



## **Telecom Regulatory Authority of India**

### **Recommendations**

**On**

### **Licensing framework for Satellites based connectivity for Low bit Rate Applications**

(Response to back reference dated 9<sup>th</sup> March 2022  
received from Department of Telecommunications on  
TRAI's recommendations dated  
26<sup>th</sup> August 2021)

**5<sup>th</sup> May 2022**

Mahanagar Doorsanchar Bhawan,  
Jawahar Lal Nehru Marg, New Delhi-110002

## **CHAPTER – I: INTRODUCTION**

1. The Department of Telecommunications (DoT), through its reference vide letter dated 23<sup>rd</sup> November 2020, under section 11(1)(a) of the TRAI Act, had requested TRAI to furnish recommendations on the Licensing framework to enable the provisioning of satellite-based low-bit-rate applications for both commercial as well as captive usage.
2. DoT had requested TRAI to examine all the factors holistically and recommend enabling provisions under the existing licensing framework of DoT, or suggest new licensing framework which must include the entry fee, license fee, bank guarantee, Network Operations and Control Centre (NOCC) charges, Spectrum Usage Charges (SUC)/royalty fee, etc.
3. The Authority initiated the consultation process and issued a Consultation Paper on ‘Licensing framework for Satellite-based low-bit-rate applications’ on 12<sup>th</sup> March 2020, seeking comments of the stakeholders on the various issues involved. Based on the written comments received from the stakeholders, views shared by the stakeholders during the OHD and its own analysis, the Authority issued the recommendations on ‘Licensing framework for Satellites based connectivity for Low bit Rate Applications’ on 26<sup>th</sup> August 2021.
4. DoT, vide its letter dated 9<sup>th</sup> March 2022, informed TRAI that the Digital Communications Commission (DCC) considered the TRAI recommendations in its meeting dated 4<sup>th</sup> January 2022 and decided to accept all the recommendations except para 4.9(ii) with regard to NLD SUC. Regarding this recommendation, DCC decided to refer back the same to TRAI to examine the feasibility of accounting separation for NLD operator(s) between satellite based services and other licensed services it provides. TRAI has been accordingly requested by DoT as per the provisions of the section 11 of the TRAI Act, 1997 to examine the recommendations to provide clarity on, whether it is feasible for an NLD

service provider to segregate revenues (and consequently separate accounts) accruing from satellite connectivity.

5. Vide letter dated 9<sup>th</sup> March 2022, DoT has also conveyed that as the DCC has further decided that DoT may work with TRAI to further reduce the charges pertaining to roll-out of satellite based communication systems, TRAI is requested to give recommendation(s) on this aspect also.
6. Copy of the DoT's back reference is attached at **Annexure**. Chapter I contains a brief background to the recommendations. The Authority's earlier recommendations, the views of the DoT thereon, and the response of the Authority on the issues referred back are given in Chapter II.

## **CHAPTER-II: PARAWISE RESPONSE**

The Authority examined the observations of the DoT in its back-reference dated 9<sup>th</sup> March 2022. It has been noted that DoT has referred-back recommendations made at Para 4.9(ii). These referred-back recommendations, DoT's observation and the Authority's response after due deliberation and reconsideration, para wise, are given below:

### **PARAWISE RESPONSE**

#### **1. Issue related to Spectrum usage charges for using satellite frequencies under the NLD service license/ authorization.**

**[Para 4.9(ii) of TRAI Recommendations dated 26.08.2021]:**

*4.9 The Authority recommends that:*

*(ii) Recommendations made earlier vide recommendations on 'Provision of Cellular Backhaul Connectivity via Satellite Through VSAT Under Commercial VSAT CUG Service Authorization' dated 28th July 2020, are reiterated in respect of provision of satellite-based bandwidth by NLD service providers:*

- a. Replacing the existing formula-based mechanism, Spectrum usage charges for using satellite frequencies under the NLD service license/ authorization should be prescribed as 1% of AGR excluding the revenue from the licensed services other than satellite-based services.*
- b. The NLD service licensees should be asked to do the accounting separation and maintain the revenues accruing from the satellite-based services and other licensed services separately.*

#### **DoT's View**

Regarding this recommendation, DoT has informed that Digital Communications Commission (DCC) considered the TRAI recommendations in its meeting held on 04.01.2022 and decided to accept all the recommendations except para 4.9(ii) with regards to NLD SUC, which is reproduced as below:

*“4.9 The Authority recommends that:*

*(ii) Recommendations made earlier vide recommendations on ‘Provision of Cellular Backhaul Connectivity via Satellite Through VSAT Under Commercial VSAT CUG Service Authorization’ dated 28th July 2020, are reiterated in respect of provision of satellite-based bandwidth by NLD service providers:*

- a. Replacing the existing formula-based mechanism, Spectrum usage charges for using satellite frequencies under the NLD service license/ authorization should be prescribed as 1% of AGR excluding the revenue from the licensed services other than satellite-based services.*
- b. The NLD service licensees should be asked to do the accounting separation and maintain the revenues accruing from the satellite-based services and other licensed services separately.”*

Regarding this recommendation DCC decided to refer back the same to TRAI to examine the feasibility of accounting separation for NLD operator(s) between satellite based services and other licensed services it provides.

