

## **BIF Response to TRAI Consultation Paper on “Licensing Framework and Regulatory Mechanism for Submarine Cable Landing in India”**

*At the outset, BIF wishes to laud the TRAI for coming out with this Consultation Paper on a subject of vital and strategic importance. In view of the humungous growth in data consumption in India and with India rising to the position of No.1 in the world in terms of data consumption, all elements associated with the entire supply chain of data flow from its origin to the point of consumption needs to be reviewed to ensure fair, free and open access to all players – incumbents as well as new entrants to promote healthy competition. This would enable provision of quality and reliable services at affordable costs.*

*In view of the above philosophy and principles, we believe the Consultation Paper and the questions put forward by the Authority are of great relevance. BIF herewith provides its question wise response, aligned to the above thoughts and principles.*

**Question 1: What limitations are being posed by existing licensing and regulatory provisions for laying submarine cables and setting up of CLS in India? Please answer with the detailed justification for changes required, if any.**

### **BIF Response:**

The Submarine Cable Systems connectivity is a critical piece of global telecommunications infrastructure and is the backbone that supports the entire international connectivity and digital ecosystem. India has witnessed exponential growth in data traffic traversing over the international submarine cables that is further expected to multiply with the launch of 5G and on growing number of Data Centres, where the country is uniquely positioned to take lead.

High-quality internet connectivity creates digital opportunities, and strengthens local and global economies. The importance of internet connectivity to economic growth is well established for many successful and matured markets. Submarine fiber optic cables, or subsea cables, are among the most important components that enable greater internet connectivity. They are important for global network infrastructure, connecting countries, carrying communications, and enabling commerce and education.

The international submarine cable is catering to two key requirements, one pertaining to carrying public traffic and selling capacity in the market to enterprise and wholesale carrier verticals. The other category includes the providers who generally build

networks from Data Center to Data Center to manage the data transfer communications and are the cable owners of modern subsea cable systems, for example content providers, cloud service providers and Data Center providers.

The current licensing and regulatory requirements needs certain changes to make India globally more competitive and attractive for global internet traffic and data centres. There is need to assess investments in submarine cables and various bottlenecks in the licensing regime which may be stifling growth in these sectors.

Under the current regime, the entities holding international long distance (*ILD*) licenses are empowered to laying submarine cables and setting up of CLS in India. This includes submarine cables and fiber pairs within those cables that are used solely by an entity for its own private/captive use and not for resale of telecom services in India. Further *ILD* license is required to physically and logically operate subsea equipment such as submarine line terminal equipment (*SLTE*) and their restrictions vis-à-vis the grant of no-objection-certifications to foreign entities looking to lay and operationalise submarine cables.

Thus, the regulatory regime in India on CLS and submarine cables is not open access in nature. This results in a scenario where consortiums have to rely on one of only a few *ILD* license holders in India to own the cable assets in Indian Territorial Waters and act as the consortium's landing party. Thus, in order to promote competition and resultantly improve quality and innovation of services in the sector – we believe that the TRAI / Department of Telecommunications (*DoT*) can open the CLS facilities which will attract more participation by private players and foreign investments. The respective players should also be able to own fiber pairs of submarine cables in Indian territorial waters, own and operate the equipment to light up the fiber pairs, and the consortium jointly should be able to own the submarine cable. This will open up competition in India, leading to more investments in submarine cables landing in India as well as the associated infrastructure to support them. There is aneled to bring down the costs of network acquisition and offer desired diversity. Open access cable systems and CLSs are a modern way to build the cable systems and landing stations, which encourages more investments in the country from data centers and new submarine cable investment perspectives. The open access model offers greater flexibility to customers to design networks with enhanced diversity and performance and reduce the additional burden of cost.

Therefore, there is a need to relook at the current License and regulations regime from different lenses. Forming a category-based licensing and regulatory framework for laying submarine cables and setting up of CLSs in India will be an option to attract more investment and make India a global transit HUB for internet traffic. The proposed framework can have two broad categories of suppliers to build and

operate submarine cable systems and Cable landing stations. One Category will include the providers, who generally build networks from Data Center to data Center to manage the data transfer communications. The suppliers in this category will use such cable systems to build connectivity from Dats Center to Data Center and should not be allowed to sell capacity in the market to enterprises and Wholesale carriers. Other category will include all the licensed parties, who wish to sell capacity in the market to enterprise and wholesale carrier verticals, for example Telcos.

