

17 December 2021

Telecom Regulatory Authority of India (TRAI)  
Mahanagar Doorsanchar Bhawan  
Jawaharlal Nehru Marg  
New Delhi: 110 002  
INDIA

Attention: Shri Syed Tausif Abbas, Advisor (Networks, Spectrum and Licensing)  
via [advmn@traai.gov.in](mailto:advmn@traai.gov.in)

Dear Sir

**SUBMISSION TO TRAI IN RELATION TO THE PUBLIC CONSULTATION PAPER: AUCTION OF SPECTRUM IN FREQUENCY BANDS IDENTIFIED FOR IMT/5G**

Reference is made to the public consultation paper - *Auction of Spectrum in Frequency Bands Identified for IMT/5G* - published on 30 November 2021 seeking comments on changes in the licensing/policy framework to facilitate TSPs to meet the demand for Private Cellular Networks.

Windsor Place Consulting as an internationally recognised outstanding provider of advice to the information industries is pleased to provide our comments. The firm, established in 2000, works extensively in telecommunications, media, and information technology. WPC has been involved in advising international organisations including the ITU, World Bank, ASEAN, APT, and the GSMA, investors, operators, Governments and regulators in Australia, Asia and the Pacific.

**Overall comments**

Firstly, any discussion on 5G spectrum needs to be prefaced by a strong statement that WPC are highly supportive of the release of larger contiguous blocks of IMT spectrum and that IMT spectrum prices should be reasonable. In particular, WPC supports the use of the multiple approaches used by TRAI to arrive at a reasonable valuation to determine reserve price, and supports a technology neutral approach. In this respect I would refer you to the APT series on the *Allocation and Licensing of 5G spectrum* which I was honoured to present in June to August 2021 (see <https://candy-goat-77f.notion.site/Series-on-Spectrum-Management-SM-f5d0e03bb24b47fba5da499e1c755655>)

**Additional 5G spectrum - 6 GHz band**

One band which is not mentioned in the TRAI consultation paper is the 6 GHz band. To assist in required changes in the licensing/policy framework to facilitate TSPs to meet the demand for Private Cellular Networks please see the recently published WPC paper titled - *Optimising IMT and Wi-Fi spectrum allocation: The compelling case for 6 GHz band partitioning in Asia-Pacific* - for the TRAI's kind consideration.

It is critical that the Asia-Pacific – including India – critically examine its approaches to mid-band spectrum for 5G, inclusive of the 6 GHz band. In regard to the 6 GHz band, we would kindly submit there is a compelling case for the TRAI to allocate the lower part of the 6 GHz band (5925-6425 MHz) for unlicensed use with the **upper part of the band (6425- 7125 MHz) to be allocated for IMT services in India as soon as practicable.**

The major reasons for this recommended approach to the TRAI include:

- (i) An need for additional mid-band spectrum in India which could be partially addressed by the partitioning of the 6 GHz band. Early field studies show that the 6 GHz band is a very good substitute for the 3.5 GHz band in terms of performance;
- (ii) A large allocation to Wi-Fi does not of itself address the digital divide in India: The allocation of the entire 6 GHz band for unlicensed use does not provide additional coverage and help bridge the country's urban digital divide which COVID-19 pandemic has highlighted is a key public policy issue;
- (iii) The allocation of 1.2 GHz of prime spectrum to Wi-Fi is not supported by any demand analysis. Further, such a decision would be premature as experience and studies are showing that faster broadband services (especially 5G)/larger data allowances/ recharges mean reduced Wi-Fi offload;
- (iv) Strong FWA growth in India supports an IMT allocation in the 6 GHz band: Growth in 4G and 5G FWA in the country (especially in areas which underdeveloped fixed network infrastructure especially fibre deployments) would be supported by reservation of additional mid-band spectrum in the 6 GHz band to support additional users and higher download usage patterns;
- (v) The likely economic benefits to India are maximised with shared allocation of the 6 GHz band spectrum as the short and long term economic benefits of improved IMT and Wi-Fi services can both be secured;
- (vi) Partitioning the 6 GHz band assists India in future proofing for future 5G advanced and 6G services;
- (vii) Making more IMT spectrum in the 6 GHz band supports strong mobile/ wireless competition in India by making available 700 MHz of additional mid-band spectrum. This will ensure at least 3 to 4 MNOs in a market have sufficiently large IMT spectrum portfolios to provide high speed, high quality wireless broadband and to be viable/sustainable in commercial terms; and
- (viii) Possible additional proceeds to the Indian Government arise from the allocation of IMT spectrum in the 6 GHz band.

In terms of technical issues, it is further recommended that:

- **Lower part of the band:** The allocation of the lower part of the 6 GHz band (5925-6425 MHz) for unlicensed use should generally be restricted to indoor use with a maximum mean EIRP 250 mW (23 dBm), or very low power 25 mW (14 dBm) outdoor; and
- **Upper part of the band:** The allocation of the upper part of the 6 GHz band (6425-7125 MHz) for IMT use, will be subject to addressing the possible interference/co-existence issues in relation to existing 6 GHz services, namely FSS and FS services.

I would be pleased to answer any questions which the TRAI has in relation to this submission. Please contact me on [scott.minehane@windsor-place.com](mailto:scott.minehane@windsor-place.com) or on +61 412 995535.

Yours sincerely,



Scott W Minehane  
Managing Director