

**Comments On the Consultation Paper on ‘Introduction of Digital Connectivity Infrastructure Provider (DCIP) Authorization under Unified License (UL)’ dated 09.02.2023**

*Submission to the Telecom Regulatory Authority of India*

**1. Introduction**

- 1.1. On 9<sup>th</sup> February 2023, Telecom Regulatory Authority of India (**TRAI**) invited public comments on the Consultation Paper on ‘Introduction of Digital Connectivity Infrastructure Provider (DCIP) Authorization under Unified License (UL)’ dated 09.02.2023 (**Consultation Paper**). This submission sets out Sterlite Power Transmission Limited’s (**SPTL**) comments on certain issues raised in the Consultation Paper. SPTL is interested in the growth of the DCIP space and to that end has set out its views in this submission.
- 1.2. While the Consultation Paper’s proposal to introduce Digital Connectivity Infrastructure Provider (**DCIP**) authorisation under Unified License (**UL**) is a much-needed intervention to update the existing regulatory framework, the Consultation Paper in its current form does not expressly account for a key stakeholder – Power Transmission licensees. Resultantly, the myriad ways in which extant transmission infrastructure can be integrated to augment and complement the expansion of the passive telecom infrastructure framework does not find mention in the Consultation Paper. Transmission licensees are involved in *inter alia* offering Optical Ground Wire (**OPGW**) fibre infrastructure to telecom operators, space for telecommunication equipment to be mounted on power transmission infrastructure, and potential use of sub-station space as co-located data centres. Such monetisation and integration of transmission assets for creation of infrastructure for telecommunication services is well-recognised in the industry. Hence, in our view, this is a massive opportunity to create an enabling regulatory framework to integrate transmission licensees’ assets in a big way into the telecommunication infra services space, including through the DCIP route.
- 1.3. On 3<sup>rd</sup> October 2022, the Ministry of Power released Guiding Principles for the Monetisation of Transmission Assets in the Public Sector through Acquire, Operate Maintain and Transfer based Public Private Partnership Model. It recognised the importance of asset monetization as an important financing option for creation of infrastructure, as it serves two critical objectives - unlocking value from public investment in infrastructure and tapping private sector flexibility in operations and management of infrastructure. Revenues from offering telecom services using transmission infrastructure is a key element of this endeavour and has the potential to provide a fillip to exponentially growing needs of the telecom sector by unlocking the untapped potential of transmission infrastructure.
- 1.4. SPTL is a leading global developer of power transmission infrastructure with 30 projects spanning 14,602 circuit kms in India and Brazil. There is untapped potential in the market for a registered IP-1 entity to build, acquire, aggregate, monetize, operate & maintain OPGW, underground optical fibre cables (**OFC**), co-location facilities and provide Telecom Infrastructure as a service for Communication Service Providers (**CSPs**), carriers and all other Telecommunication Service

Providers (**TSPs**) of any description. Further, SPTL and Maharashtra State Electricity Transmission Co. Limited (**MSETCL**) owned Joint Venture named Maharashtra Transmission Communication Infrastructure Limited (**MTCIL**) is a successful case study that can be replicated nation-wide. MTCIL was formed with the objective of establishing an OPGW-based communication network over MSETCL's EHV transmission infrastructure in Maharashtra. MTCIL has approx. ~3,350 kms of OPGW network and is providing telecom infrastructure as a service to 20+ CSPs in Maharashtra based on its IP-1 credentials.

1.5. The key focus of these comments is to explain the need for creating an enabling regulatory framework to integrate transmission licensees' assets in a big way into the telecommunication infra services space. It is proposed that transmission licensees across the country be allowed to deal with DCIP licensees/ IP-1 registrants and grant them access rights to transmission licensees' passive infrastructure such as OPGW.

2. **Need to Promote Aggregation of the OPGW fibre inventory owned and operated by various transmission licensees and other players**

2.1. Over the last 2-3 years, OPGW fibre infrastructure has clearly emerged as the most secure, high availability and low loss medium for transmission of data (SPTL's MTCIL network is a prominent example of this emerging phenomenon, especially post-COVID). OPGW fibre infrastructure has emerged as the preferred choice of over-the-top (OTT) players, data centers, cloud providers, who are increasingly pushing their connectivity providers to increase the OPGW fibre share in the fibre infrastructure mix being offered.

2.2. Significantly, State Transmission Utilities (**STUs**) under the Electricity Act, 2003 and private transmission licensees presently own and operate ~1,00,000 kms of OPGW fibre infrastructure with more than 70% of spare capacity (after considering their present and future SCADA infra requirements). However, the present actual utilisation of such spare passive infrastructure for providing telecom services is negligible. A key reason for such non-utilisation of available infrastructure for providing telecom services is because the existing OPGW network is highly fragmented and is owned/ operated by various different STUs and private transmission licensees. Further, as per current IP-1 guidelines, the sharing of passive telecom infrastructure between two IP-1 registrants is not permitted.

