



**Telecommunications Regulatory Authority of the  
Kingdom of Bahrain**

**Consultation Paper**

A public consultation document issued by the Telecommunications Regulatory Authority of the Kingdom of Bahrain (“TRA”)

On the proposed updates to the Position Paper on Fixed Point-to-Point Links and Point-to-Multi-Point Systems

30 October 2025

LAD 1025 055

E-mail responses must be sent to the Authority’s email address at [RFT@tra.org.bh](mailto:RFT@tra.org.bh).

Alternatively, responses may be sent to the following address:

The General Director  
Telecommunications Regulatory Authority  
PO Box 10353  
Manama, Kingdom of Bahrain

The deadline for responses is **4pm on 30 November 2025**.

Purpose: To seek stakeholders’ views on the proposed updates to the Position Paper on Fixed Point-to-Point Links and Point-to-Multi-Point Systems.

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## Executive Summary

The Telecommunication Regulatory Authority of the Kingdom of Bahrain (the “**TRA**” or the “**Authority**”) is issuing this consultation to seek the views of relevant stakeholders on the proposed updates to its Position Paper on Fixed Point-to -Point (P-P) and Point-to-Multi-point (P-MP) systems.

The Authority has periodically updated its regulatory frameworks in this area, beginning with the 2011 Policy, which highlighted the applicable legal framework under the Telecommunications Law. This was followed by the 2017 Position Paper on Regulating Fixed Point-to-Point Links, the 2018 Public Notice on the assignment of frequency blocks for the operation of Fixed Wireless Access (FWA) systems, and most recently the 2024 Position Paper. Collectively, these documents have established the regulatory and technical framework for the licensing, frequency assignment, and operation of fixed link services in the Kingdom of Bahrain.

Considering the international developments, including the outcomes of the World Radiocommunication Conferences and the adoption of the most recent National Frequency Plan (NFP) the TRA considers it necessary to introduce further updates. These revisions are intended to ensure Bahrain’s spectrum management frameworks remain aligned with international best practice, promote efficient spectrum use, and support the adoption of emerging technologies such as IMT (5G and beyond) and advanced Fixed Wireless Access solutions.

## I. OVERVIEW

- 1 The TRA first consulted on fixed link services in 2011, followed by the publication of Position Papers in 2017 and 2024, and the 2018 Public Notice on Fixed Wireless Access (FWA) systems. These documents established the licensing requirements and technical frameworks for Fixed Point-to-Point Links (P-P) and Point-to-Multi-Point Systems (P-MP) in Bahrain.
- 2 In light of recent international developments, particularly the outcomes of the World Radiocommunication Conference 2023 (WRC-23) and the adoption of Bahrain's 2024 National Frequency Plan (NFP), the TRA considers that further updates are required to ensure the spectrum policy remains effective and future-oriented.

### Proposed Amendments :

- 3 The TRA therefore proposes to make the following changes:
  - 3.1 Added the definition of International Mobile Telecommunications (IMT) in the Definitions section..
  - 3.2 Update renewal procedures for Point-to-Multipoint (P-MP) systems by requiring licensees to submit a new application and pay the corresponding application fee for renewal.
  - 3.3 Revise the list of permitted frequency bands by prohibiting new assignments in ranges 6.425–7.125 GHz and 39.5–40.5 GHz. Only existing assignments may be considered for renewal. This update reflects the latest National Frequency Plan (NFP) outcomes, the restrictions are intended to give flexibility for the local market to utilise the 6 GHz band for either IMT or Wi-Fi applications, while preventing harmful interference and ensuring efficient spectrum use.
  - 3.4 Revise Annex 1 (Radio-Frequency Channel Arrangements) and Annex 2 (Minimum Path Lengths) to reflect updated ITU Recommendations and national standards.

- 3.5 Add a new Annex 3 formally identifying IMT bands within the Fixed Service allocation (6.425–7.125 GHz, 24.25–27.5 GHz, 37–43.5 GHz) and specifying frequency ranges where new assignments are prohibited (6.425–7.125 GHz and 39.5–40.5 GHz).
- 3.6 Expand the performance parameters section by including ITU-RR footnotes, ETSI standards and additional provisions covering high-density fixed service bands. This includes recognising certain frequency ranges (e.g. 31.8–33.4 GHz, 37–40 GHz, 40.5–43.5 GHz, 51.4–52.6 GHz, 55.78–59 GHz, and 64–66 GHz) as suitable for high-density applications in the fixed service, while also taking into account the ITU's regulatory provisions in relation to these bands. This section also introduces:
- 3.6.1 Note (3) which allows certain fixed wireless systems operating in the 57 – 66 GHz band, using low power equipment to operate without a licence, subject to common technical conditions; and
- 3.6.2 Note (4) which encourages the use of systems and antennas that comply with ETSI EN 302 326-1 or relevant 3GPP specifications.
- 3.7 All changes are outlined as tracked changes in Annex 1 attached to this paper.

## II. PURPOSE OF THIS CONSULTATION

- 4 The Authority would like to receive views and comments on all aspects of the proposed changes to the Position Paper by 4pm on 30 November 2025 .
- 5 It would be helpful if your response could include direct answers to the questions asked in the consultation document. The questions are listed at Annex 2.
- 6 The information contained in this document is intended to provide background on the proposed changes. Interested parties should not take any actions in reliance on the information or proposals contained in this document. Any views set out in this Consultation Paper should be considered as indicative and will be subject to further consideration following the receipt of comments from interested parties.
- 7 This Consultation Paper is not a binding legal document and also does not contain legal, commercial, financial, technical or other advice. The Authority is not bound by it, nor does it necessarily represent a decision of the Authority. The matters discussed in this document remain open to consideration and should not be construed as indicating that the Authority has formed any final opinion or decision on the proposed changes to the Position Paper.
- 8 Once the Authority has received and considered responses to this Consultation Paper, the Authority will decide whether to proceed to finalise the proposed changes to the Position Paper. If appropriate, the Authority will prepare and publish a Final Direction which summarises the responses received together with the Final version of the Position Paper.

