DG/COAI/TECH/2025/3114

18 November, 2025

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Advisor (Networks, Spectrum, and Licensing),
Telecom Regulatory Authority of India,
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Subject: COAI Counter Comments to the TRAI Consultation Paper on the Auction of Radio Frequency Spectrum in the Frequency Bands Identified for International Mobile Telecommunications (IMT)

Dear Sir,

This is with reference to the TRAI Consultation Paper on the "Auction of Radio Frequency Spectrum in the Frequency Bands Identified for International Mobile Telecommunications (IMT)" released on September 30, 2025.

In this regard, please find enclosed COAI Counter Comments to some of the responses submitted by the stakeholders on the Consultation Paper.

We hope that our submission will merit your kind consideration and support.

Sincere regards,

Signed on: 18-11-2025 19:13:26
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DG
COAI
Signature Valid From: 2025-02-22 10:45:32
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COAI Counter Comments on Consultation Paper on the Auction of Radio Frequency Spectrum in the Frequency Bands Identified for International Mobile Telecommunications (IMT)

1. We thank the Authority for providing us opportunity to offer counter comments to the comments submitted by stakeholders on Consultation Paper on the Auction of Radio Frequency Spectrum in the Frequency Bands Identified for International Mobile Telecommunications (IMT).

2. Further, we would like to make the following submissions with regard to the responses of the different stakeholders to the present consultation:

   a. One of the stakeholders has stated that:

      i. **The Upper 6GHz band should be completely delicensed and not auctioned.**
      ii. **Delicense Upper 6GHz band and permit Wi-Fi low-power indoors (LPI) & VLPI (Very Low Power) to unlock consumer and enterprise benefits now.**

3. **COAI Counter Comments:**

   a. The approach of delicensing the lower portion of 6 GHz band (5925-6452 MHz) for Wi-Fi and reserving only the upper portion of 6 GHz band (6425-7125 MHz) for IMT/5G services does not align with India's connectivity realities and would undermine India's 6G ambitions:

      i. India remains a mobile-first nation, with over 95% of users accessing the internet through cellular networks.
      ii. Countries that delicensed 6 GHz, such as the U.S.A. and Europe, already possess dense fiber backhaul and extensive fixed broadband coverage which India does not.
      iii. Over 600 MHz of spectrum in the 5 GHz band and 80 MHz in the 2.4 GHz have already been delicensed for Wi-Fi, much of which remains underutilized - including 255 MHz of spectrum in the 5 GHz band.

   b. Hence, linking broadband growth with further **delicensing is misleading and counterproductive. Licensed IMT spectrum ensures quality-of-service, predictable performance and nationwide scalability**, all of which are vital for Digital Bharat and 6G applications such as connected mobility, automation and industrial networks.

   c. **Delicensing even a part of this crucial 6 GHz band would be an irreversible action, permanently foreclosing its use for licensed mobile broadband services and severely limiting India's long-term digital capacity and provision of affordable services.** Moreover, unlicensed Wi-Fi deployments by global OTT players and device manufacturers could preclude licensed usage in the band,

reduce exchequer revenues and give disproportionate advantage to foreign OTT players, creating an inequitable environment for telecom operators.

d. It is pertinent to mention here that post WRC 23, no country has delicensed this spectrum and there is a rethink in countries where this spectrum has already been delicensed, as this spectrum is critical for 6G. There are reports[1] of Europe taking steps on reversing the delicensing of this spectrum. We urge the Authority and the Government to avoid this misstep and ignore the fictitious figures of national loss if spectrum is not delicensed. Further, consideration on any requests for delicensing should be preceded by a forensic audit of utilization of current delicensed bands.

4. **One of the stakeholders also recommended that**:

   a. **Some spectrum should be 'carved out' or reserved for new market entrants** [smaller players viz. startups and others] who are seeking different categories of spectrum (for IoT/M2M,Smart Cities, enterprise connectivity and enterprise use case, etc.) which would lower entry barriers and encourage indigenous IoT solutions.

   b. **There should be a separate 'auction' which should be exclusively for smaller players & startups** with reduced or ' lighter' eligibility criteria (lower Turnover, lower Reserve Price, Permit spectrum to be given at town/district level , reduced rollout obligations, etc.. This would ensure increase in number of players and also more competition and also guarantee access spectrum for these startups and other smaller players.