2.3. Other than the transmission sector, it may be noted that even various other sectors (such as railways, oil and gas, metro rail projects in urban areas) also have their own real-time communication systems. For instance, oil and gas players own and operate ~30,000 kms of underground fibre infrastructure in the country. Such communication systems are developed by these utilities to manage the corresponding infrastructure in real time and in a coordinated manner. Even these communication systems are bound to have spare capacity that is yet to be tapped systematically into for offering telecommunication services.

- 2.4. A typical Fibre infra-aggregator holding an IP-1 registration that aggregates the spare OPGW fibres of multiple transmission licensees and utilities for use by TSPs, will give a considerable boost to monetising the spare OPGW fibres held by STUs, other private transmission licensees and other sector utilities across the country. An aggregator would be a one-stop-shop for TSPs desirous of utilising OPGW networks over a state/region that has numerous individual entities that would require liaising, coordination, operation and maintenance so as to provide a uniform quality of service to the end-consumer. Such a model would contribute significantly towards the ease of doing business by enabling aggregators to offer ready-to-go, consolidated, comprehensive long-distance data transfer solutions.
- 2.5. The key regulatory hurdle in enabling such an IP-1 aggregator is that sharing of infrastructure between two IP-1 registrants is not allowed. Therefore, at present an aggregator holding an IP-1 registration cannot contract with an STU who is also an IP-1 registrant. However, if STUs were to obtain a DCIP license as contemplated under the Consultation Paper and the regulatory regime allows a DCIP licensee to contract with IP-1 registrants (as contemplated in para. 2.23 of the Consultation Paper), it would unlock significant untapped infrastructure. Such an aggregated model would offer comprehensive data transfer infrastructure solution to the service layer licensees by collating multiple DCIP licensees present across geographies. This would clearly be a win-win scenario as the end-consumer (TSP) would gain robust telecom services without the need to create duplicate infrastructure in remote areas, and the service layer players will be able to leverage an interconnected infrastructure network with the combination of infrastructure held by -various DCIP licensees and IP-1 registrants.
- 2.6. At present, connectivity players have leased out OPGW capacity directly from few STUs for short range distances, wherein these STUs have done a pilot to monetise small quantities of available OPGW fibre capacity. In these cases, the STUs have offered to maintain the OPGW asset and promised network uptime as well. However, the exploitation of OPGW fibre capacity held by STUs is sub-optimal and still at a nascent stage. As of date, there are no neutral and independent OPGW fibre asset aggregators in India. The opportunity is ripe to create an enabling statutory framework to unlock the potential of unused OPGW fibres across the country.
- 2.7. TSPs and connectivity providers will prefer a named intermediary aggregator (neutral and independent infrastructure provider) between them and OPGW asset owners (including STUs or private transmission licensees) for the following reasons:
  - a. There is a critical need for bespoke end-to-end fibre infrastructure corridors spanning across States (Mumbai - Chennai/ Mumbai - Delhi), which implies maintaining commercial relationships with multiple STUs.
  - b. Currently, the maintenance of OPGW assets is being outsourced by TSPs to local vendors with limited skillsets. Under the aggregator model, TSPs have no exposure to maintaining OPGW assets. Thus, the critical task of maintaining the OPGW asset and ensuring high fibre network

uptimes will be undertaken by such intermediaries/ aggregators (neutral infrastructure providers).

- c. The key elements of customer service delivery namely Colocations and Last Mile connectivity need to be made available along with STUs' OPGW fibre network for integration with TSPs' networks is quintessential – which will be undertaken by an aggregator.
  - d. Few STUs have taken an IP-1 registration with an intent to monetise OPGW assets. However, these STUs have been unable to deliver maintenance, uptimes and integration with TSPs' network (for Last Mile connectivity) to TSPs' satisfaction.
  - e. There is a bar on IP-1 to IP-1 sub-leasing, which is presently a major stumbling-block for the nascent OPGW fibre infrastructure segment. This in turn, limits the potential to integrate and exploit spare OPGW infrastructure despite growing demand from TSPs. This needs to be resolved to allow infrastructure owners (who will obtain DCIP licenses) to offer their networks to other pure-play fibre infrastructure aggregators (IP-1 registrants).
  - f. The Department of Telecommunications has already permitted NLD to NLD bartering /sub-leasing. On the same lines, an enabling framework for DCIP licensee to IP-1 transaction ought to be introduced. Para 2.10 of Chapter XX [Annexure V of the Consultation at pg. 37] captures this intent well and ought to be maintained in the final DCIP guideline.
- 2.8. Such an enabling statutory framework to collate all spare OPGW capacity and offer to interested entities will offer economies of scale and reduce the lead time in ability to monetise spare unutilised capacity.

