

10th June 2021

To
The Advisor (Broadband and Policy Analysis)
Telecom Regulatory Authority of India
New Delhi.

Dear Sir,

Sub: Response from Atria Convergence Technologies Ltd (ACT) to the Supplementary Consultation Paper (SCP) on Roadmap to promote Broadband Connectivity and Enhanced Broadband speed.

Executive Summary:

- *Fixed Line Broadband service (FLB) is a Class in itself.*
- *Supply side constraints and not the demand side constraints reason for poor penetration of FLB in the Country.*
- *A Hybrid model of incentive program consisting of both direct and indirect incentivising should be adopted by way of License fee exemption on Pure Broadband internet revenues for FLB services providers and direct incentives by way of reduced ROW charges & simplified ROW approval process can enable proliferation of the fixed line broadband sector).*
- *Instead of fixing a time period for license fee exemption, a goal based model may be considered viz “until fixed line broadband access reaches to 40% of household”. For a country to have huge digital play and self-sufficiency, minimum 40% FLB penetration is bare minimum.*
- *To mitigate the risk of misuse by the licensee through misappropriation of revenues, the current process of the Statutory auditors certification of the AGR, basis which LF is paid & assessed by DOT can be further strengthened*
- *Street Furniture policy may be prescribed for FLB service providers along with facilitating 5G roll outs so as to promoting last mile / access network of FLB services established effectively.*

Our detailed response to Supplementary Consultation Paper:

At the outset, we thank the Authority for coming up with a specific Supplementary Consultation Paper (SCP) which specifically discusses the License fee and other issues that pertain to proliferation of Fixed Line Broadband (hereinafter ‘FLB’). The Authority has rightly recognised the fact that Broadband services is now one of the essential services, that is enabling people to overcome some of the constrains arising out of the pandemic.

Sir, to begin with, the Authority has rightly considered Fixed line Broadband (FLB) Service providers as a separate class in itself in its recommendations in the year 2015 itself. At the outset, we would like to bring to your kind attention that Atria Convergence Technologies Limited (ACT) currently holds an ISP Class 'A' license issued under the 2007 guidelines valid up-to Dec 2023 and provides Fixed Line Broadband ('FLB ') services in various cities in India. This paper has captured the history of the License Fee regime since inception to the latest amendment of 31st March 2021, wherein the definition of the AGR in the ISP licenses has become similar to what is provided in the Internet Service authorisation under UL.

We would like to bring to the Authority's kind attention, that this amendment has been brought in by DOT without any prior notice and without providing us with an opportunity of being heard.

Just as we are seeing an increased demand for this category, our ability to accelerate capital investments and expand rapidly, have been severely handicapped by the new levy of 8% on the amended definition of AGR, to include revenue from pure internet services.

This levy will leave the industry with lower cash flows and will constrain FLB industry from increasing its network coverage at an accelerated rate.

The ISPs have now been put in a situation, where our business model has been disrupted, right in the middle of an existing licensing regime, as a result of this change in the AGR definition.

We are therefore extremely thankful that the Authority has constituted this SCP & provided us with an opportunity of being heard, on various matters that adversely affect this industry.

Introduction: Background of FLB industry and Incentive structure for the industry

A. Fixed Line Broadband service is a Class in itself:

FLB service providers cannot be equated with other telecom service providers. FLB ISP players like ACT do not utilize the scarce natural resource of spectrum to provide their services. FLB service providers provide Broadband services by laying optic fiber cable networks from their core network directly to or closer to the subscriber. The installation costs of such networks (cost of fibre and Right of Way (RoW)) are prohibitively high. Here it may be pertinent to note that the Go-to-Market strategies & dynamics are very different for Telecom services providers and FLB service providers & as rightly captured in the SCP, there are significant challenges on the supply side to accelerate penetration of FLB to the end consumer, unlike the Wireless Broadband services which is able to scale up at a much more rapid pace.

Delivery of fixed broadband services through Low Earth Orbit (LEO) or Medium Earth Orbit (MEO) is far from reality. Two of the big projects in this technology namely Motorola Iridium and Google Loon have been officially shutdown, with a stated reason that it is not a feasible delivery model, as late as year 2020. This technology, as it stands today, is not

capable of delivering 100Mbps to every house in a dense Indian typical city scenario. Further the requirement of higher broadband speed is steadily increasing with time, which can today met only by FLB.

Delivering fixed broadband through Fixed Wireless Access (FWA) has been attempted by many service providers since several years. However, nobody is able to provide a seamless and high bandwidth broadband similar to fixed wired broadband.

