

By Email

To,
Shri Sunil Kumar Singhal,
Advisor, Broadband and Policy Analysis,
Telecom Regulatory Authority of India.
Email : advbbpa@traai.gov.in

Dated: June 13th, 2021

IFF/2021/031

Dear Sir/Ma'am

***Re: Comments on TRAI's Supplementary Consultation Paper on
Roadmap to Promote Broadband Connectivity and Enhanced Broadband
Speed***

1. Internet Freedom Foundation (IFF) is a registered charitable trust which advocates for people's rights over the internet across public institutions and the private sector. IFF's origins stem from the SaveTheInternet.in, a public movement which enabled more than a million Indians to advocate that net neutrality be recognised as a core tenet of the public internet. We work across a wide spectrum of issues, with expertise in free speech, electronic surveillance, data protection, net neutrality and innovation; we champion privacy protections, digital security, and individual freedoms in the digital age. Another core part of our work involves advocating for equitable access to the internet for all Indian citizens.
2. On 20th October, 2020, IFF submitted its [comments](#) pursuant to the Telecom Regulatory Authority of India's (TRAI's) Consultation Paper on Roadmap to Promote Broadband Connectivity and Enhanced Broadband Speed. In our comments, we highlighted the need to revamp the policy and regulatory initiatives surrounding the broadband infrastructure in the country to ensure that every citizen has access to the internet irrespective of their geographical location or social and economic status.
3. We appreciate TRAI's efforts in trying to further understand stakeholder concerns by integrating comments to the consultation paper on promoting broadband connectivity and enhancing broadband speed. In the current context, our dependence on high speed and reliable broadband connection has increased unprecedentedly. Concomitantly, the demand for real time video interactions has magnified in the wake of the ongoing Covid-19 pandemic. Predictably, the relevance of online platforms for a multitude of activities shall continue in the near future. Therefore, the current consultation paper highlights some of the raging issues of access to internet connectivity, which in turn is a key driver of our social and economic development.
4. IFF acknowledges that access to fast and affordable internet is indispensable to our social and economic well-being in the contemporary context. This issue has become

even more pronounced during the ongoing pandemic which has forced people to stay inside their homes and has increased their dependence on the internet for access to education, government schemes and basic necessities. As India battled the harsh second wave of the Covid-19 outbreak, the internet buttressed mobilisation of life saving resources to the patients and care-givers across the country. In that context, IFF is happy to share insights from our work in the area of digital rights with the Authority and assist in formulating vital steps to facilitate access to high speed and reliable internet to all.

5. IFF has consistently been advocating for high speed broadband connectivity in areas suffering from internet outages and poor connectivity like Andaman and Nicobar Islands and Odisha. In the past, we have reached out to various Central and State level government authorities and were elated to see our efforts thrive when the Hon'ble Prime Minister inaugurated the Chennai and Andaman & Nicobar Islands (CANI) Submarine Cable Systems Project.
6. In a similar vein, the question we are concerned with in the current paper deals with the viability of enhancing the use and availability of fixed line broadband across the different parts in India to facilitate smooth streaming and conferencing of videos. Parallely, we must also consider how to create a robust revenue framework for the rollout of such connectivity with the view to ensure that no one is left behind. We believe, in order to achieve this, we need to ensure that broadband infrastructure caters not only to needs based on connectivity and geography but also serves to alleviate sections of the society who have traditionally not been able to enjoy the benefits of access to the internet. Focused efforts need to be made by the Authority to ensure that special measures are taken to account for social conditions which have acted as a deterrent to access such as gender, caste or economic status.
7. In our submissions, we highlight the need for direct incentives to be provided instead of indirect incentives, as the latter may not directly contribute to an increase in the subscriber base. We further elaborate on this suggestion when discussing the potential for misappropriation of revenues due to indirect incentives and the impact of the same on government revenue and Universal Service Obligation Funds. Additionally, we argue that a direct incentive that provides based on a licensee's performance (i.e. the incremental change in the subscriber base) be implemented, making the case for the latter as an indisputable metric.
8. Next, we draw attention to hitherto relatively unaddressed issues with public wifi networks related to network fidelity and user privacy. We also suggest that public sector units be used to implement such public wifi projects. Lastly, we argue that Direct Benefit transfers may end up exacerbating existing issues while also causing new problems, and so we suggest that direct subsidies be used instead to stimulate the proliferation of fixed-line broadband services.

