

## **VIL's Response to TRAI consultation paper on Provision of Cellular backhaul connectivity via Satellite through VSAT under Commercial VSAT CUG Service Authorization dated 29<sup>th</sup> January 2020**

### **Preamble:**

In order to achieve the NDCP 2018 mission of 'Connect India' ie. ensuring inclusion of uncovered areas and digitally deprived segments of society, VIL is in favour of licence amendments in relevant licences/authorizations that permit the access providers providing mobile services, to avail cellular backhaul connectivity via satellite through VSAT under Commercial VSAT CUG service authorization using shared infrastructure. This will enhance the provisioning of internet and voice services in remote / inaccessible areas at lower costs (on account of use of shared infrastructure and percentage based SUC), where terrestrial backhaul connectivity options are unavailable/unviable.

There are certain challenges in using VSAT connectivity for mobile operations such as high latency (despite technological advancements), lead time for commencement of services (owing to requirement of bandwidth availability on respective satellite band), bandwidth limitation, outages during rainy weather and comparatively being an expensive solution vis-à-vis terrestrial backhaul options that make the use of VSAT connectivity less viable for mobile operators.

VIL is in favour of infrastructure sharing of VSAT hubs and terminals installed under the Commercial VSAT CUG licence/authorization for providing backhaul services to mobile operators, which will help reduce the cost of VSAT based connectivity deployment for mobile operators. VIL is also in favour of removal of the requirement of VSAT hub location to be in the same service area where mobile operator's MSC is located provided that the terrestrial leased line/bandwidth connectivity requirement (for connectivity of VSAT hub to core network of mobile operator such as MSC/BSC/RNC) is fulfilled only by licensed NLDO/access provider.

Additionally, VIL requests that the costs of VSAT satellite transponder and spectrum usage charges be rationalized/reduced to bring about effective reduction in VSAT based connectivity costs for mobile operators, as envisaged under NDCP 2018.

### **Issue wise responses:**

**Q1. Keeping in view the connectivity requirements in remote and difficult areas, should the Commercial VSAT CUG service provider be permitted to provide backhaul connectivity for mobile services and Wi-Fi hotspots via Satellite? Please justify your answer.**

A1. Yes, the commercial VSAT CUG service provider be permitted to provide backhaul connectivity for mobile services via satellite.

We note that under the Clause 2.1 (i) of the current Commercial VSAT CUG authorization, the commercial VSAT CUG licensee can provide internet service directly to the subscribers after obtaining the ISP authorization. Thus, provision of Wi-Fi hotspots for internet services can be undertaken by the commercial VSAT CUG licensee based on the above-mentioned clause.

As mentioned by the Authority in Para 2.30 of the consultation paper, allowing the provisions of backhaul links via satellite should be restricted to backhaul connectivity for mobile network and Wi-Fi hotspots only by commercial VSAT CUG authorization licensees, so that these licensees/entities do not overreach or overlap the business interests of NLD service providers.

Backhaul to the mobile operator through VSAT can be allowed within the jurisdiction of licensed service area (LSA) / Circle of mobile operator. The VSAT hub can be located anywhere in the country. In the backend, the VSAT hub will be connected to mobile operator's BSC/ RNC/GW through the terrestrial

links/bandwidth established/arranged by mobile operator. Thus, the Commercial VSAT CUG licensee's scope remains restricted to non-provision of terrestrial bandwidth/leased lines.

**Q2. Whether the scope of Commercial VSAT CUG Service Authorization be enhanced under both Unified License and UL(VNO) license to enable the provision of the said backhaul connectivity? Please justify your answer.**

A2. Yes, the scope of Commercial VSAT CUG service authorization should be enhanced under both UL and UL(VNO) licence to enable the provision of cellular backhaul connectivity via satellite through VSAT under Commercial VSAT CUG service authorization using shared infrastructure. This will enhance the provisioning of internet and voice services in remote / inaccessible areas at lower costs (on account of use of shared infrastructure and percentage based SUC), where terrestrial backhaul connectivity options are unavailable/unviable.

Necessary amendments can be made in the licence/authorizations for UL (Commercial VSAT CUG service authorization), UL-VNO (Commercial VSAT CUG service authorization) and NLDOs permitting the infrastructure sharing of VSAT hubs and terminals installed under the Commercial VSAT CUG licence/authorization by the NLDOs.