Further, the current licensing and regulatory regime for laying submarine cable systems does not explain about permits process, turnaround time (TAT), lawful interceptions and monitoring (LIM) standards.

The current licensing framework does not offer the flexibility to implement new technologies/models to build submarine solutions in line with global markets, for example current licensing framework requires to set up Cable Landing Station (CLS) including SLTE, LIM and other equipment at the same place. Due to massive development in key cities (Mumbai and Chennai), it is difficult to acquire suitable real estate lands, power infrastructure closer to the shore to set up CLSs, therefore there is no option other than to build these CLSs in city center locations away from the shore (typically in the range of 10-15 kms). This arrangement impacts performance of the cable systems due to long distance of fiber paths and also results in higher cost due to expensive infrastructure in the city center areas in the key landing cities like Mumbai and Chennai.

**Question 2: Which of the conditions, as stated in Para 2.10<sup>1</sup> be made applicable on the ILD licensee for applying permission / security clearance for laying and maintaining the submarine cable and setting up CLS in India? Please answer with the detailed justification.**

**BIF Response:**

In our view, both condition no. (i) and condition no. (ii) (as extracted in the footnote below) will unduly restrict the method and manner in which entities offering digital services and content in India enter and structure their arrangements with domestic ILD license holders.

Regarding condition no. (i), very few countries mandate the domestic ILD license holder to, among other things, have a fixed percentage of interest (or any other such

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<sup>1</sup>Based on the above, **following are the different conditions** that can be made applicable to ILD operators who are laying / planning to lay submarine cable and setting up CLS in India:

- (i) ILD operators should have X% or greater interest in the submarine cable system for laying cable in the Indian territorial waters, terminating the international cable and should also own or control the CLS in India.
- (ii) ILD operators not having any stake in consortium but signing agreement of ownership of submarine cable in Indian waters and submitting undertaking that they are owning the asset in Indian territorial waters.

Any ILD operators without ownership agreement / undertaking.

greater interest) in the consortium in order to receive permissions / clearances for laying cables in territorial waters or terminating international submarine cables (noting the only country we are aware of is Indonesia which we understand requires a 5% interest in the domestic section of the submarine cable in Territorial Waters). This will act as a disincentive for consortiums to invest in submarine cable systems in India and its territorial waters – as such a requirement may, without any reasonable justification, impinge on the ability of private entities to take business and commercial decisions about their ownership patterns and structuring operations.

In addition, it may be noted that in the event another country follows a system described under condition no. (ii) – and if India adopts the same system as well, it may become untenable to operate a submarine cable system between two such countries. This is because any given SLTE works on the basis of one entity controlling both ends. If both countries require a single local operator to, in effect, control the SLTE then it becomes impossible to operate a network between two such countries.

With specific reference to the U.S. model that has been discussed by TRAI in the Consultation Paper, it is important to note that while the US Government requires entities which own a 5% or more interest in the concerned cable system to be a party to the license application, it does not require that the entity that lands the system must exercise ownership or control over the system or consortium. Thus, the U.S. regulatory framework enables an entity that has no interest in the cable system and its consortium to land cables in the country. It also does not require the landing party to own and / or operate all the equipment and assets making up the concerned submarine cable system in U.S. territory.

Regarding condition no. (ii), paragraph 2.7 of the Consultation Paper appears to suggest that the ILD license holder would own the cable system in Indian territorial waters, including the CLS, backhaul systems and all the equipment (including transmission equipment). At the outset, we would like to draw your attention to the International Telecommunication Union (ITU) comments in its recommendations on 'Open Access Cables' about how it is important for different parties to own and operate their own SLTEs separately from one another.

In addition to this, we would like to urge that non-transmitting equipment or passive equipment such as cable sheaths, power feeding equipment, etc. should also be permitted to be owned, operated, and maintained by non-ILD license holders in Indian territorial waters, its Exclusive Economic Zone and up to the concerned CLS, as such equipment does not pose any security risks for India or result in toll bypass concerns and it would enable faster deployment of capital-intensive critical infrastructure.

In light of the above, we request the TRAI / DoT to implement a system that follows condition no. (iii).

Further, while the TRAI / DoT evaluates the feasibility of condition no. (iii), we would like to take this opportunity to state that the current practice followed by the DoT of requiring a member of such consortium to hold a valid ILD license for the purpose of laying submarine cables in territorial waters may be revisited.

