

February 23, 2023

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(Sent via email)

Re: Counter comments on Consultation Paper on 'Licensing Framework and Regulatory Mechanism for Submarine Cable Landing in India dated 23-12-2022'

Dear Mr. Sharma,

Congratulations to you & your team to put together many strategic issues pertaining to submarine cables landing into India, in such a comprehensive way. Authority's efforts of shaping up the regulatory/licensing framework to boost digital infrastructure growth in India is highly appreciable.

Please find my counter comments (as below) to above mentioned CP for your perusal.

Thanking You,

Yours Sincerely,

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PS: The comments submitted are my individual/personal thoughts and do not represent any of my current/previous employers.

Q.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.

Existing Licensing & regulatory provisions for setting up CLS in India pose following limitations

i. *Process of setting up CLS in India is quite long*

Current process of setting up CLS in India is quite long with multiple approvals from various authorities/agencies before a CLS is approved for use. Clearances from MOD/MHA and associated LEAs may take a long time. Similarly approvals for foreign vessels to get into India EEZ and TW to lay/repair cables is a long approval process and at times may take many months.

A single window clearance process as well as pre-defined timelines for each of such clearances/approvals if defined, will make this process efficient encouraging build of more submarine cables landing into India.

ii. *The licensing framework is less conducive for foreign companies/investors*

As mentioned in the CP, majority of the traffic to/from India is driven by global OTTs/Content Providers/Cloud providers who continue to be primary investors in submarine systems at a global level. The current licensing framework does not encourage foreign companies/investors to build more cables into India by taking requisite licenses because of stringent compliances involved such as encryption, lawful interception & monitoring and reporting/compliance requirements of ILDO license. While national security concerns should remain of utmost importance, an efficient set of well-defined approval & compliance processes (while keeping desired control of authorities) could encourage foreign investors/OTTs to apply requisite licenses in India for CLS/cable systems. This could also address other concerns raised in this CP about ILDOs seeking CLS approvals without any significant stake in the cable consortiums.

iii. *Less defined LIM requirement*

Another less defined areas include LIM requirement and minimum levels of monitoring/probes required at any given time by the ILDOs. LIM setup is not an insignificant cost for CLS Owner/ILDOs and its hard to monitor 100% of traffic at all the times. Different ILDOs follow different regimes to fulfil their compliance requirements. If Central Monitoring System (CMS) could address all national security related requirements, ILDOs or CLS owner could be relieved from LIM obligations while asked to financially contribute towards CMS. Such lighter set of obligations is likely to encourage many foreign investors to take requisite licenses to become CLS/ILDO parties in India.

iv. *Evolving definition of CLS*

Definition of Cable Landing Station is broadly defined to have PFE and SLTE to be co-located as part of CLS set-up at the same location. However in current regime of high count fiber pair cables being built with overall 200T-300T capacity per system, it's quite likely that multiple ILDOs would like to own a few fiber pairs each on a given system and setup their own SLTE/International gateway (using their fiber pairs) away from PFE/OCI location. So, the

concept of PFE + SLTE being together to call it a CLS is diluting. This practically means that all such ILDOs owning their fiber pairs on a given system would like to have their own international gateways with their own SLTE/LIM setup without any dependency on CLS owner for any compliances for their fiber pairs. In such case, CLS owner may not have any control of capacities/traffic while being owner of cable system assets in the Indian TW including PFE, BMH or Stubs.

It might be worth reviewing current regime to differentiate between CLS infrastructure owner vs services being provided by various ILDOs on any such cable systems landing in India. CLS Infrastructure owner may be relieved from any LIM/compliance requirement for fiber pairs owned by other service provider ILDOs. Though CLS owner (being the CLS applicant to authorities) may secure needed undertakings from the ILDOs owing certain fiber pairs on the system for bonafide use of such fiber pairs.

v. *Compliances linked to asset ownership in India EEZ/TW*

While most of the ILDOs operating CLS in India have stake in the cable systems landing into India and fulfil all requirement of mandatory asset ownership in India, this regime may not represent the overall business ownership of ILDOs in the system. While the current regime works well from all operational and compliance perspective, it does not enable other significant investors in the cable system to participate/engage with authorities for long term planning & enablement of infrastructure in India. The current framework with associated processes & compliances (as stated above) dissuades foreign investors to actively participate in setting up infrastructure in India under their direct ownership.