We request you to see below the substantive recommendations that are separately attached to this covering letter. We remain at your disposal should you wish to discuss the matter any further.

Kind Regards,

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Internet Freedom Foundation,
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Detailed Submissions Supplementary Consultation Paper on Roadmap to Promote Broadband Connectivity and Enhanced Broadband Speed

At the very outset, we would like to commend the efforts of the Authority in addressing stakeholder concerns about broadband connectivity and speed through successive consultation papers. The concerned authorities' efforts to promote wider access to high speed broadband is well reflected in the Department of Telecommunications' "National Digital Communications Policy, 2018" and the subsequent PM WANI scheme which aims to implement a decentralised system of public access points. Further, the consecutive consultant papers by TRAI between 2015 and 2020 on creating a roadmap on delivering fast and reliable broadband manifests efforts in good faith towards enhancing internet access for all citizens. As an organisation which advocates for the digital rights of the citizens, these are promising trends and we hope to assist the authority in formulating a comprehensive and robust framework by sharing our inputs on the subject of fixed line broadband connectivity and its associated issues. The proposal made in this paper aims to improve the outcomes and increase efficiency of the proposed plans.

The transformative milieu of digital communications is the driving force in today's society and we must ensure that the benefits of high speed broadband are not limited to only a certain section of the society. The Supreme Court of India, in *Anuradha Bhasin v. Union of India*, has also highlighted that the internet is a medium to exercise fundamental rights provided by the Constitution of India. As such, we hope to supplement the current framework with our inputs from our work in the grassroots to enable the definitions and the implementation plans of the internet rollout is guaranteed to all. In the past, we were encouraged by the government's proactiveness in providing internet access to the remote parts of Andaman and Nicobar islands through the Chennai and Andaman & Nicobar Islands (CANI) Submarine Cable Systems Project. We are hopeful that in the roll-out of fixed line broadband across the city, the principles of equal opportunity will be prioritised. Hence, our submission here tries to provide a citizen oriented perspective, keeping them at the center as the principal participants in any system design. This is through tangible articulations of digital and fundamental rights of the proposed beneficiaries.

Issues for Consultation

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 fixedline broadband services, or direct incentives based on an indisputable metric?

1.1. Suggestion: Direct incentives must be provided.

1.2. Rationale: As noted in paras 2.21 and 2.26 of the paper, several issues may arise as a result of indirect incentives, chief among which is the misappropriation of revenues. There is also no guarantee that ISP's would invest the increased monies into expanding the user base, especially in rural and far flung areas. This is because indirect incentives provide licensees with significant amounts of discretionary power, as the very nature of indirect incentives allows licenses to choose how to deploy increased resources. Additionally, internet service providers and telecommunications service providers have

faced high levels of debt in recent years due to mounting AGR dues.¹ Thus, the increased revenues in the form of indirect incentives through license fee exemptions may instead be used to service debt obligations.

On the other hand, direct incentives provide a concrete pathway towards increasing the user base. Direct incentives, if linked to investment, also provide a good boost to capital expenditure in the sector, thus enabling the development of infrastructure in under-serviced areas. Thus, we recommend that direct incentives, based on an indisputable metric, be used.

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?

2.1. Suggestion: No comments.

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?

3.1. Suggestion: No comments.

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?

4.1. Suggestion: No comments.

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?

5.1. Suggestion: Yes, there is a high likelihood of misappropriation of revenues. This should be checked by relying solely on direct incentives. Lower government revenues would also impact USOF funds.

5.2. Rationale: As we have stated earlier, the report itself acknowledges the likelihood of misappropriation of revenues, especially through the bundling of services. This is due to the two fundamental issues with the use of indirect incentives: Given the lack of clarity

¹ Rathee; *AGR dues: ISPs may move Supreme Court to seek relief on lines of PSUs*; Financial Express; 1st December, 2020; <https://www.financialexpress.com/industry/agr-dues-isps-may-move-supreme-court-to-seek-relief-on-lines-of-psus/2140171/>.

about the application of exemptions to different revenue streams, licensees will always be incentivised to increase the scope of the revenue that would be eligible for exemption, regardless of whether doing so has any impact on the subscriber base. This may lead to licensees using the financial benefits of exemptions for purposes other than increasing the user base.

Such misappropriation is likely to be curbed only if indirect incentives are dispensed with. In case indirect incentives are persevered with, strict guidelines for ensuring that exemptions are given only on the basis of broadband revenues must be notified. However, given the increased amount of 'bundling' of services, such a task may be difficult to achieve. Thus, we recommend that indirect incentives be dispensed with.