The important attributes of FLB such as “higher reliability, low latency, and higher speed” are not available in a wireless Broadband connectivity and a Wireless Broadband connectivity will never be able to provide the above attributes. Thus, the FLB service providers are different class in themselves and cannot be equated with other service providers.

B. Supply side constraints and not the demand side constraints reason for poor penetration of FLB in the Country:

The Authority has very correctly brought out the fact of Supply side constraints being the reason for lower growth in the Fixed-line broadband subscribers (FLB). These bottlenecks have impeded the accelerated proliferation of FLB in India. The Supply side constraints and issues are:

- ROW charges and the process of ROW approvals are the single biggest impediment to the adoption of wireline FLB services. Further, development activities such as road expansion, laying of electrical cables etc. and intentional fiber cut by the miscreants results in frequent service disruptions, and increase in operating costs for the FLB service providers. As such the cost of installation fixed line network, maintenance and operating cost of a fixed line is much higher.
- The State Govt and local bodies look at ROW permission as a means to maximise their revenues.
- While the Indian Telegraph ROW Rules 2016 were brought in by the GOI with the right intent and initiative, the same has not been adopted by the State Governments in that spirit.
- Post receipt of ROW permission, there are then significant challenges of laying the fiber infrastructure be it overhead network or underground network – which is manually intensive coupled with the operational challenges of laying the network on public roads and extending to the last mile delivery to customer premises.
- Once this infrastructure is laid, the industry also faces constant challenges of the overhead as well as the underground fibre network being subject to damage & cuts, causing service disruptions & the need to deploy field staff to constantly get the fibre damages resolved.
- Added to the above complexity, is the Capital-intensive nature of the FLB industry, with every customer connection coming with incremental capital investment in the form of fibre, switches, routers, very unlike the WBS industry.
- These challenges are the same - for an existing player or for a new entrant.
- In a way providing an Indirect incentive through exemption of License fee on pure internet services, will allow the industry to accelerate capital investments and enable proliferation of fixed line broadband.

- A Direct incentive structure linked to ROW will also reduce the cost of doing business & encourage companies to create lower tariff plans to accelerate broad-band adoption.

The reason for non-proliferation of FLB is mainly because of the supply side issues and the constraints that a Service provider faces on the ground. It is not a case where a FLB service is available/feasible and the same remains unsubscribed or it is not preferred by the subscribers. Hence, we would like to conclude by saying that once the supply side issues are resolved, the FLB service providers will be able to establish their network in a much cost effective manner which in turn will lead to providing services at much more competitive rates thereby resulting in healthy competition and much more growth in FLB sub base.

C. Fixed Line Broadband needs an incentives scheme like Production Linked Incentive Scheme (PLI) from the central govt and reduced ROW charges by state govts:

Fixed line Broadband subscription adoption region wise, 2010 vs 2019

	2010		2019	
	(millions)	(per 100 inhabitants)	(millions)	(per 100 inhabitants)
Africa	1	0.2	5	0.4
Arab States	7	2.0	35	8.1
Asia & Pacific	214	5.5	614	14.4
CIS	19	8.3	48	19.8
Europe	151	22.8	220	31.9
The Americas	134	14.3	222	22.0

**Source: ITU Key ICT Data, updated 28 October 2019. https://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2019/ITU_Key_2005-2019_ICT_data_with%20LDCs_28Oct2019_Final.xls*

TRAI in its aforesaid recent consultation paper dated 19.05.2021 recognizes that the state of the FLB services in India since the time it gave its recommendations in 2015 has not really changed that much. The chart below shows the same:

TRAI's Recommendation dated 17.04.2015	TRAI's Consultation Paper dated 19.05.2021
In December 2014, there were 15.32 million FLB connections in India.	In December 2020, there were 22.29 million FLB connections in India.
As such, approximately 6.17% of broadband users had FLB services in December 2014 [(15.32 million FLB	After a period of six (6) years, the percentage of broadband users vis-à-vis FLB subscribers has fallen to 2.98% [(22.29 million FLB subscribers / 747.41

<i>subscribers / 248.07 million total broadband subscribers) x 100].</i>	<i>million total broadband subscribers) x 100]</i>
This in turn results in the FLB penetration being 1.2 per 100 inhabitants in India [(15.32 million / India's population in December 2014 – 1295.6 million) x 100].	Admittedly, since 2014, the FLB penetration in India has risen only to 1.6 per 100 habitants. [(22.29 million / India's population in December 2020 – 1380 million) x 100].