We request the TRAI / DoT to consider exploring the option of requiring the ILD license holder / operator to act as a landing party only (as opposed to also being a member of / having a stake in a consortium). This is because an entity should not necessarily have to own an interest in an asset (such as a submarine cable) to lay and maintain it. In fact, global companies such as SubCom are in the primary business of supplying and laying (as well as maintaining, etc.) submarine cables for use by other entities. It is also not financially viable for IDL license holders to invest in too many submarine cables, so this becomes an artificial restraint on how many submarine cables can land in India if an ILD License holder must always be an investor in the consortium.

In addition, we note that the DoT also currently mandates for an ILD license holder applying for security clearance in India for laying / maintaining the submarine cable to have a 'significant stake' in the entities on behalf of whom such application is being made. We note that this is *not* standard industry practice in most countries. Imposing such a requirement may cause technology and internet companies (who may be part of the consortiums for submarine cables) to reconsider the need behind making significant investments into landing submarine cables in India. This is because there remains the possibility that ILD license holders in India may not contribute funds (which may comprise large sums) to hold a *significant* stake in the consortium. Thus, imposing this requirement may result in a scenario where other members of a consortium have to fund the ILD license holder's ownership stake in the consortium. This can result in the practice of landing submarine cables in India being viewed as an expensive affair – and may deter investments in the sector.

Moreover, we would like to bring attention to the fact that consortiums and open access systems for submarine cables are crucial for improving and promoting international connectivity. This enables internet and technology companies – such as businesses offering 'over the top' content and services – to invest in such cables and allied systems to offer the same to users in India effectively and efficiently. This is because by bringing data closer to consumers in India, latency reduces, and consumer experience and their overall ability to access online services and content with ease improves. Since the bulk of such investment is carried out by these companies themselves, it reduces the financial burden on ILD operators in India and does away with the need for them to incur expenditure to improve the international capacity of

their operations. Thus, it is critical for the TRAI / DoT to ensure that the regulatory framework governing submarine cables does not prove to be excessively onerous on global technology companies and to give due consideration to their concerns so that they can continue to help “*push along new innovations inside of the cable systems*”.<sup>2</sup>

**Question 3: Would an undersea cable repair vessel owned by an Indian entity help overcome the issues related to delays in undersea cable maintenance? Please provide justification for your answer.**

**AND**

**Question 4: If the answer to the above question is yes, then please suggest possible mechanisms along with detailed justification and financial viability analysis for implementing this proposal.**

**BIF Response:**

At present, owners of submarine cables have systems in place for repairing damaged cables in an efficient and cost-effective manner. Such a system is based on a few ships being responsible for repairing cables across different jurisdictions. In the event owners are required to fund a local ship in each country through which their cables pass or land, then the same will entail greater costs, which will, ultimately, trickle down to consumers. Further, to offset increased costs, owners of submarine cables may invest in less capable marine vessels and less experienced crew – thus impacting the quality of repairs (and consequently, the quality of bandwidth and internet connectivity).

A repair vessel owned by an Indian entity may partially address some issues related to delays in undersea cable maintenance and may obviate the need of high dependency on the foreign vessel providers for repairing the SCS along the Indian coastline. However, the same will require good business model for it to function successfully and considering the arrangements, the need for foreign repair vessels shall remain. It will further require consideration of the following factors:

- We note the TRAI’s earlier consultation paper on ‘Ease of Doing Business in Telecom and Broadcasting Sector ’(8 December 2021), among other things, notes that damage to submarine cables can impact global internet connectivity, which may consequently cause an internet slowdown that can affect a nation’s economy and national security. It also makes note of the time consuming and expensive process to obtain various permits for undertaking cable repairs. Thus, we would like to stress on the overall need to have a simplified procedure

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<sup>2</sup> Paragraph 1.10, page 5 of the Consultation Paper.

for the operation and maintenance of undersea cables due to the extensive costs associated with the same, time required for obtaining permits or clearances, etc.

- We also understand that owners of submarine cables have systems in place for repairing damaged cables in an efficient and cost-effective manner. Such a system is based on a few ships being responsible for repairing cables across different jurisdictions. In the event owners are required to fund a local ship in each country through which their cables pass or land, then the same will entail greater costs, which will, ultimately, trickle down to consumers. Further, to offset increased costs, owners of submarine cables may invest in less capable marine vessels and less experienced crew – thus impacting the quality of repairs (and consequently, the quality of bandwidth and internet connectivity).

