RJIL/TRAI/2025-26/502
16th July 2025

To,

Shri Akhilesh Kumar Trivedi,
Advisor (Networks, Spectrum and Licensing)
Telecom Regulatory Authority of India,
Tower-F, World Trade Centre,
Nauroji Nagar, New Delhi – 110029.

Subject: **RJIL's counter comments on TRAI's Consultation Paper on Assignment of the Microwave Spectrum in 6 GHz (lower), 7 GHz, 13 GHz, 15 GHz, 18 GHz, 21 GHz Bands, E-Band, and V-Band.**

Dear Sir,

Please find enclosed the count comments of Reliance Jio Infocomm Limited (RJIL) on the TRAI's **Consultation Paper on Assignment of the Microwave Spectrum in 6 GHz (lower), 7 GHz, 13 GHz, 15 GHz, 18 GHz, 21 GHz Bands, E-Band, and V-Band** dated 28.05.2025.

Thanking you,

Yours Sincerely,
For **Reliance Jio Infocomm Limited**

KAPOOR SINGH GULIANI

Digitally signed by KAPOOR SINGH GULIANI
Date: 2025.07.16 14:25:59 +05'30'

Kapoor Singh Guliani
Authorized Signatory

Enclosure: As above

Reliance Jio Infocomm Limited's counter comments on TRAI's Consultation on "Assignment of the Microwave Spectrum in 6 GHz (lower), 7 GHz, 13 GHz, 15 GHz, 18 GHz, 21 GHz Bands, E-Band, and V-Band" dated 28th May 2025

1. Reliance Jio Infocomm Limited (RJIL) thanks the Authority for giving us the opportunity to respond to stakeholders' comments on the Consultation Paper **('CP')** on **"Assignment of the Microwave Spectrum in 6 GHz (lower), 7 GHz, 13 GHz, 15 GHz, 18 GHz, 21 GHz Bands, E-Band, and V-Band" dated 28th May 2025.**

2. At the outset, it is submitted that many stakeholders have commented in a manner that makes them seem oblivious to the evolving spectrum usage across the globe. It is reiterated that the spectrum usage is evolving at a never before pace and no one can claim with authority that a particular spectrum band would only continue to be used as per its current usage over the years, the same applies to traditional backhaul spectrum. The spectrum in microwave bands, E-band and V-Band is increasingly being planned for Integrated Access Backhaul (IAB).

3. We believe that the potential of 7GHz, 15GHz, E-band and V-band will further unleash as we move towards 6G. Future 6G networks will enable a new immersive age of sensory and ubiquitously enriched digital experiences, requiring deeper evolution of the spectrum blueprint including exploring new frequency bands in the cmWave and mmWave ranges. There is significant global activity around utilizing these frequency bands for next-generation wireless communications. Therefore, the spectrum is invaluable for wireless communications in the country and should be treated as any other 5G/6G spectrum band for valuation and auction.

4. We have had the opportunity to go through the responses submitted by the various stakeholders and the stakeholders' comments can be divided into the following broad categories:

   A. Reserve all spectrum in Microwave Access (MWA) Carriers and Microwave Backbone (MWB) bands and E-Band and V-Band for backhaul purposes only.
   B. Make sure that spectrum 18 GHz band and E-Band and V-band is available for space-based service.
   C. Only administrative assignment of spectrum in MWA, MWB Bands and E-Band and V-band
   D. Delicense spectrum in V-Band
   E. Spectrum cap: stakeholders have proposed different spectrum caps ranging from 2 carriers to 8 carriers depending on different spectrum bands.
   F. P2P assignment of MWA/MWB for TSPs holding other than Access Service Authorisation and non-TSPs should be persisted with.

Our counter comments to these issues are detailed below

A. Stakeholder submission: Reserve all spectrum in Microwave Access (MWA) Carriers and Microwave Backbone (MWB) bands and E-Band and V-Band for backhaul purposes only.

RJIL Response:

5. At the outset, we submit that it is evident from the DoT reference dated 13.09.2024 that the Government recognizes that notwithstanding the enactment of Telecommunication Act 2023, the international regulatory landscape has seen some changes at WRC 2023 and there is a consideration of different usage of traditional backhaul bands as well as better understanding of multi-faceted usage of spectrum in E-Band and V-Band.

6. As noted in DoT reference and also recorded in consultation paper, the 7 GHz and 16 GHz bands are already being considered for IMT i.e. Access spectrum, while there is a demand to use spectrum on 6/7/13 GHz as last mile connectivity solutions.

7. Further, with regards spectrum in E-Band and V-Band, the DoT reference duly acknowledges the usage as "Access", "Backhaul" and "Integrated Access Backhaul (IAB)" and has sought recommendations accordingly. Therefore, the contention that the spectrum in all MWA, MWB bands and E- Band and V-Band should be only for backhaul is a backward-looking suggestion and should be ignored. It is worthwhile to remember here that these stakeholders have generally opposed all forward-looking technological innovations be it LTE, VoLTE, MNP and their suggestion on keeping the spectrum blocked for backhaul only should be dismissed outrightly.