From the above tables, FLB penetration in other part of the world comparatively higher than India. FLB service in India is in very nascent stage and the same require incentivising scheme similar to that PLI schemes that encourages FLB service in India. Proliferation of Broadband services can be done best by ISPs in collaboration with LCOs. This category of players (Local Cable operators) don't have sufficient resources, capital and expertise and encouraging them thru Zero License Fee and PLI will go a long way in proliferating and generating lot of employment opportunities too.

With the above backdrop we would like to answer each of the queries raised by the Authority.

- 1. What should be the approach for incentivizing the proliferation of fixed-line broadband networks? Should it be indirect incentives in the form of exemption of license fee on revenues earned from fixed line broadband services, or direct incentives based on an indisputable metric?**

A Hybrid Model can enable accelerated growth of this sector:

Considering the capital intensive nature of the business, a hybrid model of incentives can enable proliferation of FLB networks.

This industry require huge cash flows to support the laying of network upto the customer homes

To encourage companies to invest capital and create more capacity, it is important that FLB companies have clarity on their profitability and “return of capital employed”

An indirect incentive like exempting LF on pure internet revenue will facilitate adequate availability of cash flows for companies to undertake rapid expansion. We have seen over the last 12 months, there has been an accelerated demand for fixed-broadband, driven by the work from home scenario arising out of the pandemic. We have also seen a near doubling of the data use by existing customers – all of these has called for a rapid expansion of network capacity, calling for significant ramp up of capital investments.

As correctly indicated in the SCP, the supply side constrains also need to be addressed. An absence of clear ROW protocols & coupled with use of ROW as a lever for revenue generation, are significant bottlenecks.

As provided in our response to primary CP there has to be simple coordinated efforts between central and state governments for clearance of all ROW approvals. Alternatively, the GOI can also come up with policy decisions where for creation of key infrastructure such as overhead and underground OFC etc., no ROW charges shall apply for another 15 years to enable accelerated growth of the FLB sector.

Hence, it would really aid the FLBs if a combination of Indirect & Direct Incentives is made available i.e. Hybrid model of incentive program consisting of both direct and indirect incentivising should be adopted by way of License fee exemption on Pure Broadband internet revenues for FLB services providers and direct incentives by way of reduced ROW charges & simplified ROW approval process to the FLB service providers to accelerate the proliferation of the fixed line broadband networks.

2. ***If indirect incentives in the form of exemption of license fee on revenues earned from fixed-line broadband services are to be considered then should this license fee exemption be limited to broadband revenue alone or it should be on complete revenue earned from services delivered through fixed-line networks?***

Exemption of license fee on the “pure internet revenue” alone including the activation charges along with the already existing deductions such as GST would suffice. FLBs establish their own infrastructure. Considering the capital-intensive nature of FLB services, the License fee exemption should be provided only to FLBs for revenues earned from Internet services including installation charges.

Further, the Authority under clause 2.24 of this SCP has touched upon the point, whether the revenue earned from Internet Leased Line should be also considered for exemption of LF. We request the Authority to take note that exemption of revenue earned from ILL activity has always been available under Pre UL ISP regimes and we request the Authority maintain status quo.

Further, after accepting the Authority’s recommendation, DoT vide its order dated 24th October 2018 amended the UL (VNO) licence to allow Lease line/ Bandwidth charges as pass through charges and the same was allowed as deduction for payment of LF. We request the Authority to take note that the same benefit shall also be extended to FLBs. As the Authority has rightly pointed out, most of the FLBs in the country are Licensees who hold plain vanilla ISP license and for their day to day operations, they obtain bandwidth from large TSPs/NLDs/ILDs similar to that of VNOs. We therefore request the Authority to consider the Bandwidth charges paid by an ISP to other TSPs/NLDs/ILDs as pass through charges and allow as deduction for payment of LF and ensure proper level playing field.

3. ***In case of converged wireless and fixed-line products or converged services delivered using the fixed-line networks, how to unambiguously arrive at the revenue on which license fee exemption could be claimed by the licensees?***
- i. The response provided in query no 5 may be read along with below response.
 - ii. Most of the FLBs are only plain vanilla ISP license holders as they hold only ISP license, there is no scope for them to resort to any misappropriation of revenues.

- iii. The convergence of wireless and Fixed line Broadband services are being delivered by a handful of service providers who hold both Access services authorisation and Internet services authorisation.
- iv. All the converged companies have clearly differentiated product lines for FLB and mobile services. It is easily possible to ensure that they do not hide any other revenue under FLB as revenue earned from FLB is pure subscription revenue.
- v. Further, there is also an Annual Certification process, where the statutory auditors duly audit the quarterly AGR reports with the statement of Profit and loss of the company and issue a certificate quantifying the LF to be paid by a Licensee. This certificate also forms the basis on which Assessment orders are passed by DOT & is currently working efficiently, this process can continue in the future to ensure there is no loss to the exchequer.