5. **<u>COAI Counter Comments</u>:**

   a. **Permitting entities with lower entry-fee authorizations to participate in spectrum auctions will neither enhance competition nor contribute meaningfully to sectoral growth**. The entry fee for most service authorizations is negligible compared to the spectrum cost, and therefore, does not constitute a genuine barrier to entry. Any entity—new or existing—can participate in auctions by submitting an undertaking to obtain the relevant authorization. Accordingly, creating differentiated categories of licensees based on entry fee or authorization type would serve no real purpose and could instead give rise to huge consequences of spectrum fragmentation, non-transparency in spectrum auctions, back-door entry, discrimination, regulatory uncertainty and disputes regarding the scope of license and permissible services.

   b. Further, such proposals will lead to fragmentation and inefficient use of the spectrum. If spectrum in a band is assigned at city level then the same spectrum will become unusable for commercial operations in rest of LSA, as TSPs require

[1] https://telecom.economictimes.indiatimes.com/news/industry/europes-telecom-giants-win-major-spectrum-battle-against-tech-titans/125288424?utm_source=top_story&utm_medium=homepage

at least LSA level availability of spectrum to plan the network. Thus, the spectrum will go unsold in rest of LSA.

c. Further, this could in fact reduce competition in the auction, as carving out spectrum blocks for this chosen group will reduce the spectrum availability in main auction and there is a possibility that the left-over spectrum post carving, may not fit into any bidder's auction plans and may remain unsold, as with the evolving consumer demand and bandwidth hungry apps, the TSPs prefer to have wider channels. Thus, the carving out can leave the spectrum unsold, a counter outcome to TRAI's desire of wanting more competition in auction.

d. We further submit that the proposal of spectrum auction at two different reserve price will be unfair and anti-competitive and will not be legally tenable. Fair and transparent auction of spectrum is the basic requirement under the Hon'ble Supreme Court's 2G judgement and this proposal seeks to violate the same and should be rejected. We further submit that such tilting of level playing field will also not pass the scrutiny of competition law and if allowed can be misused by unscrupulous elements to acquire cheaper spectrum for later trading gains,

e. We submit that this proposal is nothing but another trick to get free or cheap spectrum without facing the vigours of competition and should not be encouraged.

f. **Adequacy of the Current Auction Framework**: The existing spectrum auction framework is robust, transparent, and flexible, ensuring open participation and fair competition among all eligible entities. It sufficiently safeguards the twin objectives of efficient spectrum use and non-discriminatory access. Hence, no further alteration or introduction of special categories of licensees is warranted.

g. **We strongly oppose extending eligibility entry to startups or Internet Service Providers (ISPs) that do not currently hold unified access service licenses or demonstrate the requisite operational capabilities to deploy and manage telecom networks at scale**. It is crucial to highlight that telecom spectrum auctions allocate a critical public resource essential for nationwide digital infrastructure and service delivery. Therefore, the Government must prioritize bidders capable of efficiently utilizing spectrum to enhance coverage, capacity, and quality of service.

h. **Infact, the eligibility criteria and associated eligibility conditions for participation in the forthcoming IMT spectrum auction, should remain as is it was during the 2024 spectrum auction, and the IMT spectrum should be assigned only to access authorisation holders only.**

6. **Reserve Price as a ratio to Valuation**- As mentioned in the comments of many of the stakeholders, we recommend the ratio of Reserve price for the auction of

spectrum should be rationalised to 50% of the valuation of the spectrum, to ensure free play of competitive market forces.

7. We would also like to take this opportunity to enclose, alongside this submission, our comments submitted earlier to this TRAI Consultation Paper as **Annexure-1**. This may be read along with, and kindly considered as part and parcel of, the present counter comments.

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ANNEXURE-1

Consultation Paper on the Auction of Radio Frequency Spectrum in the Frequency Bands Identified for International Mobile Telecommunications (IMT)

Our issue wise response is as follows:

Q1. What measures should be taken to enhance competition and mitigate over-supply of the spectrum in various frequency bands in the forthcoming auction? Please provide a detailed response with justifications.

COAI Response

1. **There is no structural over-supply of spectrum in India**. In fact, the spectrum demand by our TSPs is strong and growing. The response to previous auctions does not signify demand supply gap or lack of competition, on the contrary it is a natural corollary to spectrum sale in previous spectrum auctions and ease of planning afforded to service providers by annual auctions.

2. We understand more often than not the lack of spectrum sale in an auction is a function of various factors including but not limited to high reserve prices, device ecosystem and financing terms, and not the lack of need of spectrum.

3. We submit that Spectrum is a critical resource for mobile networks. Availability of 'adequate spectrum' at the 'right price' is central to the growth of the telecom sector. Right price means that prices should be at a level that should ensure the financial sustainability of the mobile industry and affordability of the services.