8. As mentioned above, the use of spectrum is evolving at a never before pace and spectrum administrators and regulators have to remain vigilant and flexible to all the changes in spectrum marketplace, as **no one can claim with authority that a particular spectrum band would only continue to be used as per its current usage over the years.**

9. Thus, there is a need to unencumber the so-called traditional backhaul spectrum and explore these for access and IAB use. The ongoing discussions around IMT use of 7 GHz and 15 GHz bands clearly demonstrates the substance behind the submission that traditional backhaul is no longer backhaul only. Pertinently, even the stakeholders seeking all this spectrum for only backhaul have agreed to reserve 7 GHz for access once WRC decision is in place.

10. **Therefore, we request the Authority that there cannot be usage and service specific restrictions on any spectrum band like limiting it only for backhaul use and the TSPs should have the freedom to deploy all spectrum as per their requirements and business case.**

B. Stakeholder submission: Make sure that spectrum 18 GHz band and E-Band and V-band is available for space-based service.

11. Some of the stakeholders have advised the Authority to be cautious about assigning spectrum in 18 GHz as these frequencies are relevant for satellite-based FSS operations and that this spectrum is useful in communications with gateway stations, customer terminals

etc. Similar submissions have been made about the utility of spectrum in E-Band to meet future capacity demand for satellite-based services.

12. We submit that by these suggestions the stakeholders seem to seek reservation of spectrum for their use, instead of seeking to obtain the spectrum at market price so that they can use it as deemed necessary. This suggestion is not only inappropriate but goes against every tenet of regulatory predictability and level playing field.

13. **Further these suggestions are also against the optimum utilization of spectrum resources and are exhorting the Authority to defy the DoT reference.** We submit that no spectrum that has a current and existing demand can be reserved for possible future use by some entity. 18 GHz band is an important band for microwave backhaul technology and should not be reserved for any one technology.

14. However, considering the multiple use cases, including the demand for reserving this spectrum for FSS access services under yet to be licensed satellite-based communication service providers indicate that this spectrum is suitable for different services and therefore an apt candidate to be assigned through auction.

C. Stakeholder submission: Only administrative assignment of spectrum in MWA, MWB Bands and E-Band and V-band

RJIL Response:

15. At the outset, we submit that it is evident from the DoT reference that the decision has not been taken for assignment methodology for any of the spectrum bands under discussion. DoT has clearly mentioned that the developments subsequent to the enactment of the Telecommunications Act 2023, should be taken into consideration. Further, it has explicitly asked TRAI to examine the assignment methodology of access, AIB and backhaul usage of E-Band and V-Band.

16. We bring the Authority's attention to following facts that emerge from the CP and comments by stakeholders

    a. **The Consultation paper and DoT reference note that access providers are interested in using the MWA/MWB spectrum for last mile connectivity to wireline users.**
    b. **TSP has sought permission to use E-Band spectrum as access and IAB.**
    c. **Satellite-based communication service providers are seeking 18 GHz band and E-Band for FSS i.e. access services.**
    d. **TSPs are requesting to reserve 7 GHz band for IMT post WRC decision on the subject.**
    e. **DoT reference has noted that V-Band i.e. complete 57-71 GHz band has been planned by 3GPP as IMT/Access Band.**
    f. **One ISP holder has sought E/V band spectrum for last mile connectivity purpose.**

17. It is evident from the above facts that there is a demand for spectrum in traditional backhaul bands and spectrum in E-Band and V-Band for multiple usage that includes usage as **Access Spectrum.** Thus, these spectrum bands cannot be termed 'backhaul' in terms of First Schedule of Telecommunications Act 2023.

18. Further, the DoT reference also indicates that the assignment methodology is open for discussion and administrative assignment is not pre-decided for these spectrum bands. Thus, in this scenario the only viable and legally tenable mode of assignment is auction of spectrum.

19. It is also reiterated that spectrum auction, besides being the only legally tenable mean of assigning spectrum, is also the only mode of spectrum assignment that delivers the full promise of technology to the actual owners of the spectrum i.e., consumers.

20. The auctions promote efficient utilization and put spectrum in hands of those most suitable to use the spectrum. Auction brings the much-wanted competition and innovation in services and pricing and helps deliver services at their most affordable levels. **Auction is the only blemish free mode of assignment as it delivers fairness, transparency and prevents cartelization and leads to additional infrastructure creation that has a trickle-down effect on the economy, especially in rural areas.**

21. Further, the proposal for administrative assignment of the spectrum bands under discussion should be completely rejected **as it is not only legally untenable but also encourages favoritism, non-level playing field, violates "Same Service Same Rule" principle apart from coming at a great loss to the exchequer; causing technical issues like interference; bringing in inherent inefficiencies and is detrimental to investor's confidence.**

22. It is reiterated that any other mode of spectrum assignment for any other usage/service will not be feasible, as co-existence of exclusive use spectrum with non-exclusive use spectrum in same bands would lead on major interference issues. Further, the spectrum use by majority of the user categories are not for the uses which are different from the broadband services but they either fall under the subset (e.g. VPN, MPLS, CNPN etc) of the broadband services or are substitute (e.g. public Wi-Fi, GMPCS, VSAT) of IMT based broadband services. Therefore, there is no need of any different assignment methodology under the guise of uses by other user categories.