As the India digital ecosystem continues to grow, India would need many more submarine cables to land into the country providing multiple diverse and scalable routes for its global connectivity. Any process to smoothen the current regulatory framework would help attract more investments into India along with infrastructure builds supporting economic growth.

Q.2 Which of the conditions, as stated in Para 2.10 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.

Please refer to comments in 1(iv) and 1(v) above, the essence of permission/security clearances is supposed to keep control of authorized agencies from national security & compliance perspective rather than just relying on asset ownership in Indian Territorial Waters (TW) or a minimum % interest of CLS party in the cable system.

As majority of the investments in cables landing into India are likely to be made by international parties, mandating a significant stake of ILDO in a cable system is likely to discourage investments by international parties to build new cables landing into India.

Keeping all consortium parties to be an applicant for CLS (like USA) may allow authorities to have a clear communication with investors but it's also likely to dissuade foreign investors to invest into new cable systems to get into India impacting growth.

Seeking control & monitoring of the capacities landing into India could be achieved through other operational means (CMS etc) rather than forcing international investors to be under the regulatory regime. MHA/MOD may seek detailed information of investments of various consortium parties in a consortium/system before granting permissions and if there is any single foreign party having a majority stake in any cable system, they could be considered to become co-applicant to the CLS application as co-owner of infrastructure without being constrained to become a service provider ILDO.

While asset ownership in Indian Territorial Waters (TW) could remain with Indian parties (ILDO or not), CLS party's role need a clarity in the new regime of high density multiple fiber systems being built and shared among many ILDOs (as shared in 1(iv) above) with a different regime w.r.t. CLS infrastructure ownership vs service provider ILDO.

There is no merit or need in qualifying eligibility of any ILDO to be a CLS party in terms of net worth or ability to execute a landing station project. It will be automatically ensured by cable system investors (investing few hundred million dollars) that their landing partner is credible enough to safeguard their investments.

Overall, the policy/regime adopted should provide maximum 'ease of doing business' to investors in the submarine cables landing into India while at the same time ensuring that:

- i. There is no lapse/dilution of national security requirements
- ii. There is no leakage of AGR which is one of key source of funds for investments into broader/rural telecom infrastructure in India.

Q.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.

Long outages of submarine systems lead to unavailability of international network/internet services to millions of users/businesses with direct impact on country's GDP and economic growth. Currently, it may take a long time (few weeks to few months) for foreign repair vessels to enter into Indian TW/EEZ for submarine cable repairs. Submarine cables are backbone of internet and **submarine cables deserve to be classified as part of 'essential services' having priority repairs.**

Yes, undersea cable repair vessel owned by an Indian entity would certainly help if the current regime of approvals for foreign vessels entry into Indian TW continues as it is. However, the focus should be on improving the current process and enhance performance i.e. time to repair cables in Indian TW which could be done either by granting smooth entry for foreign repair

vessels into Indian TW as priority service/approvals (Essential Services) or mandating Indian repair vessels with pre-defined performance matrix to repair undersea cables. **Enforcing cabotage law for submarine systems repair has not worked well in many jurisdictions** as it reduces competition and at times challenged on cost vs performance metrics. **It will defeat the purpose if Indian vessel is solely mandated for repairs in Indian TW (and EEZ) but it does not enhance the performance of the repair services from current levels.**

Focus should be to get this repaired on priority whether by making the entry of foreign vessels easier or mandating Indian vessel to repair within a limited/pre-defined time.

Q.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.

Though the answer to above question is not a clear Yes however if authorities decide to mandate only an Indian flag vessel to do all the maintenance & repairs in Indian Territorial Waters (TW) or EEZ, following models could be explored:

1. *Government appointed Repair Vessel:*

Government issues RFP for Indian companies to provide repair vessel and repair/maintenance services in Indian TW & EEZ for a period of 3-5 years and awards the contract to the selected vendor. This could define fixed charges per year as well as mobilization charges for the vessel based on numbers of days for vessel mobilization. All fixed charges may be distributed/charged back to back to ILDOs (owing cable systems) in proportion of number of operational cable systems/branches in Indian TW/EEZ and variable/mobilization charges may be charged directly by the Indian vessel company to the affected cable system owner ILDO(s). Government supervises the process & policy without getting into day to day operational affairs, with contract signed by ILDOs with Indian company owning such vessel and providing repair & maintenance services.