**ANNEX 1 – PROPOSED CHANGES**

*[Attached as a separate document as tracked changes]*



Position Paper issued by the Telecommunications Regulatory Authority  
on Regulating Fixed Point to Point Links and Point to Multi-Points Systems.

Issue date: [30-XxXxXx-January-2024]

Ref: [XxXxXx]LAD/0124/004

Purpose: To update the Authority's position in relation to the frequency bands and assignment  
and licensing of Fixed Point to Point Links and Point to Multi-Point Systems.

## 1 INTRODUCTION

- 1.1 The purpose of this Position Paper (the “Paper”) is to update the Telecommunications Regulatory Authority’s (the “**TRA**” or the “**Authority**”) position in relation to the frequency assignment and licencing of **Fixed point to point links (P-P) and point to Multi-point systems (P-MP)** in Telecommunications Networks.
- 1.2 On 1 July 2011, the TRA and the Directorate of Wireless Licensing, Frequency and Monitoring (the “**DWLFM**”) consulted on a policy document with respect to the legal framework and policy pertaining only to fixed link services (point to point) terrestrial links in the Kingdom of Bahrain (the “**Kingdom**”) (the “**2011 Policy**”)<sup>i</sup>.
- 1.3 On 25 December 2017, the TRA published a Position Paper (the “**2017 Paper**”) that served to clarify its position in relation to the frequency assignment and licensing of fixed point to point links.
- 1.4 In 2018, a Public Notice (the “**2018 Notice**”) was issued which provided guidance in relation to the assignment of frequency blocks for the operation of FWA systems.
- 1.5 Both the 2017 Paper and the 2018 Notice<sub>2</sub> clarified that pursuant to Articles 24 and 43 of the Telecommunications Law, a Frequency Licence is required to operate any microwave or millimetre-wave fixed terrestrial link (point to point link and point-multi point systems).
- 1.6 This Paper provides guidance for fixed point to point (P-P) and point to multi-point systems (P-MP) only. It is a general statement of the TRA’s current views on this issue based upon the facts available to it.
- 1.7 The TRA may in the future choose to issue a bespoke Regulation that deals with this matter but until such a step is taken this Paper shall act as an indication to licensees and relevant stakeholders as to the TRA’s viewpoint on the application of the Telecommunications Law and existing regulatory framework at this time.

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<sup>i</sup> The [2011 Policy](#). Fixed Point to Point Links - Licensing And Assignment Policy.

## 2 DEFINITIONS

Any word, phrase or expression used in this Paper shall, unless the context requires otherwise or it is expressly defined herein, have the same meaning set forth in the Telecommunications Law promulgated by Legislative Decree No. 48 of 2002 and the terms below shall have the following meaning for the purpose of these Guidelines:

**Fixed Point to Point Links (P-P):** This is the conventional P-P license single specified point and another specified point. whereby each individual link is licensed to use specific spot frequency/ies.

**Fixed Point to Multi-point systems (P-MP):** Is a system that establishes connections between a single specified point and more than one other specified point.

**Fixed Service:** means a Radiocommunication Service between specified fixed points.

**Fixed Wireless Access (FWA):** The Wireless Access application in which the location of the End-User terminal and the network access point to be connected to the End- User are fixed.

**International Mobile Telecommunication (IMT):** Describes the technologies that meet the standard for IMT-2000, IMT-Advanced, IMT-2020, and IMT-2030, which includes all technologies known as 3G, 4G, 5G, and beyond.~~IMT: International: International Mobile Telecommunication (IMT).~~

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**International Telecommunication Union (ITU):** ~~The International Telecommunication Union,~~ [Aa](#) specialized agency of the United Nations responsible for many matters related to Information and Communication Technologies.

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**Radiocommunication Service:** a service involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes.

### 3 POSITION UNDER THE EXISTING TRA POLICY

3.1 The 2011 Policy and the 2017 Paper state that the use of Radiocommunications Equipment is subject to equipment approval and frequency licensing by the TRA, in compliance with the provisions and requirements of the Telecommunications Law.

3.2 As such a Frequency Licence is required to operate any microwave or millimetre-wave Fixed point to point links (P-P) links and/ or Point to Multi-point systems (P-MP) terrestrial link (as per the requirements of Article 43 of the Telecommunications Law).

3.3 Article 43 of the Telecommunications Law states that:

*“No Person shall operate a Telecommunications Network which uses frequency spectrum in the Kingdom, or operate or use any Radiocommunications Equipment without obtaining a Frequency License from the Authority unless that it is operating on a frequency which the Authority, by way of a decision, has exempted from holding a Frequency License whilst operating in accordance with the terms and conditions of such exemption.”*

3.4 The ~~2017~~2024 Paper has provided a helpful guidance on key issues, namely:

~~3.4.1~~ The Authority's policy towards spectrum pricing;

~~3.4.2~~3.4.1 The Authority's policy towards developing national regulations and standards;

~~3.4.3~~ 3.4.2 The Authority's policy towards Minimum Path Lengths (MPL)

~~3.4.4~~ 3.4.3 The Authority position towards ~~for~~ Fixed point to point links (P-P) Frequency Bands;

~~3.4.5~~3.4.4 The Authority's policy towards FWA associated with Point-to-Multipoint;

~~3.4.6~~3.4.5 The Authority's policy related to other measures designed to facilitate spectrum efficiency;

~~3.4.7~~3.4.6 The Authority's policy towards the ongoing obligations of licensees/applicants; and

~~3.4.8~~3.4.7 The Authority's policy towards the authority's position on its responsibilities.