**Q3. Should the licensee having authorization for both Commercial VSAT CUG and NLD services be allowed to share VSAT Hub & VSAT terminals for the purpose of providing authorized services? Please justify your answer.**

A3. Yes, VIL is in favour of infrastructure sharing of VSAT hubs and terminals installed under the Commercial VSAT CUG licence/authorization for the provision of cellular backhaul connectivity via satellite through VSAT under Commercial VSAT CUG service authorization, which will help reduce both time and cost of VSAT based connectivity deployment (thereby facilitating the mobile operators to offer mobile services faster and more effectively in such remote/niche areas). VIL is also in favour of removal of the requirement of VSAT hub location to be in the same service area where mobile operator's MSC is located provided that the terrestrial leased line connectivity requirement (for connectivity of VSAT hub to MSC/BSC/RNC of mobile operator) is fulfilled by licensed NLDO/access provider.

**Q4. Whether the licensee should be permitted to share its own active and passive infrastructure for providing various services authorized to it under the other service authorization of UL and/ or other licenses? [In other words, whether clause 4.3 of Chapter -VIII (Access Service authorization) be made applicable for all other authorizations also] Is there a need to impose any restrictions? Please enumerate and justify your answer.**

A4. Yes, the sharing of all active and passive infrastructure established by a licensee under any of the service authorization under UL should be permitted for providing other service(s) **authorized to licensee** under other authorizations. Infrastructure sharing helps reduce both time and cost of deployment and should be facilitated with enabling licensing provisions.

**Q5. Whether formula-based spectrum charging mechanism for VSAT services in NLD/Access license is adequate and appropriate? If not, whether spectrum charging for VSAT services in NLD/Access service license should be made on AGR basis instead of existing formula basis mechanism? Whether it will require accounting/ revenue separation for satellite based VSAT services under NLD/Access license? Please elaborate and provide proper justification.**

A5. In general, spectrum charging methodology for the same type of technology and spectrum across various licences/authorizations should be uniform.

The Authority has noted in Para 2.34 of this consultation paper that the royalty charges prescribed by DoT-WPC vide letter dated 22.03.2012 for VSAT related services in NLD Licence/ Authorization (which mandates formula based mechanism) are very high and increase as the number of VSAT terminals increases while utilising the same amount of spectrum.

Thus, to that extent, this charging mechanism is inappropriate as it discourages the deployment of VSAT services. Further, in Para 2.37, the Authority has noted that though there is difference in scope of service authorizations of VSAT services provided through Commercial VSAT License/ Authorization and VSAT services through NLD License/ Authorization, but both the authorizations are to cater for commercial requirement of telecom services and that in most of the service authorizations, spectrum charging has been prescribed based on percentage of AGR rather than on formula basis. In the past too, the Authority has recommended spectrum charging on AGR basis for services such as GMPCS/ INMARSAT, Microwave Access backhaul and PMRTS.

Thus, we suggest that spectrum charging for VSAT services in NLD/Access service license should be made on AGR basis instead of existing formula basis mechanism and be charged as a nominal percentage of AGR on revenues earned from the provision of VSAT services. It will require accounting/ revenue separation for satellite based VSAT services under NLD/Access license. Suitable amendment in license will be required for this purpose.

More importantly, we request the Authority to recommend pass-through deductions for AGR computation and licence fees/spectrum fees payments w.r.t infrastructure sharing amongst all categories of licensed telecom operators, which will facilitate greater infrastructure sharing and help create a robust digital communications infrastructure. We note that the DoT has already issued license amendments for UL-VNO (VSAT) entities on 24.10.2018 permitting AGR deductions w.r.t bulk/wholesale bandwidth, leased lines and bandwidth charges paid to NSO/parent operator. On the same lines, deductions should be allowed amongst all licensed telecom operators.

**Q6. Please give your comments on any related matter not covered in this Consultation paper.**

A6. VIL requests the Authority:

- To recommend measures that make the VSAT backhaul service more affordable for mobile operators - the costs of VSAT satellite transponder and spectrum charges should be rationalized/reduced to bring about effective reduction in VSAT based connectivity costs for mobile operators.
- To continue to maintain the existing restrictions placed under Commercial VSAT CUG authorizations w.r.t PSTN/PLMN connectivity and long distance carriage rights granted for NLD, ILD and access service.