**Question 5: What measures should be undertaken for promoting Domestic submarine cables for connecting coastal cities in India? What limitations are being posed by existing licensing and regulatory provisions for laying domestic submarine cables in India? What are the changes required in the existing licensing and regulatory framework? Please answer in detail with the supporting document, if any.**

**BIF Response:**

- At the outset, in our view, the primary reason as to why India has limited domestic submarine cables is the fact that there is no incentive for ILD license holders to invest in them when they have already invested in fiber.
- To promote the growth and expansion of submarine cables landing in India, and cater to high volumes of imminent 5G traffic, we believe that it is crucial to liberalize and incentivize the development of this sector domestically. In this regard, as submitted in response to Q1, an exemption for licensing vis-à-vis submarine cables for captive use – such as for connecting premises / data centers of the same organization using terrestrial links between the CLS of different submarine cables. Further, the mechanism for misuse may be devised, as a safeguard against misuse of this exemption, entities may be periodically asked to demonstrate that this kind of telecom infrastructure is not being used to provide domestic connectivity to third parties on a commercial basis.
- Further, due to massive development in key cities (Mumbai and Chennai), it is difficult to acquire suitable real estate lands, power infrastructure closer to the shore to set up CLSs, therefore there is no option other than to build these CLSs in city center locations away from the shore (typically in the range of 10-15 kms). This arrangement impacts performance of the cable systems due to long distance of fiber paths and also results in higher cost due to expensive

infrastructure in the city center areas in the key landing cities like Mumbai and Chennai.

- Presently, undersea cables are landing in various cable landing stations in the five cities of Mumbai, Chennai, Cochin, Tuticorin and Trivandrum. Operators, however, are thinking of diversifying the locations of their CLS, which could mean many more CLSs landing in other Indian coastal cities.
- Out of all the major coastal cities, Mumbai and Chennai serve as the two largest data consumption points in India. This necessitates that the NLD network between these two locations be stable. However, since all the NLDOs have built redundant NLD networks between these locations, the terrestrial networks are subject to many cuts, which has led to network switching, flaps and a deterioration in performance and outages. However, laying of cable in shallow waters will experience similar cuts and outages as fishermen use anchors etc. Hence, it would be more costly to maintain the cable infrastructure.
- The creation of a coastal corridor could also be explored as a possibility since most coastal towns may not consume a lot of bandwidth due to the lack of data centres and a content market. This should be supplemented with a defined multi-path NLD corridor to backhaul traffic to the major metro cities with facilitation provided for all necessary clearances / rights of way.
- There are international cables, either currently deployed or part of a future deployment plan, and such cables can easily be extended to Indian coastal towns with an incremental investment. For example, a Singapore to Europe cable landing in India, say in Chennai or Mumbai, can be looked at from the perspective of extension to other coastal areas in India on the east or west coast. This will not only help in bringing in cost efficiencies, but also provide a resilient alternate route for domestic traffic.
- Therefore, domestic traffic may be allowed on cables, which are part of or merge with an international cable, including cables in international waters beyond the Indian EEZ. Such an infrastructure will provide reliable and resilient connectivity for domestic traffic. Such a route will also be a reliable alternative to the terrestrial network from the perspective of a long-term stable network.
- This may be permitted to an entity holding both ILD and NLD licenses as well as owning the Cable Landing Station. Wavelength level splitting can be done to segregate NLD and ILD traffic and all provisions pertaining to international cables like LIM, etc. which fall under the ambit of the ILD License should be applied for both domestic and international traffic.