4. *What should be the time period for license fee exemption? Whether this exemption may be gradually reduced or tapered off with each passing year?*

We feel that instead of fixing a time period, the exemption of License fee shall be made goal based. One of the important missions of NDCP 2018 is to “Enable fixed line broadband access to 50% of households within 2022”. Its abundantly clear that we may not be able to achieve the same within the timelines prescribed under NDCP 2018 due to supply side constraints discussed above. Hence, the right measure would be to make these incentives specifically the exemption of License fee available until we are able to achieve fixed line broadband to at least 40% households and we are positive that the with the right support and impetus from the GOI in addressing the supply side constraints and ROW permission & charges the same can be achieved within next 7 to 8 years.

Instead fixing a time period for license fee exemption, it has to be goal based viz “until fixed line broadband access reaches to 40% of household”. For a country to have huge digital play and self-sufficiency, minimum 40% FLB penetration is bare minimum.

5. *Is there a likelihood of misuse by the licensees through misappropriation of revenues due to the proposed exemption of the License Fee on the revenues earned from fixed-line broadband services? If yes, then how to prevent such misuse? From the revenue assurance perspective, what could be the other areas of concern?*

We request the Authority to consider the fact that in light of the Hon’ble Supreme court Judgment in AUSPI 2011 and 2019 on AGR litigations, many of the TSPs who carry out activities which might attract LF @ 8% are already getting it done by floating a separate entity, thereby keeping that particular activity completely outside the purview of the AGR and LF. In this regard, the Authority and DOT may clearly call out that any exemption in license fee and the pass-through charges shall only apply to Service providers who hold a stand-alone ISP license.

Additionally, the current process of certification by the Company statutory auditor basis which annual filings of the LF to be paid can be further strengthened to avoid any loss to the exchequer. The current certification forms the basis for completion of assessment proceedings by DOT.

6. *How the system to ascertain revenue from fixed-line broadband services needs to be designed to ensure proper verification of operator's revenue from this stream and secure an effective check on the assessment, collection, and proper allocation and accounting of revenue. Further, what measures are required to be put in place to ensure that revenue earned from the other services is not mixed up with revenues earned from fixed-line broadband services in order to claim higher amount of incentive/exemption.*

We request you to consider our response to Query no 5 as response to this query.

7. *Is there any indisputable metric possible to provide direct incentive for proliferation of fixed-line broadband networks? What would be that indisputable metric? How to ensure that such direct incentives will not be misused by the licensees?*

In addition to the ROW pointers covered by the Authority and already responded by us to the primary consultation paper issued in August 2020, we have further elaborated our response on direct incentives that can be provided to FLB service providers under query number 8 herein below.

8. *What are key issues and challenges in getting access to public places and street furniture for installation of small cells? Kindly provide the State/ City wise details.*

While the Authority has discussed Street furniture more in the purview of 5G roll out and in facilitating small cell networks which would be in huge demand in order to cater to the 5G network requirements, we would also like to take this opportunity to stress upon the fact that Street furniture is also the need of the hour for proliferation of FLB.

FLB service providers create their own infrastructure by laying Optic Fiber Cable networks from the local exchange directly to or closer to the subscriber. The Authority will appreciate that while creating Underground OFC network is more reliable and secure, the same may not be feasible in all the locations specifically while creating infrastructure within city limits. This leaves a FLB service provider with no other option but to create overhead OFC network infrastructure.

While the ROW aspect has been elaborately discussed in primary CP issued in Aug 2020, no concrete measures have been undertaken on the ground so that FLB service providers stand to get benefited.

As the Authority has coined an apt term called as "Street Furniture" we would like to stress upon important factors which will also form part as 'Street Furniture' in rolling out the FLB network. Some of the most pressing issues faced by FLBs that would require consideration under Street Furniture issue are as below:

- a. Reluctance by various State Governments in permitting usage of streetlamp post and electricity poles for stringing the OFC. Citing misplaced reasons such as beautification of city, safety and lack of proper policy or enabling provisions whereby they can grant permission and collect charges if any.