Any potential incentive will always have to account for its effect on government revenue. However, indirect incentives provide no guarantee of growth, while, at least in principle, direct incentives are by definition based on the achievement of certain objectives, especially since in the former case licensees are under no obligation to direct their increased resources towards increasing their user base.

Linking direct incentives to the performances, vis-a-vis targets of the licensees can yield tangible benefits. Through direct incentives, the licensees will be motivated to increase the number of broadband subscribers. Consequently, by forgoing a fraction of their revenue, the government would still be successful in attaining the objective of increasing the broadband subscriber base. On the contrary, sole dependence on indirect incentives is likely to create a "doubly negative impact" wherein the subscriber base is likely to remain stagnant while the government suffers a loss of revenue. As not only would the lost revenue not have resulted in an enlarged user base, revenue that the government could have used, say, through Universal Service Obligation Fund (USOF) deployment to create digital infrastructure in rural and under-services areas would also not be available for the same. Such a situation may already have occurred, as media reports have mentioned that the Central government was looking to use USOF funds to help telecom companies that were under financial duress due to non-payment of AGR funds.²

This would have a 'doubly negative' impact, Such a situation may already have occurred, as media reports have mentioned that the Central government was looking to use USOF funds to help telecom companies that were under financial duress due to non-payment of AGR funds

Not only are such measures against the Indian Telegraph Act, 1885, but they also draw financial resources away from the main focus of the USOF while also acting as an unwarranted 'bailout' for telecom companies that have not fulfilled their fiduciary responsibility of paying their AGR dues. The COVID-19 pandemic has only increased the need for providing high quality broadband services to citizens. For example, while students in Kargil have struggled with low internet connectivity at homes, USOF deployment has been slow.³ In such a scenario, the use of indirect incentives, which

² Rathee; *AGR crisis: Govt may dip into USOF to support telecom companies*; Financial Express; 2nd March, 2020; <https://www.financialexpress.com/industry/agr-crisis-govt-may-dip-into-usof-to-support-telecom-companies/1885780/>.

³ *Students in Kargil struggle with poor internet services, officials say efforts on to improve connectivity*; The Times of India; 26th May, 2021;

reduce government revenue while providing no guarantee of an increase in subscriber base, may be untenable.

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.

6.1. Suggestion: No comments.

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?

7.1. Suggestion: User based incentives should be provided as directive incentives. Here, *post facto* incentives based on the growth of the user base should be used as the indisputable metric.

7.2. Rationale: Once again, the advantage of direct incentives that are based on the growth in the number of users is that a) they allow incentives to given in direct response to performance, improving competition and b) any financial benefits reaped from such incentives are used directly in the building up of India's digital infrastructure and internet subscriber base.

The use of such 'output' based incentives is not novel in the Indian context: the Central government's Production-Linked-Incentive scheme is seen as a key part of India's post pandemic revival plan and aims to provide a huge boost to the manufacturing sector.⁴ Indeed, the telecom infrastructure sector has already been earmarked to receive Rs 12,195 crore worth of incentives over the next five years on the basis of incremental sales.⁵ As has been argued elsewhere, such revenue based incentives (as opposed to license fee incentives) can encourage companies to invest further and provide a direct

<https://timesofindia.indiatimes.com/home/education/news/students-in-kargil-struggle-with-poor-internet-services-officials-say-efforts-on-to-improve-connectivity/articleshow/82972978.cms>.

⁴ Dutta; *India's economic revival: PLI scheme likely to take center stage*; Business Standard; 1st March, 2021; https://www.business-standard.com/article/companies/pli-scheme-likely-to-take-center-stage-in-india-economic-revival-121030100022_1.html.

⁵ *Telecom manufacturing to get boost with outlay of ₹ 12195 Crores over 5 years leading to enhanced production of more than ₹ 2.4 Lakh Crores*; Press Release ID: 1698664; Press Information Bureau of India; 17th February, 2021; <https://pib.gov.in/PressReleasePage.aspx?PRID=1698664>.

boost to output - “If companies invest, then employment and development in that region follow, and with incentive payments, a virtuous cycle sets in”.⁶

Such a model can then be naturally replicated in the context of the subscriber base, where service providers can be provided with similar incentives for incremental increases in the number of users. This measure is also well equipped to serve as an indisputable metric. Firstly, it rewards those companies the most who are able to be dynamic and courageous in their consumer acquisition strategy. This will spur competition, as companies would have to innovate to capture such incentives. Under-serviced areas, where subscribers counts are low - rural internet penetration is around 34.60, while urban internet penetration is around 103.98 - would also benefit, as they would have a higher potential for massive increases in the subscribers base and so would be a greater source of incentives.⁷ Secondly, such output-based incentives do not carry the potential for misuse by licensees as they are based on a transparent and easily measurable metric that directly rewards performance.