TRAI in its earlier recommendations dated 28.07.2020 has mentioned that:

*2.85 The Authority is of the view that migration to the AGR-based spectrum charge for the satellite-based VSAT services will require accounting separation for computation of AGR. The Authority also agrees with the argument that only the revenue from the provision of satellite services should be considered for the purpose of calculation of spectrum usage charge, and no component of the revenue from other licensed services, under NLD, should be accounted for SUC. Accordingly, suitable amendment in the license should be incorporated by DoT for this purpose.*

*2.86 Based on above analysis, the Authority is of the view that the spectrum usage charges for using satellite frequencies under the NLD service license/authorization should be prescribed as a percentage of*

AGR. Replacing the existing formula-based mechanism, Spectrum usage charges for using satellite frequencies under the NLD service license/authorization should be prescribed as 1% of AGR excluding the revenue from the licensed services other than satellite-based services. The NLD Service licensee has to do the accounting separation and maintain the revenues accruing from the satellite-based services and other licensed services separately.

2.87 Access Service Providers are also permitted to establish satellite-based connectivity for their access network within a Licensed Service Area. For establishing a satellite-based radio communication network, Access Service licensee is required to obtain the satellite frequency authorization from WPC and pay the associated Royalty charges on formula basis. **Migrating spectrum usage charges for using satellite frequencies from the formula-based mechanism to AGR-based mechanism for Access Service licensee will be a complex issue, as it is difficult to do the accounting separation for revenues accruing through the use of satellite connectivity.** For Access service licensee, it is an integrated activity and the revenues are accrued by way of the voice calls, data usage and other revenues. Further, all the Access Service licensees also have NLD Service Authorization and mostly use their NLD network for such requirement of satellite bandwidth. **The Authority, therefore, is of the view that no such changes should be proposed under the Access Service Authorization for calculation of spectrum charges for satellite-based services.**

2.88 In case of VSAT, the transponder bandwidth is allocated by the Department of Space (DoS) and the frequency allotment is carried out by WPC, DoT. Therefore, the VSAT licensees have to essentially take the satellite bandwidth and pay the charges for the transponder bandwidth to the DoS. These transponder charges are basically to enable the use of electronics and resources of the satellite placed in

*the space. The Authority, therefore, does not agree with the proposal of one of the stakeholders to treat transponder charges payable to DoS and backhaul charges payable to NLD/ Commercial VSAT CUG service providers as pass through, because in absence of the satellite connectivity, the service provider shall anyway have to create its own transmission infrastructure or lease the connectivity from the NLD operator and it is part of the cost for creation of infrastructure.*

*2.89 In view of the above, the Authority recommends that:*

- a) Replacing the existing formula-based mechanism, Spectrum usage charges for using satellite frequencies under the NLD service license/ authorization should be prescribed as 1% of AGR excluding the revenue from the licensed services other than satellite-based services.*
- b) The NLD service licensees should be asked to do the accounting separation and maintain the revenues accruing from the satellite-based services and other licensed services separately.*

TRAI is accordingly requested to examine the above to provide clarity on whether it is feasible for an NLD service provider to segregate revenues (and consequently separate accounts) accruing from satellite connectivity.

### **Response of TRAI**

**In its back reference dated 9<sup>th</sup> March 2022, DoT has stated that "Digital Communications Commission (DCC) considered the TRAI recommendations in its meeting held on 04.01.2022 and decided to accept all the recommendations except para 4.9(ii) with regards to NLD SUC. Regarding this recommendation, DCC decided to refer back the same to TRAI to examine the feasibility of accounting separation for NLD operator(s) between satellite based services and other licensed services it provides."**

**In this regard, it is to clarify that as per the last proviso of Section 11(1)(d) of TRAI Act, 1997 (as amended), it is the Central Government which shall refer the recommendation(s) back to the Authority for its reconsideration. The decision of DCC to refer back to TRAI may be an internal process of the Central Government, however, while referring the recommendation back to the Authority for its reconsideration, the back reference letter should categorically state the decision of the Central Government regarding referring the recommendation back to the Authority. In the instant back reference it is therefore understood that the decision to refer back the recommendations is of the Central Government.**