- b. The last mile network of FLBs involve deploying a last mile network switch which in turn will connect a minimum of 5 to 7 customers basis their capacity. This last mile network switch is usually placed in a 2x2 box which is wall mountable and occupies very minimal space. Further, the last mile network switch requires electricity to relay its signals. There is a huge difficulty on the ground in securing permission for this last mile network switch from the customers, as they are being issued penalty notices for permitting installation of network switches. It is pertinent to note that these last mile switches only consume very minimal power say 5 units per month and can run in domestic power like any other gadget at a customer's residence. However, the Electricity department officials have misplaced understanding and see this as usage of domestic power for commercial usage and reprimand the customer, because of which there is huge challenge in getting feasibility and in providing on-time services to the customers by establishing our network. Hence a proper policy framework needs to be brought in where
- electricity for these last mile switches needs to be permitted using domestic power and
 - the service provider shall not be forced to seek any separate permission from the electricity department and shall not be obliged to take any commercial power connection.
 - An explicit notification wherein awareness is brought in to the public at large that they shall actively give permission to FLBs last mile switches shall brought in. this can be done in the same lines as to how TRAI & DOT issued notifications and press release clarifying the safety of MSC & BTS (GBT & RTT) towers so that the general public actively give permission for installation of the same.
- c. Similarly, its high time that a proper policy framework be brought in where Gated community and Resident welfare Associations (RWA) of such gated communities duly give permission for deployment of FLB network. TRAI is very much aware of the practical difficulties faced by FLBs on the ground such as
- non-availability of permission to enter and deploy network;
 - even if permission is granted the same being given at exorbitant cost at the whims and fancies of the RWA;
 - RWAs taking their own stance that they will only permit few handful of service provider which is illegal and anti-competitive

The above issues have already been discussed at length in various consultation papers. However, till date there has not been any law or regulation which duly aids the ground difficulty. We request the Authority to take note of the above issues as part of the Street Furniture issues of the ISPs and timely disposal of all the above will help the FLB to a great extent and will definitely promote proliferation of Broadband services.

9. ***How to permit use of public places and street furniture for the effective rollout of 5G networks? Kindly suggest a uniform, simple, and efficient process which can be used by States/ Local-Bodies for granting access to public places and street furniture for installing small cells. Kindly justify your comments.***

Our response to Q.No 8 shall be read as part and parcel of this reply.

10. Which all type of channels of communication should be standardized to establish uniform, transparent, and customer friendly mechanisms for publicizing provisioning of service and registration of demand by Licensees?

We maintain standardized uniform, transparent, and customer friendly mechanisms for publicizing provisioning of service and registration of demand by subscribers. Further, we have come up with mobile application and website services wherein there is an automated process where the customer can check whether the connections are feasible at location or not on any given day.

We request the Authority to be cognizant of the fact that the License conditions such as maintenance of waiting list etc., that are being quoted under the CP are archaic and lot of technological developments have come in place where the customer himself is able to check whether a particular network is feasible at his location or not.

As soon as an enquiry is made by a customer in the mobile application or through any other medium, the data gets duly captured internally and he is actively followed up for connecting him. In case the location is not feasible when the enquiry has been made by the customer, proper follow up call goes to the prospect once feasibility is established to check whether the prospect is still interested to subscribe the services. In this manner a proper mechanism is already being followed.

The most important reason as to why a customer is not serviceable in a particular location is only because a service provider is not able to reach its network to the customer location due to various supply side issues as we had already highlighted in detail above. It is never the case where the services are not publicised widely, or the customers are refused registration of demand in the service areas. With the advent of more competition and availability of more options at the disposal of the customer all these license conditions have become redundant and infructuous.

11. Whether proliferation of fixed-line broadband services can be better promoted by providing Direct Benefit Transfer (DBT) to subscribers of fixed-line broadband services? If no, elucidate the reasons.

By giving direct incentive to consumers (in the form of subsidy etc), will not give companies encouragement to put in more capital as subsidy to the consumer will only mean that some of the subsidy will come to the companies as revenue. However, without any clarity, most companies will not invest in the infrastructure. This proposal of DBT scheme to consumers will not aid in proliferation of FLB services in the country.

12. If answer to Q11 is affirmative, then:

- i. Should DBT scheme be made applicable to all or a particular segment of fixed-line broadband subscribers? Kindly justify your comments.**
- ii. If you recommend supporting a particular segment of fixed-line broadband subscribers, how to identify such segment of the subscribers?**
- iii. How to administer this scheme?**

- iv. *What should be the amount of DBT for each connection?*
- v. *What should be the period of offer within which individuals need to register their demand with the service providers?*
- vi. *What should be the maximum duration of subsidy for each eligible fixed-line broadband connection?*

Response to Query no 11 may be referred here.

13. Any other related issue

We do not have anything further to add.



C. N. [Handwritten Signature]