4. **Availability of spectrum**: It is important to note that all IMT spectrum bands have a specific purpose in modern 4G/5G data networks. For instance, sub-GHz bands are essential for the coverage of the network while Mid and High bands are essential for capacity. Since all the bands have a complementary role, these must be auctioned simultaneously for efficient designing of the network and to deploy various use cases. It is thus important that entire available spectrum in existing bands is put for bidding in the forthcoming auction.

5. India has traditionally relied on spectrum auctions, but these have frequently been hindered by excessive reserve prices, leading to unsold spectrum and contributing to spectrum scarcity. In other instances, high reserve prices contributed to higher final prices paid by operators. Simultaneously, due to the already accumulated spectrum cost for the operators, meant that in the last few auctions, they were only able to pay much less per unit of additional spectrum.

6. The latest generations of mobile networks use spectrum more efficiently, allowing data to be transmitted at a rate that is tens of times faster per each MHz of spectrum

compared to the efficiency of early 2G networks. However, demand for data has grown even faster than these improvements in efficiency of spectrum use. Operators have therefore needed to acquire additional spectrum to realise the full potential of 4G and 5G technologies.

7. The cost of spectrum has always been high for TSPs in India. The acquisition of new bands to support 5G and improved 4G networks by TSPs in India has led to the spectrum cost burden gradually increasing between 2015 and 2023. This currently stands at 26% of operator recurring revenues and is among the highest in the world. There is a need for concrete steps to reduce this price burden. There is no case for artificially curtailing spectrum supply.

Q2. Whether the entire available spectrum in the existing bands viz. 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, and 26 GHz band should be put to auction in the forthcoming auction?
(a) If yes, what measures should be taken to ensure effective competition in the forthcoming auction?
(b) If no, what quantum of spectrum in each of the frequency bands should be put to auction in the forthcoming auction? Kindly provide a detailed response with justifications.

COAI Response:

1. **Yes, entire available spectrum in the existing bands viz. 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, and 26 GHz band should be put to auction in the forthcoming auction**.
2. Fragmentation of the bands or lower availability will be a retrograde step and consequently not be sufficient for deployment of 5G by four operators as only 4G can be deployed in the limited spectrum bandwidth.

Q3. Whether the band plans, which have been adopted for the existing bands viz. the 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, and 26 GHz bands in India, should be retained in the forthcoming auction? If no, kindly suggest new band plan(s) for the existing bands with detailed justifications.

COAI Response:

1. **COAI strongly supports retention of the current band plans** for the 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, and 26 GHz bands.
   This approach will:
   a. Preserve spectrum contiguity and operational efficiency;
   b. Protect existing network investments;
   c. Ensure international harmonisation and device ecosystem support; and
   d. Maintain regulatory stability essential for ongoing and future network deployments.

Q4. Whether the spectrum in the existing bands viz. 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, and 26 GHz bands should be auctioned on Telecom Circle/ Metro Area basis with a validity period of 20 years in the forthcoming 201 auction? If no, what should be the area, and validity period of spectrum assignment in the existing bands? Please provide detailed response with justifications.

COAI Response

1. The bands viz. 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, and 26 GHz bands **should be auctioned on Telecom Circle/ Metro Area basis.**

2. This is consistent with the framework adopted in all previous auctions since 2010. This method is well-established, administratively efficient, and reflective of India's **licence service area structure under the Unified Licence (UL)** regime.

3. The **validity period for these bands should be retained to *20-years while providing TSPs the option to extend it to* additional 10-20 years before expiry**

4. There is no need to change the licensed service area (LSA) wise assignment. Any move toward smaller service areas (e.g., district-level) would create regulatory discontinuities and add complexity to spectrum assignment, network planning, and interference coordination.

Q5. Whether the block size and minimum quantity for bidding in the existing bands viz. 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, and 26 GHz bands should be kept the same in the forthcoming auction as those in the spectrum auction of June 2024 as mentioned in Table No. 2.14 of this consultation paper? If not, what should be the band-wise block size and minimum bid quantity? Kindly provide a detailed response with justifications.

COAI Response

1. The block size and minimum quantity for bidding in the existing bands viz. 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, and 26 GHz bands should be kept the same in the forthcoming auction as those in the spectrum auction of June 2024.