**The rationale behind the Authority's recommendations at para 4.9(ii) has been clearly brought out in para 3.93 to 3.95 of its recommendations dated 26.08.2021 and para 2.83 to para 2.88 of its earlier recommendations on 'Provision of Cellular backhaul connectivity via Satellite through VSAT under Commercial VSAT CUG Service Authorization' dated 28.07.2020. It has been observed that while referring the recommendation back to the Authority through its back reference letter dated 9<sup>th</sup> March 2022, DoT has not stated/pointed out the difficulties/issues in implementing the revenue separation accruing from provision of satellite based connectivity in respect of NLD Service provider.**

**As has been mentioned in para 3.93, NLD Service license has a wider scope and it is permitted to provide connectivity/bandwidth/ links to all other licensees, including Access Service providers, Internet Service Providers and other NLD Service providers. Besides, NLD service provider is permitted to provide Leased Circuits (point to point bandwidth) directly to the subscribers also. Such connectivity/bandwidth/links/leased circuits may be provided using satellite media also. It is, therefore, important to ensure that the NLD service licensee is able to provide**

**the satellite-based connectivity to other licensees in a cost-effective manner so that the services can be delivered to the end users in remote and inaccessible areas at affordable prices.**

**Migration from the existing formula-based mechanism for SUC calculation for using satellite frequencies under NLD service license/authorization, to percentage of AGR and maintaining separate accounts for the revenues accruing from the satellite-based services and other services, is based on the premise that it is a separate identifiable vertical, for which revenues accruing from satellite-based services and other services can be maintained easily, as it is easier to segregate revenue arising out of services offered by the NLD service licensee. As such, the Authority has recommended the migration of SUC calculation to 1% of AGR for using satellite frequencies under the NLD service license/authorization, excluding the revenue from the licensed services other than satellite-based services.**

**In view of the above, the Authority reiterates its earlier recommendations and affirms that it is feasible for an NLD service provider to segregate revenues accruing from satellite connectivity.**

## **2. New Issue in the DoT's Back Reference**

DoT has also conveyed the following vide its back reference letter dated 9<sup>th</sup> March 2022:

“Also, as the DCC has further decided that DoT may work with TRAI to further reduce the charges pertaining to roll-out of satellite based communication systems, TRAI is requested to give recommendation(s) on this aspect also.”

### **Response of TRAI**

**DoT's back reference letter dated 9<sup>th</sup> March 2022 conveyed the decision of DCC that DoT may work with TRAI to further reduce**

**the charges pertaining to roll-out of satellite based communication systems, and requested TRAI to give recommendations on this aspect also.**

**In this regard, it is to clarify that as per Section 11(1)(a) of TRAI Act, 1997 (as amended), it is the Central Government which shall seek the recommendation(s) of the Authority. The decision of DCC to refer back to TRAI or to seek recommendations from TRAI may be an internal process of the Central Government, however, while referring the recommendation back to the Authority for its reconsideration or seeking recommendations of the Authority, the reference letter should categorically state the decision of the Central Government regarding referring the recommendation back to the Authority or seeking recommendations of the Authority.**

**Further, it is noted that this issue was not part of the consultation process carried out by the Authority in the present reference, in response to which the recommendations dated 26.08.2021 were furnished. Therefore, this issue cannot be dealt as a part of the back reference. However, the Authority is of the view that this issue may be looked into and recommendations may be given, if a detailed fresh reference is made by DoT in this regard. Further, while sending the fresh reference, DoT is requested to clearly specify the various charges being levied by the Government in respect of establishing Satellite based Communication system, which the DoT is desirous of reducing further.**

## Annexure



Government of India / भारत सरकार  
Ministry of Communications / संचार मंत्रालय  
Department of Telecommunications / दूरसंचार विभाग  
Satellite Division, DoT HQ  
Sanchar Bhawan, New Delhi - 110001

No. 824-203/NLD SUC/2022-SAT

Date: 09.03.2022

To

The Secretary  
Telecom Regulatory Authority of India,  
Mahanagar Doorsanchar Bhawan,  
Jawahar Lal Nehru Marg (Old Minto Road),  
New Delhi-11002

**Sub: Reference back on Spectrum Usage Charges (SUC) for NLD license after considering TRAI recommendations on licensing framework for Satellite based low bit-rate applications dated 26.08.2021**

Kind reference is invited to TRAI recommendation on licensing framework for Satellite based low bit-rate applications dated 26.08.2021.