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.

8.1. Suggestion: A fundamental issue that does not seem to have been addressed so far is the security of such public networks. Furthermore, such public wifi projects must be implemented by public sector units.

8.2. Rationale: As we have written elsewhere, public Wi-Fis are known to be susceptible to attacks and breaches, especially in the absence of data protection norms.⁸ The security architecture used in public Wi-Fis may often not possess sufficient security standards, and so may leak data.⁹ Furthermore, many websites, including government portals, may not always have security credentials such as HTTPS or SSL certificates, and so accessing such websites through public Wi-Fis may be even more dangerous. The possibility of rogue networks acting as PDOs also exists, where hackers may spoof a legitimate network for malicious purposes.¹⁰

Furthermore, in the absence of a robust data protection legislation, both usage data and any personal or sensitive information entered for the purpose of authentication may also

⁶ Ramachandran; *Production-linked incentives: A well-designed scheme*; Livemint; 13th April, 2021; <https://www.livemint.com/opinion/columns/productionlinked-incentives-a-well-designed-scheme-11618245189412.html>.

⁷ *The Indian Telecom Services Performance Indicators October – December, 2020*; Telecom Regulatory Authority of India; 27th April, 2021; https://www.trai.gov.in/sites/default/files/QPIR_27042021_0.pdf.

⁸ *The PM-WANI Scheme: An Explainer*; Internet Freedom Foundation; 10th February, 2021; <https://internetfreedom.in/pm-wani-explainer/>.

⁹ Johansen; *Public Wi-Fi security: Why public Wi-Fi is vulnerable to attack*; Norton, ; <https://us.norton.com/internetsecurity-wifi-public-wi-fi-security-101-what-makes-public-wi-fi-vulnerable-to-a-attack-and-how-to-stay-safe.html>.

¹⁰ *How to Avoid Public WiFi Security Risks*; Kaspersky, February 8th, 2019; <https://www.kaspersky.co.in/resource-center/preemptive-safety/public-wifi-risks>.

be at risk. The deregulated environment, while perhaps good for business, only exacerbates the issues. Thus, there is a clear need for comprehensive security guidelines to be included in the framework.

Thus, should a robust data protection legislation not be enacted in the near future, it is essential that privacy and data security norms be notified to ensure the fidelity of such public networks. Such provisions must include a comprehensive gamut of user rights, a consent based mechanism for the harvesting and processing of data, and the implementation of cyber security norms at par with international best practices.

Additionally, all such programmes for the installation of small cell wifi infrastructure should be carried out by public sector entities. A key goal of such projects is to increase the reach of digital networks to those who are *sans* internet. Thus, it is crucial that not only is high speed internet connectivity provided, but also that it is done so at low rates, which may not always be possible with the private sector. The latter is due to the economic viability of projects, as they may require long gestation periods that private actors may not be able to absorb. Similar projects by private entities have failed to take off, as noted by technology and ICT giant Google: “several governments and local entities have kicked off their own initiatives to provide easier, cost-effective access to the Internet for everyone”.¹¹

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.

9.1. Suggestion: No comments.

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?

10.1. Suggestion: No comments

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.

11.1. Suggestion: No, Direct Benefit Transfers (DBTs) should not be used to promote the proliferation of broadband services. Instead, usage-linked subsidies should be provided.

¹¹ Sathé; *PM WANI: Can UPI-Style Approach Lead to Wi-Fi Profusion?*; NDTV Gadgets, December 11th, 2020; <https://gadgets.ndtv.com/internet/features/pm-wani-upi-style-rollout-for-wifi-hotspots-india-pdo-public-data-office-2337278>.

11.2. Rationale: As has been noted in the consultation paper, while there is certainly a significant 'demand' for fixed line broadband services, effective demand is low as there is not enough purchasing power to back the high demand. Overall average monthly earnings were as low as Rs. 15,210 in 2019, and this figure has fallen to Rs. 12,625 as a result of the COVID-19 pandemic.¹² In such a situation, affording even basic monthly broadband service plans is a tough ask (and this before one considers the various additional fees and set up charges that one must bear).