2. The TSPs have deployed networks and planned holdings based on the current block configurations. Retaining these parameters will:
   a. Preserve **contiguous holdings** already acquired and optimised through prior auctions;
   b. Avoid re-engineering of existing radio configurations and interference boundaries; and

c. Simplify integration of newly acquired blocks with current spectrum, particularly in the **3300 MHz mid-band** and **26 GHz mmWave band**, where contiguity is crucial for 5G performance.

Q6. What should be the eligibility criteria and associated eligibility conditions for participation in the forthcoming auction for the existing bands viz. the 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, and 26 GHz bands? Kindly provide a detailed response with justifications.

Q7. Whether there is a need for modifying roll-out obligations for the existing bands viz. 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz and 26 GHz bands, as stipulated in the Notice Inviting Application (NIA) for the spectrum auction held in June 2024 in order to improve mobile coverage in the country? If yes, what modifications should be made in the roll-out obligations for the existing bands? Kindly provide a detailed response with justifications.

COAI Response

1. We recommend approach of prescribing no rollout obligations if an existing licensee has already met these obligations once using any technology in any band.

2. In view of the significant rollout achievements already demonstrated by established TSPs across various spectrum bands, it is considered appropriate to rationalize the rollout obligations applicable to existing operators. Specifically, the 26 GHz rollout (both for new as well as existing holdings) should be deemed fulfilled, if it has been met through spectrum in 3300 MHz band. Such enabling policies would promote efficiency and alignment with evolving technology trends, while preventing premature deployments that may result in inefficient use of spectrum resources.

3. This ensures that while the operator has the due flexibility to meet the rollout obligations using any technology and band, the objectives of the Government for coverage are also met.

4. For a new entrant, the rollout obligations should be as defined as have been done in earlier NIAs including that of 2024, except for 26 GHz, which should be as per point no. 2 above.

Q8. Whether there is a need to review the spectrum caps for the existing bands viz. 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz and 26 GHz bands for the forthcoming auction? If yes, what should be the spectrum cap per service provider for different frequency bands? Kindly provide a detailed response with justifications.

COAI Response

Members to reply separately

Q9. Are there any other inputs/ issues related to the auction of spectrum in the existing bands viz. 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz and 26 GHz bands for the forthcoming auction? Suggestions may be made with detailed justifications.

COAI Response

None

Q10. Whether the spectrum in the 600 MHz band should be put to auction in the forthcoming auction? If yes, whether the band plan n105 should be adopted for the 600 MHz band, or otherwise? Please provide a detailed response with justifications.

COAI Response

Members to reply separately

Q11. In case you are of the opinion that the 600 MHz band should not be put to auction in the forthcoming auction, what should be the timelines for auctioning of the 600 MHz band? Please provide a detailed response with justifications.

COAI Response

1. We submit that the sub 1GHz spectrum is very useful on account of its propagation characteristics and the role that it can play in delivering mobile broadband especially in the rural areas. The Authority has also noted that lower frequency bands provide wider coverage because they can penetrate objects effectively and thus travel farther, including inside buildings.

2. Therefore, this band has a potential to enhance terrestrial mobile coverage, particularly in rural and far-flung areas and also to fill the in-building coverage gaps in urban areas. It is therefore most important that it is used in the most optimal and efficient manner. 600 MHz should come with n105 band plan, which gives 2x40 MHz spectrum.

Q12. In case it is decided to auction the spectrum in the 600 MHz band in the forthcoming auction, -

(a) Should the entire available spectrum in the 600 MHz band be put for bidding in the forthcoming auction?

COAI Response

Members to reply separately

(b) Whether the eligibility criteria, associated eligibility conditions, block size, minimum bid quantity of spectrum, validity period for the assignment of spectrum, area of assignment on Telecom Circle/ Metro Area-basis, spectrum cap and roll out obligations for the spectrum in the 600 MHz band in the forthcoming auction should be kept the same as those in the spectrum auction of 2022, or otherwise? Please provide a detailed response with justifications.

COAI Response

Members to reply separately

Q13. Are there any other inputs/ issues related to the auction of spectrum in the 600 MHz band for the forthcoming auction? Suggestions may be made with detailed justifications.
None
Q14. Whether the spectrum in 6425-6725 MHz and 7025-7125 MHz ranges in the upper 6 GHz band should be put to auction for IMT in the forthcoming auction? Kindly provide a detailed response with justifications.

COAI Response

Members to reply separately

Q15. In case you are of the opinion that the spectrum in 6425-6725 MHz and 7025-7125 MHz ranges should not be put to auction in the forthcoming auction, what should be the timelines for auctioning of this spectrum for IMT? Kindly provide a detailed response with justifications.