2. Digital Communications Commission (DCC) considered the TRAI recommendations in its meeting held on 04.01.2022 and decided to accept all the recommendations except para 4.9(ii) with regards to NLD SUC, which is reproduced as below:

*"4.9 The Authority recommends that:*

*(ii) Recommendations made earlier vide recommendations on 'Provision of Cellular Backhaul Connectivity via Satellite Through VSAT Under Commercial VSAT CUG Service Authorization' dated 28th July 2020, are reiterated in respect of provision of satellite-based bandwidth by NLD service providers:*

*a. Replacing the existing formula-based mechanism, Spectrum usage charges for using satellite frequencies under the NLD service license/ authorization should be prescribed as 1% of AGR excluding the revenue from the licensed services other than satellite-based services.*

*b. The NLD service licensees should be asked to do the accounting separation and maintain the revenues accruing from the satellite-based services and other licensed services separately."*

3. Regarding this recommendation, DCC decided to refer back the same to TRAI to examine the feasibility of accounting separation for NLD operator(s) between satellite based services and other licensed services it provides.

Page 1 of 3

4. Further, TRAI in its earlier recommendation dated 28.07.2020 has mentioned that:

*2.85 The Authority is of the view that migration to the AGR-based spectrum charge for the satellite-based VSAT services will require accounting separation for computation of AGR. The Authority also agrees with the argument that only the revenue from the provision of satellite services should be considered for the purpose of calculation of spectrum usage charge, and no component of the revenue from other licensed services, under NLD, should be accounted for SUC. Accordingly, suitable amendment in the license should be incorporated by DoT for this purpose.*

*2.86 Based on above analysis, the Authority is of the view that the spectrum usage charges for using satellite frequencies under the NLD service license/authorization should be prescribed as a percentage of AGR. Replacing the existing formula-based mechanism, Spectrum usage charges for using satellite frequencies under the NLD service license/authorization should be prescribed as 1% of AGR excluding the revenue from the licensed services other than satellite-based services. The NLD Service licensee has to do the accounting separation and maintain the revenues accruing from the satellite-based services and other licensed services separately.*

*2.87 Access Service Providers are also permitted to establish satellite-based connectivity for their access network within a Licensed Service Area. For establishing a satellite-based radio communication network, Access Service licensee is required to obtain the satellite frequency authorization from WPC and pay the associated Royalty charges on formula basis. **Migrating spectrum usage charges for using satellite frequencies from the formula-based mechanism to AGR-based mechanism for Access Service licensee will be a complex issue, as it is difficult to do the accounting separation for revenues accruing through the use of satellite connectivity.** For Access service licensee, it is an integrated activity and the revenues are accrued by way of the voice calls, data usage and other revenues. Further, all the Access Service licensees also have NLD Service Authorization and mostly use their NLD network for such requirement of satellite bandwidth. **The Authority, therefore, is of the view that no such changes should be proposed under the Access Service Authorization for calculation of spectrum charges for satellite-based services.***

*2.88 In case of VSAT, the transponder bandwidth is allocated by the Department of Space (DoS) and the frequency allotment is carried out by WPC, DoT. Therefore, the VSAT licensees have to essentially take the satellite bandwidth and pay the charges for the transponder bandwidth to the DoS. These transponder charges are basically to enable the use of electronics and resources of the satellite placed in the space. The Authority, therefore, does not agree with the proposal of one of the stakeholders to treat transponder charges payable to DoS and backhaul charges payable to NLD/Commercial VSAT CUG service providers as pass through, because in absence of the satellite connectivity, the service provider shall anyway have to create its own transmission infrastructure or lease the connectivity from the NLD operator and it is part of the cost for creation of infrastructure.*

*2.89 In view of the above, the Authority recommends that:*

a) Replacing the existing formula-based mechanism, Spectrum Usage Charges for using satellite frequencies under the NLD service license/authorization should be prescribed as 1% of AGR excluding the revenue from the licensed services other than satellite-based services.

b) The NLD Service licensees should be asked to do the accounting separation and maintain the revenues accruing from the satellite-based services and other licensed services separately."

5. TRAI is accordingly requested to examine the above to provide clarity on whether it is feasible for an NLD service provider to segregate revenues (and consequently separate accounts) accruing from its satellite connectivity.

6. As per the provisions of Section 11 of TRAI Act, 1997, a reference back is hereby accordingly made to TRAI for reconsideration of the said recommendation.

7. Also, as the DCC has further decided that DoT may work with TRAI to further reduce the charges pertaining to roll-out of satellite based communication systems, TRAI is requested to give recommendation(s) on this aspect also.

 9/3/22  
(Suneel Niraniyan)  
Deputy Director General (Satellite)  
Satellite Division, DoT HQ