23. In view of the above and considering the importance of these spectrum bands, the Authority should focus on a legally tenable, predictable, transparent and investor friendly mode of spectrum assignment for these bands. In compliance with the Hon'ble Supreme Court's order in 2012, India has used the most beneficial and transparent mode of Auction to assign spectrum for use in commercial public networks in the country and there is no reason or justification to reverse the Hon'ble Supreme Court decision for MWA, MWB carriers and spectrum in E-Band and V-Band.

D. Stakeholder submission: Delicense spectrum in V-Band

RJIL Response:

24. It is reiterated that WRC-19 has already identified the upper portion of V band (66-71 GHz) for IMT / 5G services, and **no country has delicensed this band post that. 3GPP has already identified 52.6-71 GHz for 5G NR (New Radio).** With passages of time, therefore, the lower portion of spectrum is likely to be considered for IMT (5G/6G) services.

25. It is pertinent to mention that due to technological advancement, the same broadband services (internet access services) can be provided through Wi-Fi technology or 5G (NRU) network built over delicensed spectrum. Therefore, delicensing of spectrum not only creates cost arbitrage between the operator providing services on licensed spectrum and other operators but will also lead to huge loss to exchequer. **Therefore, the study of competition and value of such spectrum should be at the heart of any decision-making process on delicensing of more spectrum in any band including in V-Band.**

26. Further, delicensing is an irreversible process and always leads to indiscriminate and inefficient use and is normally done in spectrum band which are not suitable for the IMT technologies**.**

27. Notwithstanding the above, it may be noted that over 1300 MHz of spectrum is already delicensed, and it is not fully utilized anywhere and therefore the demand for additional delicensing need to be considered keeping in view availability of this huge chunk of unutilized spectrum.

28. We reiterate that the demands to delicense V band are not justified**.** Further, wide, and indiscriminate adoption of delicensed spectrum will cause serious interference issues thus rendering these bands technically unusable for IMT services.

E. Stakeholder submission: Spectrum cap: stakeholders have proposed different spectrum caps ranging from 2 carriers to 8 carriers depending on different spectrum bands.

RJIL Response:

29. A plain reading of the arguments submitted by the stakeholders indicate the self-contradictions and anomalies. **On the one hand the stakeholders feel that requirement of so-called backhaul spectrum in MWA and MWB bands will continue to increase, on the other they are proposing artificial restrictions on the assignment and in many cases feel that the current assignment limits are optimum.**

30. This argument is made despite the marked under-utilization. The CP itself indicates around 20% utilization. **Thus, the composite proposal is to continue using the same amount of**

spectrum at a lesser charge, if accepted by DoT, while a pile of spectrum sits idle at the cost to Exchequer.

31. We submit that all these contradictions are result of aversion for auction of spectrum. The Auctions will come out with the market value of spectrum and will increase the utilization. It may be borne in mind that same stakeholders were happy with pre-2010 auction, administrative spectrum assignments of 6.4 MHz to 10 MHz.

32. **However, sometimes to achieve national goals a certain status quo has to be broken. Thus, we submit that all spectrum should be put to auction and overall batch wise cap of 40% for MWA, MWB and E-Band and V-Band, as submitted in our comments should be implemented.**

F. Stakeholder submission: P2P assignment of MWA/MWB for TSPs holding other than Access Service Authorisation and non-TSPs should be persisted with.

RJIL Response:

33. We submit that the proposal of continuation of link-by-link allocation has been floated simply to continue with the status quo position, without providing any technical justification. We reiterate our submission that this would lead to in-efficient utilization of spectrum resource. The interference caused by link-to-link allocations would be difficult to manage and timely mitigation of such issues on a daily basis would be nearly an impossible and herculean task for the WPC.

34. The more prudent approach is allocating the spectrum on LSA basis through auction. This will provide the service providers with exclusive use spectrum and provide them much-needed flexibility for usage of the spectrum based on the evolving requirement. We understand and recognize the need for link-by-link spectrum and the same for spectrum for smaller geographical locations or captive use and have already proposed a liberal and decentralized spectrum leasing policy that will enable the smaller players to lease this spectrum in some specific areas from multiple parties.

35. It is also reiterated that the link-by-link allocation of a large number of short-haul links has proven to be an inadequate arrangement in the long run. MWA spectrum was also initially allocated on link-to-link cases, however, with increasing number of BTS, administration of such allocation became a herculean task and effectively compelled the Government to migrate to exclusive LSA based assignment with license fee as percentage of AGR. Further, with high frequency in E and V band, the number of links are expected to be in multiples times of MWA links making such an allocation impractical. Furthermore, due to short range of the E&V band spectrum, it would be impossible to detect and enforce the illegal/ unlicensed use of these bands by WPC/WMO/DoT. On the other hand, LSA wise assignment to any entity will resolve such problem.