

TRAI releases Recommendations on 'Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services'

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The Telecom Regulatory Authority of India (TRAI) has today released Recommendations on 'Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services'.

2. Department of Telecommunications (DoT), through a reference dated 11.07.2024, stated that keeping in view the provisions of Section 4 and the First Schedule of the Telecommunications Act, 2023, in terms of Section 11(1)(a) of the TRAI Act 1997, TRAI is requested to provide recommendations on terms and conditions of spectrum assignment including spectrum pricing while accounting for level playing field with terrestrial access services for the following satellite-based communication services:
 - (i) NGSO based Fixed Satellite Services providing data communication and Internet services. In its recommendations, TRAI may take into account services provided by GSO-based satellite communication service providers.
 - (ii) GSO/ NGSO based Mobile Satellite Services providing voice, text, data, and internet services.
3. In this regard, TRAI issued a consultation paper on 'Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services' on 27.09.2024 for seeking comments and counter comments from stakeholders on 21 issues raised in the consultation paper. Initially, the last dates for furnishing comments and counter comments initially were 18.10.2024 and 25.10.2024, respectively. However, considering the request of some of the stakeholders, the last dates for furnishing written comments and counter comments were extended to 25.10.2024 and 01.11.2024, respectively.
4. In response to the issues raised in the consultation paper, 30 stakeholders furnished comments, and 12 stakeholders furnished counter comments. As part of the consultation process, TRAI conducted an open house discussion (OHD) on the consultation paper through virtual mode on 08.11.2024.
5. Based on the comments received from stakeholders during the consultation process, and further analysis, TRAI has finalized its Recommendations on 'Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services'. Salient points of the recommendations are given below:

For assigning frequency spectrum for user links and feeder links for NGSO-based FSS for data communication and Internet service, frequency spectrum in Ku band, Ka band, and Q/V band should be considered.

For assigning frequency spectrum for GSO/NGSO-based MSS for providing voice, text, data communication and Internet service, the following frequency bands should be considered:

L band and S band for user links; and C band, Ku band, Ka band and Q/V band for feeder links

Frequency spectrum should be assigned for NGSO-based FSS and GSO/ NGSO-based MSS for a period of up to five years. However, considering the market conditions, the Government may extend it for a further period of up to two years.

Terms and conditions including prices for the spectrum assignment for NGSO-based FSS and GSO/ NGSO-based MSS, recommended through these recommendations, should remain valid for a period of five years from the date of notification of the policy regime by the Central Government, further extendable by a period of upto two years.

Any revision in the terms and conditions including prices for the spectrum assignment for NGSO based FSS and GSO/ NGSO based MSS, notified by the Central Government after a period of five years from the date of notification of the policy regime recommended through these recommendations, should become applicable to all authorised entities including the existing entities.

To control interference, the relevant provisions of ITU-RR should be made applicable to the authorised entities, and other entities which have been authorised by the Central Government.

The frequency spectrum identified by the Central Government for satellite-based telecommunication services in the higher frequency bands such as C, Ku, Ka, and Q/V bands that are assigned on a shared basis, should be assigned with a condition that each Authorised Entity and all other entities which have been authorized by the Central Government to use such shared frequency spectrum, will coordinate among themselves in good faith.

The Government, with the help of Telecom Engineering Center (TEC), should examine the need for prescribing a framework for sharing of spectrum. The framework may include conditions on the maximum equivalent power flux density (EPFD) etc. With a view to nudging the satellite operators to coordinate among themselves in good faith at the earliest, the Government may also consider introducing a provision for splitting of spectrum as a last resort in line with the provision created by FCC in its 'Spectrum Sharing Rules for Non-Geostationary Orbit, Fixed-Satellite Service Systems' in case two or more NGSO-based FSS satellite systems fail to complete coordination.

For establishment and operation of satellite earth station gateways, the authorised entities should be mandated to coordinate among themselves in good faith.

The DoT, with the help of TEC, should carry out a study to assess the requirement for prescribing coordination distance between two satellite earth station gateways (GSO-NGSO and NGSO-NSGO) operating on the same frequencies. If required, necessary guidelines may be issued.

In the frequency range(s) already identified for IMT such as 42.5-43.5 GHz, the satellite earth station gateways should be permitted to be established at uninhabited or remote locations on case-to-case basis, where there is a less likelihood of IMT services to come up.

With a view to mitigate the risk of scarcity of gateway sites, Satellite Earth Station Gateway(s) should be installed and commissioned within 12 months from the date of permission granted to the authorised entities by the Central Government for the establishment of the Satellite Earth Station Gateway(s).

The entities authorised to provide satellite-based telecommunication services should be permitted to surrender the right to use frequency spectrum assigned to them before the expiry of the validity period. For this purpose, broad terms and conditions have been recommended.

There should be a defined timeline, not exceeding 30 days from the date of application, within which the frequency spectrum should be assigned to an Authorised Entity for the provision of satellite-based communication services, provided that the in-principle clearance of satellite network has been given by the Central Government. In case of any objection, the same may be communicated to the concerned Authorised Entity within such window of 30 days from the date of application, for necessary action.

Spectrum charges should be levied as:

GSO-based FSS	4% of Adjusted Gross Revenue, subject to a minimum annual spectrum charge of Rs. 3,500 per MHz.
NGSO-based FSS	4% of Adjusted Gross Revenue Plus an additional charge of Rs. 500 per subscriber per annum in urban areas, while exempting the rural and remote areas from this additional charge Subject to a minimum annual spectrum charge of Rs. 3,500 per MHz
GSO/ NGSO-based MSS	4% of Adjusted Gross Revenue, subject to a minimum annual spectrum charge of Rs. 3,500 per MHz

Payment terms for spectrum charges:

AGR-based spectrum charges should be paid on an advance quarterly basis and payable within 15 days of the commencement of the respective quarter.

Minimum spectrum charges should be paid in advance at the time of assignment of spectrum and at the beginning of every year. The quarterly/annual adjustment of payment dues shall be made with the minimum spectrum charge for the particular year only.

Per subscriber charges should be paid by NGSO-based FSS service providers on a quarterly basis equal to $125 \times Nu$, where Nu refers to the total number of subscribers in urban areas at the end of the previous quarter.

The Government may consider providing a subsidy for NGSO-based FSS user terminals to the targeted user segments in unserved/ underserved regions of rural and remote areas.

6. The Recommendations have been placed on the TRAI's website (www.trai.gov.in). For any clarification/ information Shri Akhilesh Kumar Trivedi, Advisor (Networks, Spectrum and Licensing), TRAI may be contacted at Telephone Number +91-11-20907758.

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