COAI Response

Members to reply separately

Q16. Considering that the satellite-based service (uplink) will coexist with IMT-based services in the upper 6 GHz band, - whether pilot trials should be conducted to ascertain the keepout distance of the IMT base stations for satellite uplink stations before the auction of the upper 6 GHz band, or should it be left to the telecom service providers to ascertain the keep-out distance of the IMT base stations for satellite uplink stations at the time of commercial deployment after the auction? Kindly provide a detailed response with justifications.

COAI Response

1. We submit here that the determination of keep-out distances for satellite uplink stations shall be worked out by the TSPs in coordination with the WMO, based on the technical specifications of the base transceiver stations (BTS).

2. India-specific pilot coexistence trials between IMT base stations and satellite uplink earth stations be conducted before auction of this band.

3. Should there be interference, the trial shall clearly be able to identify that:

   a. The minimum distance between IMT base stations and Satellite systems with no or minimum degradations.

   b. All efforts shall be made to ensure that there is no Fragmenting of the spectrum. This will be a significant loss to Govt and the services which the Indian population can enjoy.

   c. A finite timeframe shall be given to Satellite operators to move out of these bands.

Q17. In case it is decided to put the spectrum in 6425-6725 MHz and 7025-7125 MHz ranges in the forthcoming auction, -
(a) Whether the 3GPP band plan n104 should be adopted for the upper 6 GHz band? If no, which band plan should be adopted for the upper 6 GHz band?
(b) What amount of spectrum in the 6425-6725 MHz and 7025-7125 MHz ranges should be put to auction?
(c) Whether the spectrum in the 6425-6725 MHz and 70257125 MHz ranges should be auctioned on Telecom Circle/ Metro service area basis with a validity period of 20 years? If no, what should be the area and validity period of spectrum assignment in the 6425-6725 MHz and 7025-7125 MHz ranges?
(d) What should be the block size, minimum bid quantity, and roll-out obligations for the spectrum in these ranges?
(e) What should be the eligibility criteria and associated eligibility conditions for bidding for the spectrum in these ranges? Please provide a detailed response with justifications.

COAI Response

Members to reply separately

Q18. What provisions with respect to the spectrum cap per service provider in a licensed service area (LSA) should be made applicable for the spectrum in the upper 6 GHz band for IMT? Specifically, -
(a) Whether a combined spectrum cap for the 3300 MHz band and the upper 6 GHz band should be prescribed? If yes, what should be the spectrum cap per service provider?
(b) In case your response to (a) above is in the negative, what should be the spectrum cap per service provider for the spectrum in the upper 6 GHz band? Please provide a detailed response with justifications.

COAI Response

Members to reply separately

Q19. To mitigate inter-operator interference due to TDD-based configuration, whether the approach adopted for the 3300 MHz and 26 GHz bands should also be made applicable for the newly identified spectrum in the upper 6 GHz band? In case you are of the opinion that some other provisions are required to be established, suggestions may kindly be made with detailed justifications.

COAI Response

Yes, we agree that to mitigate inter-operator interference due to TDD-based configuration, the TSPs shall follow the approach adopted for the 3300 MHz and 26 GHz bands should also be made applicable for the newly identified spectrum in the upper 6 GHz band.

Q20. Are there any other inputs/ issues related to the auction of spectrum in the upper 6 GHz band for the forthcoming auction? Suggestions may be made with detailed justifications.

None

Q21. Considering the need to assign a contiguous 24 MHz block in the 1427-1518 MHz range to the Government user, (a) Which band plan and duplexing scheme should be adopted for IMT in the 1427-1518 MHz range? (b) Which range of spectrum (a contiguous block of 24 MHz) should be assigned to the Government user? Kindly provide a detailed response with justifications.

Q22. Are there any other inputs/ issues related to the spectrum in the 1427-1518 MHz range? Suggestions may be made with detailed justifications.

COAI Response

1. India has limited mid-band spectrum (1-6 GHz) that supports both coverage and capacity for 5G, the 1427-1518 MHz band offers ~ 90 MHz of valuable mid-band spectrum, that can fill the gap between low-band (sub-1GHz) and high-band (3.3-3.67) 5G allocations.

2. **The band 1427-1518 MHz will ensure long-term capacity expansion for TSPs, as data usage keeps increasing, hence, it becomes necessary that this band should be brought under the IMT services.** A continuous spectrum at the end of the block can be assigned to the Govt User post finalizing the band plan for this band.