Thus, it is commendable that the TRAI is considering subsidising the use of fixed broadband services. However, we suggest that such subsidies not take the form of DBTs. The use of DBTs in the Indian context has been severely criticised. Critics have found evidence of high levels of payment delays (in 2016-17, they found that only 21% of NREGA beneficiaries received on time payments) and a flawed method of delay compensation.¹³ Several structural problems have also been pointed out:¹⁴

- **Lack of Infrastructure:** Cash transfers rely on the existence of technology and financial infrastructure. These may not exist everywhere in a country that remains exceedingly rural.
- **Identification of beneficiaries:** By the Centre's own admission, there have been several issues with the identification of beneficiaries, especially due to the existence of overlapping databases.¹⁵
- **Local influences on DBT delivery:** Studies have shown that existing cash transfers are significantly influenced by local power brokers that thwart the effective implementation of schemes.
- **Need for services:** In countries where DBT programmes have been adjudged to be successful, DBT schemes have been accompanied by an expansion of state services to provide low cost supply boosts; this is not presently envisioned by the consultation paper.
- **Economic factors:** Cash transfers bring with them the threat of severe inflationary pressures. With India's consumer price indices already inching upwards, such dangers must not be discounted.

Additionally, in kind transfers (in this case, direct subsidies) may also be the preferred method for receiving government benefits: one study found that around two thirds of

¹²Basole, Abraham, Lahoti, Kesar, Jha, Nath, Kapoor, Mandela, Shrivastava, Dasgupta, Gupta, & Narayanan; *State of Working India 2021*; Centre for Sustainable Employment; 5th May, 2021; https://cse.azimpremjiversity.edu.in/wp-content/uploads/2021/06/SWI2021_FullReport_1June.pdf.

¹³ Narayanan, Dhorajiwala, & Golani; *Analysis of Payment Delays and Delay Compensation in MGNREGA: Findings Across Ten States for Financial Year 2016–2017*; The Indian Journal of Labour Economics; 1st July, 2019; <https://link.springer.com/article/10.1007/s41027-019-00164-x>.

¹⁴ Bhattacharya; *Cash transfers: Miracle or mirage?*; Livemint; 28th November, 2015; <https://www.livemint.com/Sundayapp/pJdRTr4eBlaCIUVMKggVDM/Cash-transfers-Miracle-or-mirage.html>.

¹⁵ Kapil; *COVID-19: Centre's financial package through DBT attracts criticism*; Down To Earth; 12th May, 2020; <https://www.downtoearth.org.in/news/governance/covid-19-centre-s-financial-package-through-dbt-attract-s-criticism-71062>.

Indian citizens preferred receiving in kind transfers over receiving cash.¹⁶ Jharkhand has even witnessed significant protests against DBT programs.¹⁷ The reasons for this preference included a lack of access to banking and financial infrastructure, a fear of inflationary pressures, and high transaction costs. A respondent in the aforementioned study stated the following: “In the current system, the government deals with the tension of logistics; if we get money, that tension will be ours”.¹⁸

Thus, we recommend that direct subsidies be provided. This would involve subsidizing the monthly packs purchased by subscribers, along with accompanying subsidies for installation charges incurred. We acknowledge that the beneficiary identification problem may still remain, and so we recommend that National Food Security Act beneficiary data be used as a proxy to identify the ideal beneficiaries of the subsidy scheme. Block development officers may then be given the charge of adding households to the list of beneficiaries if they can demonstrate their need to the officer.

12. If answer to Q11 is affirmative, then: 34 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?

12.1. Suggestion: No comments.

13. Any other related issue.

¹⁶ Khera; *Cash vs In-Kind Transfers: Indian Data Meets Theory*; Food Policy Journal; June 2014; <https://www.sciencedirect.com/science/article/abs/pii/S0306919214000499>.

¹⁷ Sen; *Why People Are Protesting Against Jharkhand's Experiment With Direct Benefit Transfers*; The Wire; 1st march, 2019; <https://thewire.in/rights/jharkhand-nagri-ration-pds-direct-benefit-transfer>.

¹⁸ Khera; *Cash vs In-Kind Transfers: Indian Data Meets Theory*; Food Policy Journal; June 2014; <https://www.sciencedirect.com/science/article/abs/pii/S0306919214000499>.