**Question 6: Are any limitations being envisaged in respect of getting permissions and/or associated charges/ fee for laying domestic submarine cable and its Cable Landing Station? What are the suggested measures to overcome limitations, if any?**

**Currently the following steps are required to set up a CLS:**

1. **Permit in Principle (PIP):** PIP approval is the first step before any further permissions for a CLS. DOT is the nodal agency for this approval under the Ministry of Communications, Government of India. (Some estimate indicate this may take up to 24 months)
2. **Right of Way/ Local Body Approvals:** Municipal Corporation/administration approval is needed for land acquisition, digging of roads, laying of cables and for information on future/planned development in that area where we intend to set up a CLS. This includes obtaining "Right of Way" from local municipal authorities to dig beach manholes, joint manholes & lay land cable between Beach Man Hole and Cable Landing Station at each site.
3. **State Government:** State Government departments related to Highways, Public Works (PWD), Fisheries, Electricity Board, Pollution, Port & Mercantile may need to be involved for information and permissions depending on the shortlisted location.
4. **Maritime Board** permission is needed for Beach Man Hole (BMH) and sub-sea cable portion in Indian territorial water and hence to that extent its cable system specific.

**The following authorities are involved in giving approvals:**

1. Department of Telecommunications, Ministry of Communications (Nodal Agency)
2. Ministry of Defence (Agency for survey in Indian EEZ, Territorial waters & sea besides construction and other related offshore activities)
3. Ministry of Home Affairs / Ministry of External Affairs (Agency for issue of permit for foreign national to work in India and operate from vessels in Indian waters)
4. Ministry of Environment (Agency for environmental clearance), etc for permission of cable laying, operating vessel for survey, installation and

maintenance, etc.

5. Ministry of Finance (GST)

**BIF Response:**

1. A single window facility should be setup for such applications with reasonable Turn Around Time (TATs) to fast track applications.
2. There should also be a provision of deemed approval if no objection/query is raised within the prescribed time.
3. The process also needs to be standardized, as currently there are different rules for different ports.

Regarding FEE/ associated charges in respect of getting permissions for laying domestic submarine cable and its Cable Landing Station, authorities may decide as per the norms.

**Question 7: Will it be beneficial to lay Stub-Cables in India? If yes, what should be the policy, licensing, and regulatory framework for laying, operationalizing, and maintaining the stub cable in India? Please answer in detail with the supporting documents, if any.**

**BIF Response:**

Yes. Stub-Cables should be allowed however it should not be mandatory.

Stub cable would enable a future-ready network and cable system, help reduce costs since they can be laid with an ongoing project for a CLS, and make industry invest more in the subsea cable infrastructure. Laying of stub-cables will improve efficiency, provide a more economically viable future extension and reduce the time required to complete new submarine cable projects.

On the flip side prior stub deployment limits owners/ operators from taking advantage of future technological improvements vis-à-vis cables as it commits them to the given (albeit outdated) cable design/ configuration that was chosen at the time of deployment in advance of a full-system design and optimization. Further, it is pertinent to mention that any cable unconnected to equipment/ not in use get cuts, then the operator is not able to monitor the fault in the cable and at the time of actual usage, it may be a challenge to use it. In addition, cable investors who have their own commercial reasons for wanting to build a stub cable as part of a construction program of another cable increases cost of current project.

Further:

- a) Only the number of Stub-cable fibre pairs may be declared to nodal agencies, in this case DoT. It should be intimated at the time of building separate cables for future expansion or extension and/or granting approval for a new cable system.
- b) Any use of the stub-cable needs to be formally communicated to DoT and the necessary permits maintained by the ILDO for every individual fibre pair under the new project.
- c) There should be a policy to allow stub-cables with fibre pairs provisioned at designated locations beyond the territorial water limits so that they can serve as ready infrastructure for future cable or fibre pairs coming into India. This can be an extension of the current cable plan and any new projects requiring such infrastructure need not be separately approved for cable laying in the Indian territorial waters. The ILDO may notify the authorities on allocation of such infrastructure or a part of it for any new project and also report utilisation of the same at periodic intervals. Once a stub-cable is allocated for a new project, the new project owner intending to use the stub-cable infrastructure for onward termination of cable into India will be responsible for the LIM and other applicable regulatory compliances.

**Question 8: What challenges are being posed by existing telecom licensing and /or any other framework for establishing terrestrial connectivity between different CLSs in India? What are possible solutions to such challenges? Please support your answer with detailed justification.**

**BIF Response:**

- India should promote open access to and between different domestic CLSs in a fair, equitable and transparent manner. This is crucial to boost competition in the bandwidth connectivity segment, bringing down bandwidth costs (especially, since high bandwidth costs may ultimately trickle down to users), and improving the efficiency with which technology and internet companies offer services in India.
- Further, in addition to the reasons noted in the Consultation Paper on enabling terrestrial connectivity between different CLSs in India, it is submitted that general licensing constraints may limit terrestrial investment in CLSs, which could, as a result, directly impact submarine cable deployment in the country. Further, the availability of multiple routes and connectivity (vis-à-vis both

submarine and terrestrial cables) is crucial for India to be seen as an emerging CLS hub. A cable system should ideally not land at a site without having access to different backhaul routes domestically, as the same can allow both for bandwidth-related collaboration, as well as competition between stakeholders in the sector.

