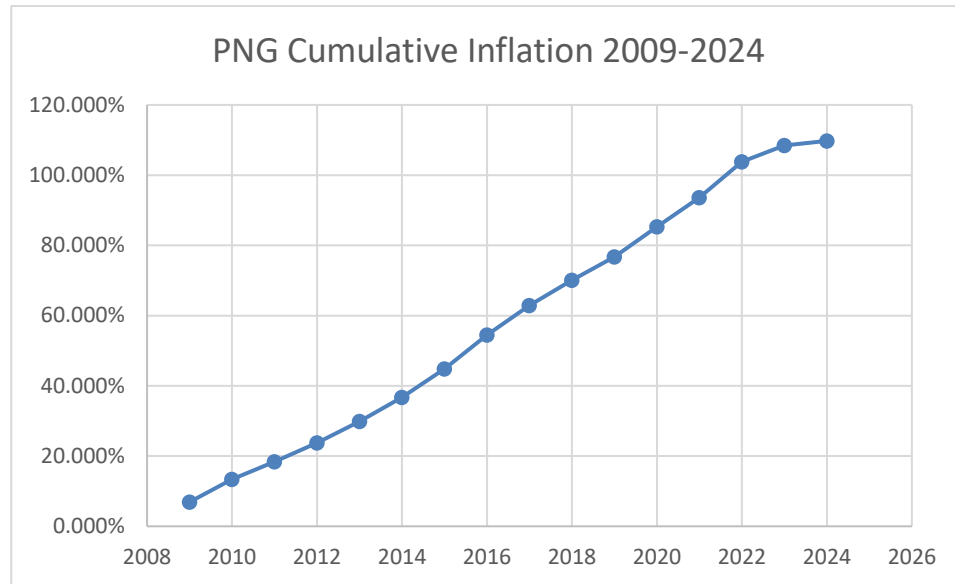


Figure A-1

Data Source: <https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?end=2024&locations=PG&start=2009>

Figure A-2 depicts the PGK to USD Foreign Exchange (FOREX) trend chart from 2010 until May 2025. It depicts that 1\$ USD was equivalent to PGK 2.7 in early 2010. Over the past fifteen (15) years, the PGK has devalued with respect to the US dollar by more than 50% to circa PGK 4.09 to the dollar (1\$ USD) as of May 2025. This chart is included because PNG telecoms operators correctly state that much of the equipment, they buy for their networks is USD-denominated, though they arguably buy more and more equipment from Chinese manufacturers.

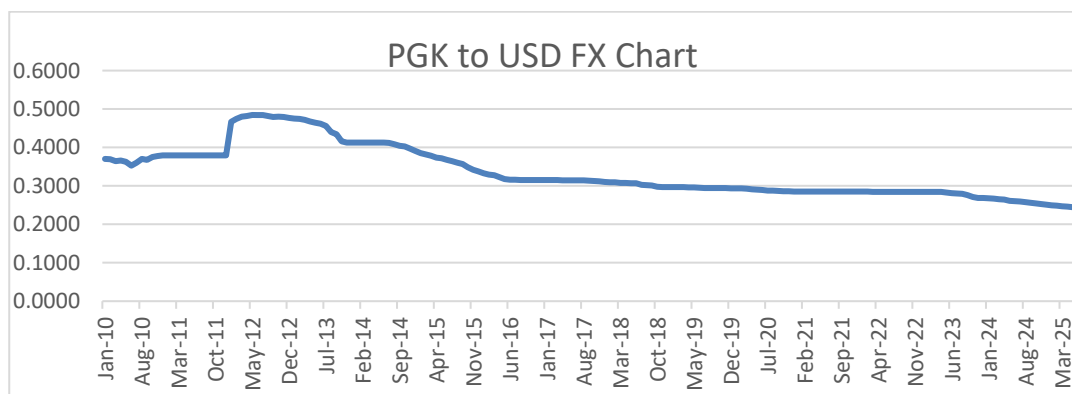


Figure A-2

Data Source: <https://www.bankpng.gov.pg/publications/foreign-exchange-rates/historical-exchange-rates>

Appendix II – Methodology: DRAFT NICTA Operator Licensing Cost Recovery Methodology, using Hybrid Tiered-Proportional Allocation Model

1. Define & Calculate Total NICTA Operator Licensing Recoverable Costs

NICTA shall annually determine the full cost base required to support licensing, spectrum management, and regulatory oversight. This includes:

A. Direct Regulatory Activities

- Licensing Administration: Application processing, database entry, renewals
- Technical Coordination: Frequency planning, interference analysis
- Compliance Monitoring: Inspections, enforcement actions, rural outreach
- Spectrum Planning: Band refarming, harmonization, future allocation studies
- Stakeholder Support: Public education, licensee queries, engagement

B. Internal Resource Costs

- Staff Salaries: Licensing & Enforcement (L&E), Engineering Resource Planning (ERP) &, Economic and Consumer Regulation & Policy (ECIA), Finance (CSD)
- ICT Systems: Licensing portals, spectrum databases, monitoring tools
- Office Overheads: Utilities, equipment, rent
- Legal & Policy Support (Staff salaries allocations): regulatory drafting, dispute resolution
- Transport & Field Logistics: Vehicles, fuel, maintenance

All cost components shall be sourced from NICTA’s audited budget and operational expenditure reports.