### **3. Proposed Changes to Facilitate Integration of Transmission Licensees and other Utilities to Offer Comprehensive Long-Distance Data Transfer Solutions**

#### **Changes Proposed to the IP-1 Guidelines/ proposed regime for DCIPs**

- 3.1. Para. 2.23 of the Consultation Paper expressly states that *“as far as leasing and renting infrastructure between DCIP and IP-1 is concerned, it can be argued that the same should be permitted within the limit of the scope of IP-1 registration. This may require necessary amendment to IP-1 registration. The stakeholders may share their viewpoints on the same.”* Thus, TRAI has considered permitting DCIPs to offer their passive infrastructure to IP-1 registrants. It is submitted that this is essential to allow IP-1 registrants to aggregate and integrate the assets of various DCIP licensees (including transmission licensees).
- 3.2. Should the Guidelines for Registration of IP-I Entities dated 22<sup>nd</sup> December 2021 (**IP-I Guidelines**) and the proposed regime for DCIPs be suitably amended to allow DCIPs to lease/ rent/ sell/ grant access rights for their passive infrastructure to IP-1 registrants, we anticipate the following key benefits:

- a. This will lead to the rapid monetisation of existing passive fibre infrastructure already developed and owned by various STUs, private transmission licensees and other utilities, which will in turn lead to revenue generation for such utilities without any significant financial investments on their part.
- b. This will enable the integration of multiple transmission licensees and utilities for offering comprehensive long-distance data transfer solutions.

We do not anticipate any legal or regulatory hurdles in allowing DCIPs to lease/ rent/ sell/ grant access rights on their passive infrastructure to IP-1 registrants.

- 3.3. Further, it is also proposed that both DCIPs and IP-1 registrants be expressly allowed to contractually offer 'access rights' on their passive infrastructure. Currently, the modes of offering passive infrastructure are limited to: (a) sell; (b) lease; and (c) rent. In furtherance of the light regulation approach contemplated in the Consultation Paper, it would be beneficial to permit flexible contracting structures that are market determined. There does not appear to be a compelling need to restrict or limit the way infrastructure is given to a service provider to only sale, rent or lease. Each DCIP licensee and IP-1 registrant ought to retain the flexibility to shape an appropriate contractual mechanism based on the prevalent regulatory and market conditions.
- 3.4. It is not necessary that every TSP will want to obtain a proprietary right over passive infrastructure held by a DCIP licensee or IP-1 registrant when their key priority is utilising the passive infrastructure to transmit their data. The option of granting access rights can be in addition to the existing mechanism of lease/ rent/ sale envisaged in the IP-1 Guidelines, as also the rent/ lease/ sale contemplated in the Consultation Paper for DCIPs. This is considered necessary in view of Section 17 of the Electricity Act, 2003 (**Electricity Act**), which applies to every transmission licensee. Any transmission licensee that is creating any form of charge or granting proprietary interest (such as lease/ license/ rent/ sale) is considered to be creating an 'encumbrance' on the regulated transmission asset. In view of this, such transmission licensee must seek the prior approval of the Central Electricity Regulatory Commission, or the concerned State Electricity Regulatory Commission in terms of Section 17(3) of the Electricity Act before entering any contractual arrangement resulting in creation of an encumbrance on a regulated transmission asset. Therefore, it is important to allow DCIPs and IP-1 registrants the option to contractually grant 'access rights' to telecom licensees or other DCIP licensees without the creation of an encumbrance. Grant of access rights on regulated transmission assets does not amount to the creation of an encumbrance and therefore approval of the Central/ State Electricity Regulatory Commission will not be required. This will promote ease of doing business for various STUs/ private transmission licensees that apply for and successfully obtain DCIP licenses under the proposed regime.
- 3.5. We also note that paras. 2.14-2.16 of the Consultation Paper propose that DCIPs can offer their infrastructure only to such entities which are licensed under Indian Telegraph Act, 1885 (**Indian**

**Telegraph Act**). The reasoning provided for such a proposal is that the Government should not be deprived of license fee on rent/ lease/ sale of active infrastructure. In our view, such a stipulation would be restrictive and will not allow DCIPs to rent/ lease/ sell/ grant access rights on their passive infrastructure to non-licensees/ aggregators including IP-1 registrants in terms of the Indian Telegraph Act either. Consequently, the same restrictive regime prevailing because of the embargo on IP-1 to IP-1 dealing will constrict the ability of aggregators and DCIP licenses to deal with each other. Thus, there appears to be some tension between the proposal at para. 2.16 of the Consultation Paper and para 2.23 of the Consultation Paper. To resolve this, it is proposed that for passive infrastructure, there be no bar on DCIP licensees on leasing, selling, renting or granting access rights on passive infrastructure to IP-1 grantees. Any contrary embargo would defeat the purpose underlying the proposal in para 2.23 of the Consultation Paper.

- 3.6. It is proposed that the present system of not charging a licensee fee from IP-1 registrants for rent/ lease/ sale of passive infrastructure be retained for DCIPs as well. On the other hand, for rent/ lease/ sale of active infrastructure, the restriction of dealing with only licensees in terms of the Indian Telegraph Act may be retained. This will ensure that the Government is not deprived of any license fees on account of rent/ lease/ sale of active infrastructure, while allowing DCIPs to lease/ rent/ sell/ grant access rights to IP-1 registrants and telecom licensees for their passive infrastructure. Therefore, this distinction between active and passive infrastructure will address the issue raised at para. 2.16 of the Consultation Paper.

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