3. However, in our view, there is no need to take a decision on this spectrum right now. There is no pressing need for a SDL band and the TRAI should review the market growth post 6G launch to decide on this spectrum. There is a possibility of this band becoming more useful for supplementary uplink (SUL) for TSPs going forward, in

view of the device and app usage trends.

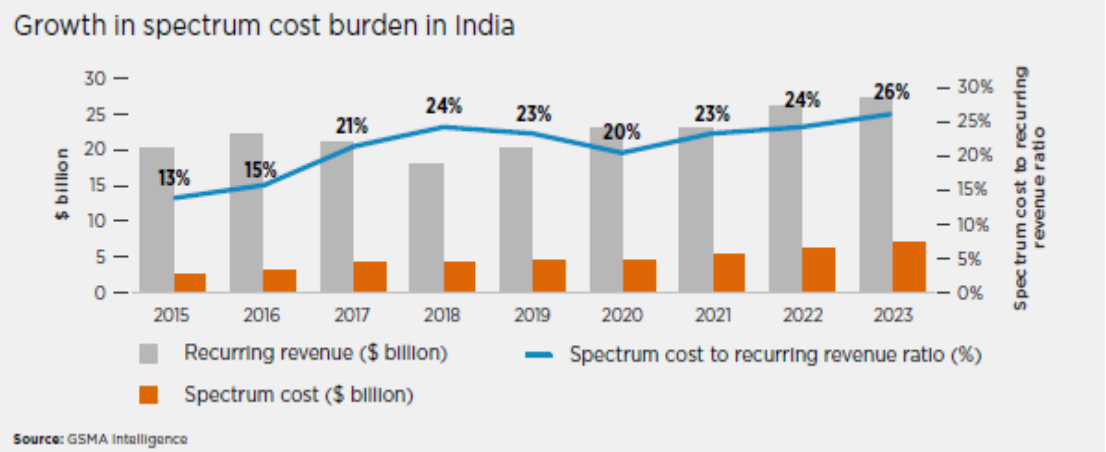
Q23. Whether there is a need to review the spectrum auction method and design followed in India? If yes, suggestions on spectrum auction method and design may be made with detailed justifications and international practice in this regard.

Members to reply separately

Q24. What additional economic, technical, or market-related factors should be taken into account while determining the valuation and, subsequently, the reserve price of spectrum, in order to promote effective competition, ensure optimal spectrum utilization, and encourage wider participation in auctions?

COAI Response

1. The cost of spectrum has always been high for TSPs in India. The acquisition of new bands to support 5G and improved 4G networks by TSPs in India has led to the spectrum cost burden gradually increasing between 2015 and 2023. This currently stands at 26% of operator recurring revenues and is among the highest in the world.



2. Hence, we submit that the spectrum valuation requires a comprehensive relook. There is a need to adopt a holistic approach, considering economic, technical, and market factors beyond the traditional models. Further it is very important to ensure that spectrum pricing is aligned with India's low ARPU reality as well as per-population metrics.

3. Besides the above market realities, the following critical factors must be carefully considered to formulate a fair and future-ready valuation framework:

   i. **Limited 5G Monetisation** – Despite substantial investments in network infrastructure and spectrum, 5G has not yet yielded commensurate revenue growth, as service premiums remain absent and new monetisation avenues are limited.

ii. **Large Traffic Generators (LTGs)** – Data consumption driven by LTG applications continues to surge, yet, given the low tariffs in our competitive market, this exponential growth does not translate into proportional revenue for service providers, thereby imposing a significant financial strain on networks.

iii. **Unlicensed band ecosystem** -The rapid growth of the unlicensed band ecosystem offers low-cost connectivity, diminishing the exclusive value of licensed spectrum.

4. We strongly recommend that setting a much rational reserve price will enable true market-driven price discovery, and ensure optimal spectrum utilization, and encourage wider participation in auctions. **Hence, a rational valuation framework is the need of the hour.**

Q25. Should the valuation of a given spectrum band, among 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2500 MHz, 3300 MHz, and 26 GHz, be based exclusively on its respective auction-determined price from the 2022 and/or 2024 auctions, without applying any other valuation approach? In such a case, should the auction price be indexed using MCLR or any other basis (please specify) to account for the time gap? Please provide detailed justification.

Q26. If the answer to the above is in the negative, should the past auction-determined price of the respective spectrum band still be considered as one of the approaches or basis for valuation, along with other approaches? Please provide justification for your response. In such a case, should the auction price be indexed using MCLR or any other basis (please specify) to account for the time gap? Please provide detailed justification.