2. Segment Licensees into Tiers & Bands

Operators are grouped into administratively defined tiers based on service scope and regulatory effort required. An example tiering follows:

Tier	Description/Example	Typical Licensee
Tier 1	National Operators	e.g. National Mobile Networks, National Transmission Networks, national subscription TV/satellite broadcasters
Tier 2	Regional Operators	e.g., provincial operators, mid-size ISPs, provincial broadcasters
Tier 3	Local/niche operators	e.g., community radio, rural WISPS, Content licensees, IGW licensees, rural FWAs
Tier 4	Special categories	Temporary, experimental,

		or low-impact users
--	--	---------------------

Tier definitions may be refined based on coverage area, service type, and compliance burden.

3. Calculate & Assign Tier-Based Cost Weights

Each tier above is assigned a proportional share of the total recoverable cost pool, reflecting:

- Average regulatory effort per operator
- Complexity of coordination and monitoring
- Support requirements (e.g., rural travel, technical assistance)

These weights are reviewed periodically and may be adjusted to reflect evolving market dynamics and policy priorities.

4. Distribute Costs Proportionally Within Tiers

Within each tier, costs are allocated proportionally using quantifiable indicators (Allocation Drivers):

- Revenue-based: % of gross annual turnover
- Subscriber-based: Number of active SIMs or subscribers
- Spectrum-based: MHz held, geographic coverage, or band type

Formula

For each licensee/*i* Tier *T*:

$$\text{Fee}_i = (\text{Total Cost Tier}_T \times \text{Weight}_i) / \sum \text{Weights}_{\text{Tier}_T}$$

WHERE

- **Total Cost_{Tier_T}** = Tier's share of total recoverable cost
- **Weight_i** = Composite score based on selected indicators (allocation driver)

Composite weights may also be calculated annually (e.g., 60% revenue, 30% subscribers, 10% geography/#cities or provinces).

5. Review Annually, Biennially to Every Three Years at Most

The cost pool, tier weights, and allocation formulas shall be reviewed biennially (once every 2 years) with a mandatory recalibration at least once every **three years**.

- Adjustments shall reflect actual expenditures, market changes, and stakeholder feedback.
- NICTA shall publish the updated methodology at least once every 5 years and

fee schedule with supporting rationale.

Appendix III – Illustration of Use of the Methodology – FOR ILLUSTRATION PURPOSES ONLY

Context & Assumptions Using NICTA 2021 Budget

- *Total NICTA Budget (2021)*: K57.1 million: (2021 NICTA Budget Gazette (No. G915)³⁰;
- *Number of Licensees*: 67 total
- *Tier 1*: 4 national operators
 - Operator A: 45% of total industry revenue/subscribers
 - Operator B: 25%
 - Operator C: 15%
 - Operator D: 8%
- *Tier 2*: 15 regional operators
- *Tier 3*: 43 local/niche operators

1. Estimate Recoverable Licensing & Regulatory Costs Recoverable Costs

- Step 1 - Recoverable Operator Licensing & Regulatory Costs: **K20 million** (≈35% of total budget) – Estimated from Step 1 of the DRAFT NICTA Operator Licensing Cost Recovery Methodology (see Appendix II)

2. Segment Licensees into Tiers/Bands

Tier	# Operators	Typical Licensee
Tier 1	4	e.g. National Mobile Networks, national subscription TV/satellite broadcasters, National Transmission Networks
Tier 2	15	e.g., provincial operators, mid-size ISPs, provincial broadcasters
Tier 3	43	e.g., community radio, rural WISPS, Content licensees, IGW licensees, rural FWAs, etc.
Tier 4	5	Temporary, experimental, or low-impact users

3. Calculate and Assign Tier-Based Cost Weights

Tier	Cost Share	Total Cost
Tier 1	70%	K14 million

³⁰ [Papua New Guinea National Gazette – NICTA Budget 2021 \(PDF\)](http://papua-new-guinea-national-gazette-nicta-budget-2021-pdf-ddjoianxpcus0.cloudfront.net)
[ddjoianxpcus0.cloudfront.net](http://papua-new-guinea-national-gazette-nicta-budget-2021-pdf-ddjoianxpcus0.cloudfront.net)

Tier 2	20%	K4 million
Tier 3	10%	K2 million

4. Distribute Costs Proportionally Within Tiers

Tier	# Operators	Total Tier Cost	Proportionate Costs Allocation (Revenue/Subscriber-based allocation)
Tier 1	4	K14 million	<ul style="list-style-type: none"> Operator A (45%) → K6.3 million Operator B (25%) → K3.5 million Operator C (15%) → K2.1 million Operator D (8%) - K1.12 million Remaining 7% (e.g., K0.98 million) adjusted for spectrum holdings
Tier 2	15	K4 million	<ul style="list-style-type: none"> Allocation based on revenue, subscribers, etc. Example: Operator D (largest Tier 2) pays K700,000 Operator E (smallest Tier 2) pays K250,000 Others scale accordingly
Tier 3	43	K2 million	<ul style="list-style-type: none"> Flat base fee + scaled adjustment Base fee: $K30,000 \times 43 = K1.29$ million Remaining K710,000 distributed proportionally Larger rural ISP: K60,000 Community radio: K35,000 <u>Or split K2 million entirely based on declared revenues</u>

5. Review and Adjust Annually or Biennially

- Recalculate and recalibrate cost pool, tier weights, and allocation formulas at least once every two years
- Adjust based on actual expenditures, market data, and stakeholder feedback
- Publish updated fee schedules and rationales

In summary, this methodology ensures:

- Full recovery of K20 million
- Proportional fairness based on market size
- Tiered simplicity for administrative efficiency
- Protection and promotion for/of small/rural operators

High (Revenues/Subscribers) =>tend towards Tier 2 (A significant NCD ISP), Lay	Big MNOs, National Transmission Networks (Tier 1s)
Low (Revenues/Subscribers) Tier 3s	National Broadcaster (Tier 2)
Regional/Sub-Regional	National