- Open access model is followed in countries such as Singapore. For instance, Singapore which has become a hub for technologies / infrastructure such as submarine cables, etc. is because it promotes open and cost-effective landing stations. Cable stations that provide cost-based open-access to competing backhaul providers and cost-based interconnection are foundational to a healthy internet connectivity ecosystem. Interestingly, it may be noted that Singapore enables entities to peer with one another and cross-connect to competitive backhaul providers for lower costs compared to other countries. This is likely to attract companies to Singapore due to the convenience of being able to peer with more parties in a cost-effective way. Singapore also supports licensing exemptions for private/captive use.

**Question 9: In comparison with other leading countries, what further measures must be undertaken in India for promoting investment to bring submarine cable in India? Please answer in detail with the supporting documents, if any.**

**BIF Response:**

- Singapore has unique geography and limited land resources, the framework of carrying out an assessment of financial viability of a project, at the time of deploying new submarine cable systems (coupled with the various regulatory approvals required) may be advantageous for Singapore. However, the same cannot be imported to India, given its vast geography and long coastline.
- U.S. model envisages that there will be multiple consortium members and potentially other applicants for a license to land and operate each specific submarine cable landing in US territory, unlike the Indian regime which instead requires an individual Indian company holds the requisite IDL license to land any subsea cable in India and then can apply for the permit to land a specific submarine cable on behalf of the consortium. Given these fundamental differences, it would prove difficult to transpose the U.S. framework to India. Furthermore, the U.S. does not require that an applicant for the license must have a 5% or greater interest in the cable system (in fact, the party that owns or controls the CLS in the U.S. does not necessarily have to be a party to the cable consortium). Instead, it requires that if an entity owns a 5% interest or greater, then they need to be *one* of the applicants in a cable landing license

application to the concerned regulator.

- It may be mentioned that Australia does not discriminate between local and non-local submarine cable providers, and only stipulates a permits-based framework based on 'protection' versus 'non-protection' zones – with the former being zones where activities such as fishing, and anchoring are prohibited. To lay an international cable, a permit is required irrespective of the zone the cable will be laid in. To lay a domestic cable, a permit is required only when the cable is being laid in the protection zone. In addition, the concerned regulator must either grant or refuse an application for a submarine cable installation permit within mandated timeframes (not more than 90 days for a non-protection zone permit) – it would be important to introduce certainty for businesses in the approvals / permissions process in India by providing specific timeframes and ensuring that permits are provided in a timely manner. This will go a long way towards improving ease of doing business in the country and may also help boost investment in the sector. Hence, Australian model may be adopted in India.

## **Annexure 1**

### **International Bandwidth and Resilient Internet**

Telecom Service Providers (TSP) create infrastructure and network catering to the enterprise segment, this includes transport layer comprising of terrestrial cable (domestic and international), international submarine cable, cable landing stations and international gateways etc. There is a need for policy impetus for capacity creation and route diversity in the international bandwidth space (IPLC, MPLS, ILL, IP transit). It is submitted that:

- The objective of this new framework should be to facilitate creation of capacity and route diversity in International Bandwidth through policy measures
- The strategy to be adopted is Single window clearance for laying, maintenance and fault repair of international submarine cables and terrestrial cables coordinated by department of telecom. This should be monitored under the Gatishakti yojana through ROW portal
- Provision of advance authorization for maintenance and fault repair of international cables (submarine and terrestrial) for ships, land vehicle, manpower and equipment
- Facilitate creation of new landing stations at diversified locations along the international land and sea frontiers of India
- Unrestrictive access to facilities at the Cable Landing Station to Telecom Service Providers
- Encourage creation of independent infrastructure by Telecom Service Providers to be available for sharing by all other licensed service providers on equitable basis

This would help in bringing down the end-to-end landing cost of International Bandwidth in India in comparison to other geographies. This shall also build resilience in the internet bandwidth at the infrastructure and network layer at the national level.

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