COAI Response

1. We submit a fundamental recalibration of the spectrum valuation methodology is imperative to enhance network coverage and ensure the success of future auctions of new bands.

2. Therefore, a carte-blanche approach of indexing these already high prices using MCLR or any other mechanism is unsound, as it artificially inflates value contrary to market realities

   a. **Rationalization of reserve price:** The objective of the Government should not be maximization of revenue through auctions, hence reserve price of new spectrum bands needs to be rationalized. At the same time, we recommend following measures can be taken in the forthcoming auction(s):

      i. For the LSA and spectrum band combination where the spectrum remained unsold in entirety in the last auction where it was put up for auction, the reserve price should be maintained equal to the last auction without any indexation.

ii. For the LSA and spectrum band combination where for the total spectrum put to auction there was no excess demand (i.e. demand was for only part or equal to the spectrum put to auction) and spectrum was sold at reserve price only, the reserve price should be maintained equal to last auction without any indexation.

Q27. Should the spectrum valuation exercise be undertaken once every three years, as recommended by the Authority in its recommendations dated 11.04.2022? If not, what should be the revised periodicity for conducting the valuation exercise? Please justify your response along with detailed basis for conducting a fresh valuation exercise.

COAI Response

Members to reply separately

Q28. Should the valuation models as adopted by the Authority in its last recommendation, continue to be used as a basis for valuation of spectrum in the 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, and 26 GHz bands? Please provide a detailed justification.

AND

Q29. Is there a need to introduce any changes to the valuation models or methodologies currently followed by the Authority for spectrum valuation exercises, including the discontinuation of any existing model or the introduction of a new model? If yes, please provide specific suggestions along with a detailed justification.

COAI Response

1. We submit that the valuation models adopted in previous recommendations have their place in spectrum valuation exercise but these should not be continued as the primary basis for valuation on as is basis. These models should be supplemented by learnings and critical factors of the ecosystem such as lack of 5G monetisation, emergence of unlicensed band ecosystem and satellite communication services, thus, need to be recalibrated.

2. To ensure robust digital connectivity which is the backbone of digital India, there is a need to ensure that there is a paradigm shift in the spectrum valuation exercise from a short-term revenue maximization goal to a long-term sustainability and growth-oriented approach.

3. In addition to the existing models, the Authority should introduce a rational methodology that places greater emphasis on dynamic market-based indicators and global benchmarks.

4. Our above comments to Q.no 25 & 26 may also be referred here.

Q30. Should the auction determined price of other bands by using spectral efficiency factor serve as a basis of valuation for the 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz and 26 GHz bands? If yes, which spectrum bands be related, what efficiency factor or formula should be used and what is the basis for the same? Please justify your suggestions.

AND

Q31. Apart from the approaches highlighted above which other valuation approaches should be adopted for the valuation of spectrum in existing bands? Please provide detailed information along with justifications.

COAI Response

We reiterate our above submission that the past methodologies including the use of auction determined price (ADP) should not be the sole criteria for arriving at spectrum valuations. Further, these bands have been auctioned multiple times and benchmarking these to ADP of other bands is not suitable, especially when the bands own ADP is available.

Q32. Should the auction determined price of other bands by using spectral efficiency factor serve as a basis of valuation for 6425–6725 MHz and 7025–7125 MHz bands? If yes, which spectrum bands be related, what efficiency factor or formula should be used and what is the basis for the same? Please justify your suggestions.

COAI Response

Members to reply separately

Q33. Should the auction determined price of other countries in 6 GHz spectrum bands serve as a basis of valuation of 6425- 6725 MHz & 7025-7125 MHz bands in India? What methodology should be followed for using this auction determined price as a basis for valuation? Support your suggestions with justifications and country-wise auction data.

AND

Q34. If the above approach is considered appropriate, should the international auction-determined prices be normalized to account for cross-country differences such as population, GDP, purchasing power parity (PPP), subscriber base, and other relevant factors? If so, should normalization be carried out by using the ratio of auction prices of 6 GHz spectrum bands vs other mid band/mm Wave band within the same country to neutralize the impact of cross-country differences?

Alternatively, please suggest any other suitable normalization methodology that may be adopted in this context.

AND

Q35. Apart from the approaches highlighted above, which other valuation approaches may be adopted for the valuation of 6425-6725 MHz & 7025-7125 MHz bands? Please provide detailed information along with justifications.

Q36. Should the auction determined price of other bands by using spectral efficiency factor serve as a basis of valuation for 600 MHz bands? If yes, which spectrum bands be related, what efficiency factor or formula should be used and what is the basis for the same? Please justify your suggestions.