3.5 The Authority confirms that unless otherwise stated in this Paper, the Authority's views as set out in the 2011 Policy remain relevant to its current position vis a vis fixed (point to point) terrestrial links in the Kingdom.

#### 4 CURRENT POSITION STATEMENT

4.1 The Authority has set out below its position in relation to applications for frequency licences for Fixed Point to Point (P-P) Links and Point-to-Multi-point systems (P-MP).

4.2 The content of this Paper is intended to assist licence applicants, and relevant stakeholders in understanding:

(a) The scope of the TRA's jurisdiction in relation to these issues;

(b) The approach the TRA will take with regards to approvals;

~~(b)(c)~~ The approach the TRA will takes with regards to ~~to~~ IMT-frequency bands identified for IMT within the Fixed Service allocation;

~~(e)(d)~~ The approach the TRA intends to take with regards to the non-payment or late payment of invoices as well as missing or incorrect information;

~~(d)(e)~~ The information that will be required of applicants when applying under the current regime;

~~(e)(f)~~ Fixed Wireless Access systems associated with the Point-to Multi-point systems.

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#### 5 THE APPLICATION OF THIS PAPER

The TRA believes that it is important, that it clearly articulates its current position with regards to the issuance of Fixed Point to Point Links and Point to Multi-point systems frequency licence(s) in the territory of the Kingdom of Bahrain.

#### 6.6. FREQUENCY ASSIGNMENT AND LICENCE PROCEDURE

It is TRA's priority to ensure that all licence applications are processed efficiently and promptly. Each application will be considered on its own merits, on a first come, first served basis assigned as follows:

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6.1 For Fixed Point to Point Links (P-P)

6.1.1. The applicant should submit the relevant application to operate P-P Links or to modify or delete an existing point-to-point assignment. The relevant application form is downloadable from the Authority's website www.tra.org.bhwww.tra.org.bhwww.tra.org.bhwww.tra.org.bhwww.tra.org.bhwww.tra.org.bhwww.tra.org.bhwww.tra.org.bh

- 6.1.2. The Authority reserves the right to update or amend the application form from time to time.
- 6.1.3. The applicant should submit the application to the Authority with full details of the proposed link, including site details, equipment, and antenna details as per the requirements of the application form(s).
- 6.1.4. Once the technical evaluation is completed, the Authority will, ~~in-seas~~ as far as is possible and in compliance with the timeframes set out in this Paper:
  - 6.1.4.1. Request any additional and/or missing information from the applicant; and
  - 6.1.4.2. Request that any overdue amounts be paid by the applicant.
- 6.1.5. The Applicant may be required to provide additional details by the Authority for frequency assignments and must be received within five (5) working days of the receipt of required information.
- 6.1.6. In order to ensure the requisite continuity of the application process, each licensee shall appoint not more than five (5) duly authorised representatives to follow up on the status of the application with the TRA and to receive any updates relating to the approval/rejection of the application; and/or any financial matters associated with the application.
- 6.1.7. The Authority will validate all received applications for completeness, to ensure integrity of the data and in compliance with technical and non-technical requirements.
- 6.1.8. The Authority will endeavour to process a valid application within ten (10) working days if it does not require international coordination.
- 6.1.9. The Authority position to the receives multiple applications, the Authority may be unable to maintain this turnaround target but will provide applicants with an estimated delivery target.

## 6.2 For Point to Multi-Point systems (P-MP).

- 6.2.1. The Applicant should submit the application to the Authority, a formal request should be received by the Authority either in written format or electronically.
- 6.2.2. The Authority would assess the spectrum license application of the applicant/-licensee and take the appropriate decision (i.e., approve, reject, or request further information/-documentation), and to take into account the national and public interest when deciding whether to grant spectrum

licenses to a licensee to establish and operate its FWA.

- 6.2.3. The Authority will endeavour to process a valid application within ten (10) working days if it does not require international coordination and/or with other existing services.
- 6.2.4. The Effective date of the frequency licence may valid/ approve for a term up to twelve (12) months, considering the date of the submission.
- 6.3. For applications requiring international coordination, the Authority may be unable to process valid applications within the timeframes referred to in 6.1.8 and 6.2.3 above due to the fact that this procedure is regulated by the Radio Regulations of the International Telecommunication Union and/or bi-lateral agreements.
- 6.4. In exceptional circumstances, when a justifiable occasion arises, an application not requiring international coordination can be given priority by the Authority over queued applications in order to achieve a very fast turnaround. Such cases might include restoration of telecommunications services in the case of a catastrophic network or service failure, or where telecommunications services are required in response to a national emergency or natural disaster, or in any other circumstance where there is a legitimate national interest served in the expedited approval of the relevant application. The Authority confirms that it will, at all times, have regard to its duties under Article 3 of the Telecommunications Law duties when deciding upon whether such prioritization is justified.
- 6.5. The Authority confirms that in order for an application to be processed, any and all overdue amounts payable to the Authority by the applicant must have been satisfied. For the avoidance of doubt, the "overdue amounts" referred to in this clause cover any amounts that the Authority charges pursuant to the Schedule of Fees and any fines or penalties that the Authority may have imposed on a Licensee that become payable following the lapse of the payment terms stipulated in the accompanying invoices~~(s)~~.
- 6.6. The Authority may either issue an annual or temporary frequency licence at its discretion (having at all times regard~~s~~ to the terms of the application received).
- 6.7. If a licensee requires a copy of the original licence, a formal written request should be received by the Authority from the authorized person stating the licensee's name, licence reference, and version that is requested.