2. *Government Appointed ILDO led Vessel:*

Government seeks proposals from eligible ILDOs to provide such repair & maintenance services in Indian TW & EEZ with clearly defined scope of services and performance matrix. Based on merits/capabilities of the proposal, government may appoint one ILDO who could own/buy such a vessel and provide such services for a minimum period of 5 years (to recover a good part of its investments) to all the cable systems in Indian TW & EEZ in a fair and non-discriminatory manner.

Government/Authorities need to retain right to cancel such permit/license to repair in case of breach of obligations by such ILDO provider/Indian company and allow any foreign vessel to come in to meet the objective of maintaining high standards for such 'Essential Services'.

3. Government promoted Infraco (Not for Profit)

An infrastructure company could be created which is owned by government and various ILDOs (owning cable system/s) with no majority stake for any single party. Such Infraco could undertake responsibility for repairs & maintenance of cable systems in the Indian TW & EEZ. The ILDO shareholders represented through Infraco board represent the whole industry and decisions are made collectively by all industry stakeholders through this Infraco. Government minority representation acts as watchdog for fair treatment given to all stakeholders.

Regardless of the model adopted, few suggestions as below may apply at all the times

- (a) Uniform/published rates for repair & maintenance for all parties avoiding discrimination among customers/system owners.
- (b) Allow vessel company to do other marine activities in idle time (at time of no cuts/repairs) to lower down the repair costs for all ILDOs
- (c) Pre-defined performance matrix to be adhered by such appointed vessel company

With introduction/build of domestic cable systems connecting various coastal cities in India, this concept of Indian vessel providing repairs & maintenance could be more relevant and economical for all stakeholders.

Q.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.

- i. With rapid growth of digital ecosystem in India, there is huge demand for reliable domestic long haul (NLD) fiber networks and allowing domestic submarine cables would certainly help bridge this gap between demand & supply of reliable long haul fiber availability in India.

To promote domestic submarine cable systems connecting Indian coastal cities, following measures could be undertaken

- (a) Clear policy on building/operating domestic submarine cable systems
- (b) NLDOs to be encouraged/enabled to build such domestic systems in line with policies allowing domestic/terrestrial fiber infrastructure
- (c) State/Central government incentives should be granted to such NLDOs creating new CLS in the states promoting development of domestic infrastructure.

ii. Current limitations in existing licensing & regulatory regime include

- a. Mandated ILDO license to land a submarine cable system (international or domestic) into India
- b. Less defined LIM obligations for domestic submarine cables/capacity
- c. Most of currently functional submarine systems connecting domestic coastal cities are part of international cable system which are hard to isolate itself from international use while it could be used as NLD route
- d. No clear policy/defined process for operating a domestic submarine cable system

iii. Changes required in current licensing framework to support

NLDOs (not ILDOs) should be allowed to build/operate domestic submarine cables connecting coastal cities in India. Regardless of the cables touching the EEZ or not, these cables need not comply with stringent LIM obligations as needed for international cables landing in India as these domestic cables remain solely for use of domestic traffic within India.

Such domestic cable landing stations could be independent of international cable landing stations though may be hosted in the same building/facilities as part of shared infrastructure.

Interconnecting such domestic cable landing stations on terrestrial networks to provide needed network redundancy should be open access without any applicable regimes of RIO/AFC as applicable for CLS of international cable system.

On existing/upcoming international cable systems touching 2 coastal cities in India, a clear demarcation of fiber pairs from one India coastal city to another India coastal city may be considered as domestic cable system subject to fully isolated SLTE and infrastructure supporting these fiber pairs and ownership of such FPs could be owned/operated under the NLD license of the owner/operator. Such domestic fiber pairs should be undertaken not to be used for any international traffic at any time.

Required permits (marine/coastal zones) for domestic cable systems would be needed however security clearance requirement from MoD/MHA may be diluted as its for pure domestic use as well as 100% owned by NLDOs only. NLDOs should be encouraged to jointly invest as a consortium bringing economies of scale.

Q.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?

Please refer to response in 5 above

Yes, there have been limitations in absence of a clearly defined policy for domestic submarine cables. There are not enough incentives by state/central government to promote such domestic infrastructure and cable systems builds so far have been confined to ILDOs only.

There are no domestic submarine cables in India other than CANI and LKI both of which are government owned.