COAI Response

Members to reply separately

Q37. Should the auction determined price of other countries in 600 MHz band serve as a basis of valuation of 600 MHz 192 band in India? What methodology should be followed for using this auction determined price as a basis for valuation? Support your suggestions with justifications and country-wise auction data.

AND

Q.38. If the above approach is considered appropriate, should the international auction-determined prices be normalized to account for cross-country differences such as population, GDP, purchasing power parity (PPP), subscriber base, and other relevant factors? If so, should normalization be carried out by using the ratio of auction prices of 600MHz band vs other sub-GHz spectrum bands within the same country to neutralize the impact of cross-country differences? Alternatively, please suggest any other suitable normalization methodology that may be adopted in this context.

AND

Q39. Apart from the approaches highlighted above which other valuation approaches may be adopted for the valuation of 600 MHz band? Please provide detailed information.

COAI Response

Members to reply separately

Q40. Should the value of 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, 26 GHz, 6425- 6725 MHz & 7025-7125 MHz and 600 MHz bands be

determined using a single valuation approach? If yes, please indicate which single valuation approach or method should be adopted in each case and provide detailed justification

AND

Q41. In case your response to the above question is negative, will it be appropriate to take the average valuation (simple mean) of the valuations obtained through the different approaches attempted for valuation of the above spectrum bands, or some other approach like taking weighted mean etc. should be followed? Please support your answer with detailed justification.

COAI Response

1. We submit that while the authority may consider different approaches, but international spectrum prices adjusted for ARPU on per pop basis, which reflects the revenue potential as well as technically efficiency factor and ADP should be the most important consideration while arriving to spectrum valuations.

2. In case, the Authority adopts different approaches, due weightage should be given to the spectrum prices arrived at using the International benchmarks adjusted for ARPU on per pop basis.

3. This ensures the final valuation is strategically aligned with sustainable market outcomes rather than being a mere mathematical average.

Q42. What ratio should be adopted between the reserve price for the auction and the valuation of the spectrum in 800MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, 26 GHz, 6425- 6725 MHz & 7025-7125 MHz and 600 MHz bands and why? Please support your answer with detailed justification.

COAI Response

1. TRAI in para 3.116 has noted that-
   "A reserve price set at 70% of the average valuation of spectrum band would go a long way in helping to discover the market clearing price of the spectrum."

2. However, experience tells us that if the reserve price is set excessively high, it heightens the likelihood of auction failure; conversely, if set too low, it may invite participation from non-serious or frivolous bidders.

3. Each instance of an unsuccessful auction results in a lost opportunity for the economy, diminished investor confidence in the sector, loss of potential revenue to the exchequer, and suboptimal allocation of spectrum resources. It is therefore imperative that reserve prices be set at prudent and realistic levels.

4. In light of the above, we submit that the reserve prices should be kept at relatively lower levels to enable efficient market-based price discovery.

5. Accordingly, it is our considered view that the reserve price be fixed at a rational % to the valuation **of the assessed valuation of spectrum,** to facilitate wider participation and promote efficient market discovery of the spectrum's true value.

Q43. What should the payment terms and associated conditions for the assignment of 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz, 26 GHz bands, 6425- 6725 MHz & 7025-7125 MHz bands and 600 MHz bands relating to:

(i) Upfront payment
(ii) Moratorium period
(iii) Total number of instalments to recover deferred payment
(iv) Applicable interest rate for protecting the NPV of bid amount

Please support your answer with detailed justification.

COAI Response

1. In the past auctions, the Government had allowed the TSPs a moratorium of 2 years. However, considering the financial health of the Industry, the Cabinet, in the reforms of 2021, had also provided a moratorium period of four years to ensure liquidity with the operators.

2. In order to enhance funds for investment with TSPs we submit that **a moratorium of 6 years can be provided in the upcoming auctions.**

3. Thus, in case a 20-year timeframe is adopted for payment, then after a 6-year moratorium, the payment can be in **14 equal instalments.**

4. The current 8.65% rate used in the 2024 NIA is excessive and erodes operators' ability to invest. It must be noted that the obligation to pay huge interest on deferred spectrum payments ultimately burdens the TSPs' finances and impairs their ability to make investments for network rollout.

5. We recommend aligning the rate with the **prevailing repo rate to protect the NPV and arrive at the** deferred payment instalments.

Q44. Any other suggestion relevant to the subject may be submitted with detailed justification.

COAI Response

None.