## 7. RENEWAL OF ANNUAL FREQUENCY LICENCE.

- 7.1. **For Fixed point to point links (P-P)**, any Frequency Licence, renewable on an annual basis, will be invoiced for a further term of one (1) year unless that Frequency Licence has been cancelled or modified. Therefore, the Authority must be formally notified by 30<sup>th</sup> November of each calendar year of any cancellation or modification of existing Frequency Licences. Only notifications submitted after 1<sup>st</sup> of January will be considered.
- 7.2. **For Point to Multi-point (P-MP) systems**, TRA may renew the frequency licence at its sole discretion and upon request by-from the licensee for an additional term of up to twelve (12) months upon expiration of the current-existing licence term, subject to such terms and conditions as may be specified by the Authority in its sole discretion, provided that the underlying operating licence has not been revoked. Such request has to be made by the licensee through the submission of a new licence application and the payment of the corresponding application fee.

## 8. TEMPORARY FREQUENCY LICENCE.

- 8.1. A temporary frequency licence may be issued for fixed point to point links, for a period of up to eleven (11) months, subject to a minimum duration of one (1) calendar month.
- 8.2. Considering the date of the submission, Frequency Licence fees will be charged according to the relevant Schedule of Fees as may be amended from time to time.
- 8.3. Temporary licences are not renewable and will terminate automatically upon the expiry of their term.

## 9. DELETION OF ASSIGNMENTS

- 9.1. The Authority's position is that the deletion will be effective within five (5) working days from the date of receipt of a valid deletion request of Fixed Point to Point Links (P-P), and all rights and obligations stemming from such an assignment will cease as of the effective date.
- 9.2. A-The Point to Multi-pPoint (P-MP) Frequency licence-Licence will terminate automatically, upon the expiry of their term, subject to such terms and conditions

as may be ~~specified~~ prescribed by the Authority in its sole discretion, provided that the underlying operating licence has not been revoked.

## 10. FREQUENCY MANAGEMENT

10.1. Frequency assignments require strict controls in order to maximise the utilisation of this critical resource and to optimise the re-farming process in certain bands (if such re-farming process is deemed necessary).

~~10.2. As such, the Authority has set out below those frequency bands in which frequency assignments will be limited or in which no new assignments will be permitted.~~

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10.2. The Authority expects that there will be a substantial growth in International Mobile Telecommunications ("IMT") demand over the coming years, ~~is of the current opinion that it~~ will assess the future demand for the IMT spectrum every 3-4 years (*although the Authority reserves its right to review the situation with regards to frequency assignments and to update the below in accordance with the powers conferred on it by the Telecommunications Law*).

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10.3. The Authority confirms that the following frequency bands listed in Annex 3 (a) are identified for IMT, and a migration plan could be established to vacate one or more of the bands. Frequency assignments in these bands might be limited.

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~~10.3.10.4.~~ In addition, no new assignments in the frequency bands listed in Annex 3 (b) will be permitted. This therefore means that only existing Fixed Point to Point Links (P-P) can ~~may~~ will be considered by the Authority for renewal at the TRA's sole discretion.

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~~10.4. The Authority confirms that the following frequency bands (namely 24.5-27.5 GHz, 37-39.5 GHz, 40.5-43.5 GHz and 74-76/84-86 GHz) are identified for IMT, a migration plan could be established for Fixed Point to Point Links (P-P) to vacate one or more of the afore-mentioned bands.~~

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~~10.5. In addition, the Authority states that no new assignments will be permitted in the following frequency bands: 6.425-7.125 GHz, 39.5-40.5 GHz, 48.5-50.2 GHz, and 51.4-52.6 GHz.~~

~~10.6.10.5.~~ Frequency users are encouraged to make use of alternative frequency bands and apply in the manner indicated above.

## 11. NATIONAL REGULATIONS AND STANDARDS

- 11.1. All equipment that is planned to be deployed must be ~~type-Type approved~~ Approved in accordance with the Type Approval ~~regulations-Regulations~~ of the Kingdom. Users are encouraged to use equipment supporting spectrally efficient high order digital modulation techniques, especially for higher capacity systems.
- 11.2. The Authority has provided, at Annex\_1 to this paper, details of the Radio-Frequency channel arrangements for ~~fixed-Fixed point-Point~~ to point-Point links that applicants should have regard to, with reference to the relevant ITU ~~recommendations-Recommendations~~ and ~~standards-Standards~~ or other channel arrangements applicable in the Kingdom.
- 11.3. The Authority~~TRA~~ will undertake frequency assignment for all point-to-point and Point to Multi-Point systems based on the technical parameters, preferred channels or sub-bands by applicants and with regard to the compatibility with other existing frequency assignments.
- 11.4. All Fixed Point to Point Links and Point to Multi-Points Systems equipment shall comply with the Technical Specifications<sup>ii</sup> and ~~standards-Standards~~<sup>iii</sup> issued by the Authority.