Q.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.

Stub cables certainly reduces build time for future cables connecting to same landing location and also reduces build costs for parties by way of sharing such build costs however stub cables remain highly strategic for locations like Singapore where land and sea corridors to bring new cables are heavily constrained.

Thankfully, Indian coastal cities are not much constrained on allocating land for CLS/BMH in India and we may be better off building diversified CLS landing in different locations rather than concentrating cable landings at same landing location however there is no harm in allowing building of stub cables by the ILDOs building new cables now as it may certainly help future cables landing into India.

Following policies/guidelines may be applied while granting build of Stub-cables in India:

- i. To avoid multiple Stub-Cables built by different ILDOs and lying idle for long, if such stub cable is not used by ILDO owner within a certain period (say 3-5 years) of initial cable system going RFS, Government may allocate such Stub-Cable to any upcoming future cable project as shared infrastructure. The new Stub-Cable owner may pay the actual pro-rata cost of such Stub-Cable to original owner.
- ii. New cable system owner should not be forced to use an existing Stub-Cable unless there is a constraint of land & sea corridor resources at such location and if mandated, government should ensure a fair & non-discriminatory price charged by the Stub-Cable owner to the upcoming new cable system owner.
- iii. Potential new owner of Stub-Cable may not be mandated to use the same CLS of existing Stub-Cable owner

Q.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.

The merit of connecting CLS to CLS terrestrially is to enhance the overall availability of networks at time of repairs/cuts/disasters or to build in general network redundancy or international customers/carriers to transit India connecting 2 different cable systems in India without any need for terminating their traffic into India.

The challenges occasionally faced connecting CLS- CLS in India include

- i. AFC/RIO charges may be applied by ILDO to simply exit from CLS payable at both CLS for transiting India regardless of the capacities getting actually terminating into India network or not.

- ii. The meet me point for some cable systems may exist in a city PoP rather than at CLS itself which incurs additional domestic charges for customers seeking India transit only and are constrained to enter into India domestic network.
- iii. There is no policy to allow CLS-CLS transit traffic without need of LIM or RIO/AFC charges.

Such lack of open policy/framework for India transit or Meet Me Point restricts many international users/carriers to land cables in India diluting potential of India to become regional hub for traffic exchange/transit.

Possible solutions to address above challenges may include:

- a) If it's a transit from one CLS to other CLS in India, it should be free from AFC payable to CLS owner provided a clear legally binding undertaking is made by customer that no part of such traffic will be terminated into India and will remain purely transit at all times.
- b) End users may be allowed to avail CLS to CLS connectivity from ILDOs or NLDOs.
- c) CLS to CLS transit services may be classified as a different product available without need of LIM obligations for ILDOs
- d) Such transit services tariff may remain under forbearance or filed separately with TRAI at a price point at par with NLD services

Q.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.

Some of the measures which could certainly help promote submarine cable investments into India are as below:

1. Well defined timelines for providing various permits/permissions to land cable system in India and a single window clearance process for all needed approvals/permits
2. Allowing foreign investors to invest into cable systems landing into India as infrastructure investments/owners without much of regulatory compliances as long as they have ILDO partners to fulfil regulatory compliances in India.
3. Encourage/allow use of shared infrastructure among various ILDOs or CLS parties.
4. Strengthen CMS system. This may relieve a lot of obligations for ILDO to setup a LIM in addition to CMS, saving a lot of time & cost for ILDOs.
5. Reduce repair time of the cables in Indian TW & EEZ by introducing policies for quick repair by foreign/Indian repair vessels and offering/enabling strategic locations for cable depots at subsidised rates by government.

6. To attract more investments into submarine cables landing into India, it might be worth considering to split the ownership of CLS held in Indian Infrastructure company(Cable/PFE/BMH/Stub Cables etc.) vs use of the system to provide services by ILDOs (along with obligations for SLTE, LIM, AGR etc.). This could be somewhat similar to prevailing global regime of shared infrastructure for tower business.
7. Provide Tax incentives and/or import duties waivers for investments into submarine cables infrastructure
8. Qualify CLS and cable systems as “Essential Services” providing priority clearances and attention for maintenance & repairs
9. Assign sea corridors around key coastal cities for submarine cable laying enabling easy built of new cable systems around many coastal cities and setup diversified CLS infrastructure across Indian coastal cities.