## 12. MINIMUM PATH LENGTH (MPL).

- 12.1. The choice of frequency bands for Fixed Point to Point Links (P-P) depends principally on path length and traffic capacity. Preserving spectrum in the lower frequency bands for longer path length, high-capacity links (*which can be accommodated only in these bands*), the Kingdom operates a Minimum Path Length (“MPL”) for fixed point to point links within the Kingdom to select the appropriate frequency band for a given link.
- 12.2. The MPL permitted in each frequency band is ~~listed-specified~~ in Annex 2. Any applicant ~~wishing-planning~~ to install a link shorter than the MPL will need to provide more detailed justification in writing. Permission to deviate from the MPL will be at the discretion of the Authority. In the interest of fairness, it is considered necessary to apply these limits to all users.

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<sup>ii</sup> [Technical Specification](#)

<sup>iii</sup> [Applicable Technical Standards](#).

12.3. The MPL requirements set out ~~at~~ in Annex 2 will apply to both new assignments and existing assignments. Licensees are advised to have regard to the MPL requirements set out in Annex 2 should there be any change to an existing fixed point to point link *(for example, in case of any changes to stations at either end of the link, e.g., - a change in modulation technique, data rate, or channel bandwidth, or a change in the height of the antenna, type of antenna, etc.)*.

### **13. OTHER MEASURES TO FACILITATE SPECTRUM EFFICIENCY FOR THE FIXED POINT TO POINT LINKS (P-P).**

13.1. High gain antennas should be utilised wherever possible in order to minimise radiation in directions other than in the bore-sight of the antenna. The use of antennas with poor performance is discouraged.

13.2. In the assignment process, ~~cross-cross~~ polar discrimination is also taken into account; a link is therefore licenced with a specific linear (horizontal (H) or vertical (V)) antenna polarisation, unless the applicant requests a specific linear polarisation.

13.3. Service availability is the mean propagation availability used to determine the overall link budget. In general, permitted levels are 99.9%, 99.95%, 99.99%, 99.995% and 99.999%. The use of protected (duplicated) equipment is generally a requirement for availability levels greater than 99.99%.

13.4. Space diversity or "hot standby" facilities may be required in certain circumstances to achieve the required service availability level.

### **14. PAYMENT OF FEES AND INVOICES.**

14.1. Application fees are payable upon the submission of an application for a Frequency Licence and shall not be refunded irrespective of whether the application was successful or not. Any ~~invoice-invoice~~ issued with regards to new applications or in respect of a request for a modification of an existing frequency licence.

14.2. ~~A Credit-credit~~ note will be calculated in accordance with the Schedule of Fees in force at the time of the application in the event of the Frequency License for fixed point to point links upon their request of a Licensee.

- 14.3. Upon receipt of an application, the Authority will prepare and process the required invoice, whereupon the Fixed Point to Point Link(s) invoice will be sent to the applicant for payment thereof.
- 14.4. Frequency Licence fees associated with Fixed Point to Point Links ~~and Point and Point~~ to Multi-Point systems (P-MP) are payable in accordance with the Schedule of Fees, for the period from the effective date until the end of the year in which the licence is issued, on pro rata basis for such period.
- 14.5. Once the invoice is issued, the applicant has ~~Fifteen-fifteen~~ (15) working days to make the payment. If payment is not made, any new application made by the applicant will be subject to the provisions of paragraph 14.7 below.
- 14.6. As set out above at paragraph 6.5, the authority position is that in order for new applications to be approved, all overdue amounts owed by the applicant must be paid in full.
- 14.7. The Authority's position in relation to new applications is that upon receiving a valid application, the applicant will be allowed five (5) working days to pay any overdue amounts owing to the Authority, which ~~is-are~~ to be paid in cleared funds into the Authority's nominated account (bearing in mind that some payments need ~~—~~three (3) working days to be cleared in the bank). Should the aforementioned amounts remain unpaid within that timeframe, then the new application will be rejected by the Authority.
- 14.8. Whilst the Authority will endeavour to issue all invoices and/or credit notes expeditiously (*in accordance with the applicable timeframes*), issuance may be delayed in certain months due to financial closings.

## **15. THE ONGOING OBLIGATIONS OF LICENSEES.**

- 15.1. It is also important that the Authority has access to all Radiocommunications Equipment (*in the case of the Authority in accordance with the provisions set out at Article 77 of the Telecommunications Law*).
- 15.2. It is the licensee's responsibility to provide access to Radiocommunications Stations or Radiocommunications Equipment in case of an emergency immediately or without any delay if access is required for inspection or other related aspects.

- 15.3. It is the licensee's responsibility to provide, upon request, a copy of the frequency licence(s) with all technical details for the Radiocommunications Station(s).
- 15.4. In order to facilitate the identification of frequencies deployed at Radiocommunications Stations, the site identity number provided by the licensee shall be clearly visible at all stations. In the case of a shared installation, the site identity numbers of all licensees shall be clearly visible.
- 15.5. Licensees shall ensure that electromagnetic radiation~~s~~ from Radiocommunications Stations or Radiocommunications Equipment are within the limits set by the International Commission on Non-Ionizing Radiation Protection ("ICNIRP") and shall ensure that it complies with any future radiation emission standards ~~which-that~~ may be set by the ICNIRP, or have been or will be adopted in the Kingdom.
- 15.6. With regards to the technical performance of its Radiocommunications Equipment or Radiocommunications Stations, the Authority confirms that its position is that it is incumbent upon licensees to inform the Authority as soon as it is aware of any and all alterations in circumstance that may cause a licensee to be in breach of the terms of any of its licences (*including any individual, class of frequency licence*) or the Telecommunications Law and wider regulatory framework.

## 16. THE AUTHORITY'S POSITION ON ITS RESPONSIBILITIES.

- 16.1. The Authority wishes to ensure that the Kingdom's policy with regards to frequency assignments is held to the highest standards of international best practice. As such and when necessary, the ~~Authority will~~Authority will notify and ~~register radio~~register radio frequencies into the Master International Frequency Register ("MIFR") of the ITU. Licensees may be required to assist the Authority in this process.
- 16.2. The Authority confirms that it will take all appropriate measures to ensure that all used frequencies in the Kingdom are registered and licenced and will take the appropriate legal actions set out under the Telecommunications Law and wider regulatory framework against any licensee not following the requirements set out by law.

## 17. APPEAL OF ANY DECISION OF THE AUTHORITY.

- 17.1. Where a party feels aggrieved by any decision or action of the Authority in relation to the matters covered within this paper, the Authority's position is that the aggrieved party may appeal to the Authority in writing stating the grounds for the appeal. This appeal process is without prejudice to a party's rights to appeal under the Telecommunications Law or the other laws of the Kingdom.
- 17.2. The Authority's current position is that for such an appeal to be valid, it should be made within 30 days of the decision.
- 17.3. The Authority will review the basis on which it arrived at its decision to determine whether or not the decision was made in accordance with the applicable laws and the duties of the Authority.
- 17.4. The Authority will endeavour to communicate the outcome of the review to the aggrieved party in writing within 20 working days of receipt of the appeal.

## 18. CONCLUSION

~~18.1. The Authority believes that in due course it may benefit from the promulgation of a bespoke Regulation that confirms the position of the current policies and position adopted by the Authority.~~

~~18.2. Until such time, the Authority confirms that the content of this paper is to be treated by licensees as setting out the Authority's confirmed position with regards to its current Fixed Link Policy.~~

The Authority has issued this Position Paper to provide clear and updated guidelines on the licensing, assignment, and regulation of FWA in the Kingdom of Bahrain.

This document consolidates the 2017 and 2024 Policies together with the 2018 Public Notice on the Assignment of Frequency Blocks for the operation of FWA systems in the band 27.5-29.5GHz. This document also introduces key updates to align with technological advancements, national frequency planning, and international standards.

The Authority remains committed to transparent, efficient, and fair spectrum management, balancing industry growth with striking a balance between industry growth and national interests.

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**ANNEX 1- RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR FIXED POINT TO POINT LINKS.**

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Frequency Sub-Band	Frequency Range Upper (MHz)	ITU-Radio Recommendation (F-Series)/Others	Duplex separation (MHz)	Relevant Regulation and remarks	Channel Separations (MHz)
6 GHz	Lower 6 5925 – 6425	F.385 (Annex3)	260	--	5, 10, 20, 40
7GHz	Lower 7 7125- 7425	F.385 (Annex1) ECC/REC/ (02)06	161	--	1.75, 3.5, 7, 14, 28, 56
	Upper 7 7425-7900	F.385 Annex 4	245	--	1.75, 3.5, 7, 14, 28, 56
8 GHz	Lower 8 7900-8400	F.386 Annex 3	266	--	7, 14, 28
	Upper 8 8400-8500	F.386 Annex 2	119	Uni-Directional, shared with MOBILE	14
11GHz	10700-11700	F.387 CEPT/ERC/DEC/ (00)08	530	--	7, 14, 28, 56, 112
13 GHz	12750-13250	F.497 CEPT/ERC/REC 12-02 E	266	--	1.75, 3.5, 7, 14, 28, 56
15 GHz	14000 – 15350	F.497	490		3.5, 7, 14, 28, 56
18 GHz	17700-19700	F.595 Annex 4	1010	See Note (1a)	1.75, 3.5, 7, 13.75, 27.5, 55
23 GHz	21200-23600	F. 637 Annex 1 & 2	1008 1231	See Note (1b)	3.5, 7, 14, 28, 56, 112
26 GHz	24500 – 26500	F. 637 Annex 1 & 2	1008	See Clause (10.4)	3.5, 7, 14, 28, 56, 112
31 GHz	31000 – 31300	F.746-11 Annex 6 ECC/REC/ (02)02	140	TDD/FDD See Note (1c)	3.5, 7, 14, 28
	31500 - 31800				
32 GHz	31800-33400	F.1520	812	TDD/FDD	3.5, 7, 14, 28, 56, 112, 224
36 GHz	36000-37000	F.749 Annex 2	462	See Note (1c)	3.5, 7, 14, 28, 56, 112
38 GHz	37000-39500	F.749 Annex 1	1260	See Clause (10.4) See Note (1e)	3.5, 7, 14, 28, 56, 112, 224
42 GHz	40500 - 43500	F.749 Annex 2	1500	--	3.5, 7, 14, 28, 56, 112
49 GHz	48500 - 50200	ECC/REC12-11	884	--	3.5, 7, 14, 28, 56, 112
52 GHz	51400 - 52600	F.1496 Annex 1	616	-	3.5, 7, 14, 28, 56
56 GHz	55780 – 57000	F.1496 Annex 1	616	-	3.5, 7, 14, 28, 56
60 GHz	57000-66000	F.1497	-	See Note (1f) Note (3):	50, 100, ....., 2500
70/80	71-76 81-83	F.2006 Annex 2-part 3	10000		250, 500, ....., 4500
94 GHz	92-94/94.1-95	F.2006 Annex 1&2	1500		50, 100, 200, 300

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**ANNEX 3- The TRA position on some of Frequency Bands**

The Authority confirms that the frequency bands<sup>v</sup> listed below are identified for IMT; a migration plan could be established for Fixed Point to Point Links (P-P) to vacate one or more of the afore-mentioned bands

(a) Bands identification for International Mobile Telecommunications within the Fixed Service allocation

Frequency Bands (GHz)	Remarks
<u>6.425 – 7.125</u>	<u>See Resolution 220 (WRC-23)</u>
<u>24.25 – 27.5</u>	<u>See Resolution 242 (Rev.WRC-23)</u>
<u>37 – 43.5</u>	<u>See Resolution 243 (Rev.WRC-23)</u>

(b) No new assignments will be permitted in the following frequency bands

Frequency Bands (GHz)
<u>6.425 – 7.125</u>
<u>39.5 – 40.5</u>

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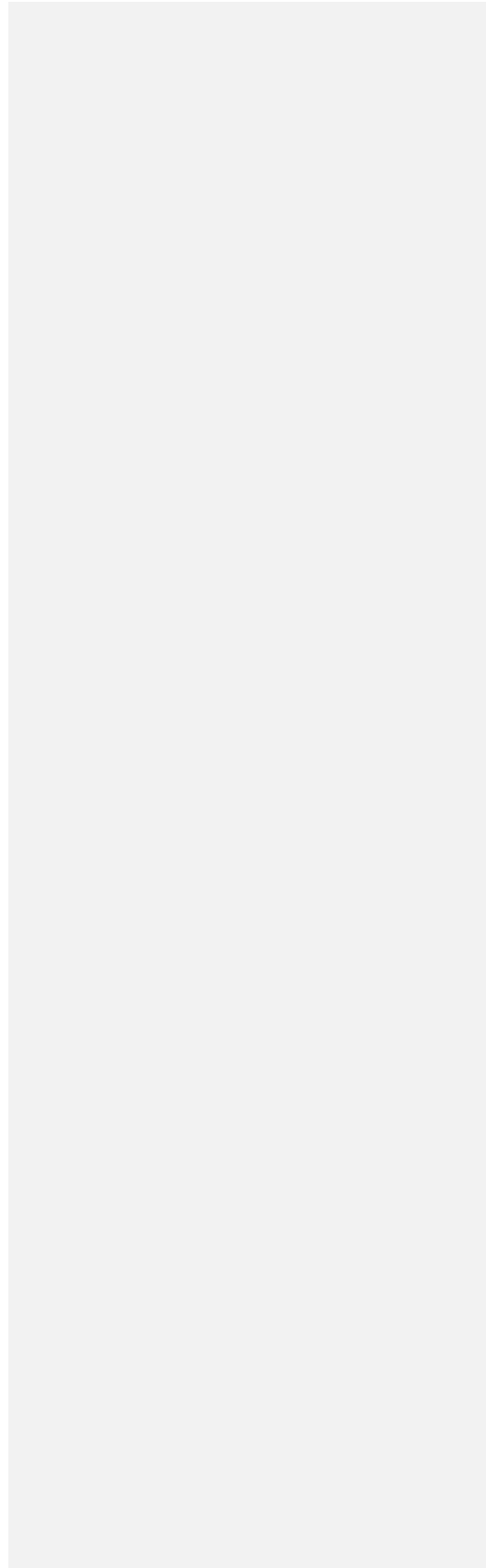
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<sup>v</sup> The Authority reserves its right to review the situation with regards to frequency assignments and to update the tables in accordance with the powers conferred on it by the Telecommunications Law.

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**ADDITIONAL PERFORMANCE PARAMETERS**

**Note (1):** In accordance with ITU-R Radio Regulations RR in line with the national interest, the following limits shall be taken into account when deploying fixed point to point links and ensure that it complies with any future revisions or have been or will be adopted in the Kingdom of Bahrain.

- a- In the frequency band 18.6-18.8 GHz the carrier power to the input of antenna shall not exceed -3dBW.
- b- In the frequency band 21.4-22 GHz stations shall not exceed a power flux-density of -120.4 dB (W/(m<sup>2</sup> · MHz)) at 3 m above the ground level of any point of the territory of neighbouring countries for more than 20% of the time. In calculations, the most recent version of Recommendation ITU-R P.452 should be used.
- ~~b-c-~~ According to RR footnote 5.149, users are obliged to take all practical steps to protect radio astronomy service against interference from their transmitting radio equipment.
- ~~e-~~ In the frequency band 36-37 GHz, the maximum elevation angle is 20 degrees, the maximum transmitter power at the input of antenna is -10 dBW or -7 dBW if ATPC is used.
- ~~d-~~
- ~~e-~~ The frequency bands 31.8-33.4 GHz, 37-40 GHz, 40.5-43.5 GHz, 51.4-52.6 GHz, 55.78-59 GHz and 64 66 GHz are available for high-density applications in the fixed service. Administrations For any frequency, the assignments part Authority will take this into account when considering the ITU's regulatory provisions in relation to these bands. Because of the potential deployment of high-density applications in the fixed-satellite service in the frequency bands 39.5-40 GHz and 40.5-42 GHz (see ITU-R footnote, No. 5.516B), the Authority will also consider potential constraints to high-density applications in the fixed service, as appropriate.
- ~~e-f-~~ In the band 55.78-56.26 GHz, the maximum power density delivered by a transmitter to the antenna is limited to – 26 dB(W/MHz). ETSI EN 302 217-2-2 provides characteristics and limits of Point-to-Point equipment in these bands, to be applied when link-by-link coordination procedure is applied.-

**Note (2):** In accordance with annex1 of the ECC Recommendation (09)01 Edition January 2009, the use of fixed wireless point to point systems in the band 57 - 64 GHz may be provided within the technical parameters stated below to provide coexistence with other services (e.g. Intelligent Transport System);

- Maximum EIRP: +55 dBm
- Minimum antenna gain: +30 dBi
- Maximum transmitter output power: +10 dBm

An additional limit on the transmit output power density (-10dBm/MHz) in the 59 - 64 GHz can be implemented to support the deployment of wideband systems (i.e. bandwidth higher than 100 MHz) by consequently limiting the maximum transmitter output power for narrow band systems (i.e. bandwidth lower than 100 MHz) below that of the maximum (+10dBm) allowed

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in the 59 - 64 GHz band. This limit will not apply for implement narrowband systems in the band.

Note (3); in accordance with the document of the technical specifications, and parameters approved by the Authority based on the Telecommunication Device Type Approval Regulation and the use of radiocommunication Devices. Where the assigned spectrum is used in conjunction with low power equipment, the Authority will change the authorisation approach for fixed wireless systems operating in the 57 - 66 GHz band to licence exempt. The Authority will also implement common technical conditions across the band for short range wideband data transmission systems and fixed wireless systems on a licence exempt basis.

Note (4Fer): For Fixed Point to Multi-point (P-MP): For the Point-to-Multipoint systems, the Authority encourages the use of systems, including antennae, that comply with the appropriate specifications specified in the latest version of ETSI EN 302 326-1 (Fixed Radio Systems - Multipoint Devices and Antennas) or relevant 3GPP specifications.

- a- The maximum equivalent isotopically radiated power (e.i.r.p.) of a station in the fixed or mobile service shall not exceed +55 dBW.
- b- The power delivered by a transmitter to the antenna of the station in the fixed or mobile service shall not exceed +10dBw.
  - the bands are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis for the beacon transmissions intended for up-link power control. Such space-to-Earth transmissions shall not exceed an equivalent isotopically radiated power (e.i.r.p.) of +10 dBw in the direction of adjacent satellites on the geostationary-satellite orbit.

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## **ANNEX 2 - CONSULTATION QUESTIONS**

- Q1 Do you agree with the TRA's proposal to revise the list of permitted frequency bands by prohibiting new assignments in 6.425–7.125 GHz and 39.5–40.5 GHz, while allowing existing assignments to continue? Please explain and provide justifications.
- Q2 Do you agree with the TRA's proposed updates to Annexes 1 and 2? Please explain and provide justifications.
- Q3 Do you agree with the addition of Annex 3 listing IMT bands within the Fixed Service allocation and specifying frequency ranges where new assignments are prohibited? Please explain and provide justifications.
- Q4 Do you agree with the expansion of the performance parameters section, including the introduction of ITU-RR footnotes, ETSI standards, recognition of high-density fixed service bands, and the additions of Notes (3) and (4)? Please explain and provide justifications.
- Q5 Do you have any other comments not considered specifically above that you wish to raise?

### **ANNEX 3 – SUBMITTING A RESPONSE**

- 1 The Authority invites comments on this consultation paper from all interested parties. Comments should be submitted no later than **30 November 2025 by 4pm.**
- 2 Responses to this document should be in a Microsoft Word format and must be accompanied by a consultation coversheet which can be downloaded from the TRA website.
- 3 Responses should be sent to the Authority for the attention of the General Director by email to [rft@tra.org.bh](mailto:rft@tra.org.bh).
- 4 Alternatively, responses may be sent to the address below:  
The General Director  
Telecommunications Regulatory Authority  
P.O. BOX 10353, Manama, Kingdom of Bahrain
- 5 Responses should include direct answers to the questions asked in the consultation paper. Interested parties are encouraged to provide answers that are fully substantiated and supported as far as possible by evidence. The questions are listed at Annex 2. Respondents do not have to answer all the questions in the consultation if they do not have a view; a short response is fine, the Authority also welcomes joint responses.
- 6 Respondents who wish to discuss the questions raised in this consultation paper may email [rft@tra.org.bh](mailto:rft@tra.org.bh) .

#### **Confidentiality**

- 7 In the interest of transparency and good regulatory practice, the Authority, subject to the confidentiality of the information received, will publish all responses received on its website as soon as it receives them. The Authority will evaluate requests for confidentiality in line with relevant legal provisions and the Authority's published guidance on the treatment of confidential and non-confidential information.<sup>1</sup>
- 8 Respondents are required to fill out the consultation coversheet and clearly mark any information included in their submission which is considered confidential. Where such confidential information is included, respondents are required to provide both a confidential and non-confidential version of their submission. If a submission is marked confidential in its entirety, reasons for this should be provided. The Authority may publish or refrain from publishing any document or submission at its sole discretion.

#### **Next steps**

- 9 Once the Authority has received and considered responses to this document, the Authority will decide whether/how to proceed.

<sup>1</sup> [https://tra-website-prod-01.s3-me-south-1.amazonaws.com/Media/Documents/Position Papers & Guidelines/20220922120746880\\_2u01vqdj\\_mah.pdf](https://tra-website-prod-01.s3-me-south-1.amazonaws.com/Media/Documents/Position Papers & Guidelines/20220922120746880_2u01vqdj_mah.pdf)