RJIL/TRAI/2018-19/535
29th October 2018

To,

Shri U.K. Srivastava,
Pr. Advisor (Network Spectrum and Licensing),
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg,
New Delhi - 110002

Subject: Comments on Consultation Paper on 'Estimation of Access Facilitation Charges and Co-location Charges at Cable Landing Stations' dated 18th October 2018.

Dear Sir,

Please find attached comments of Reliance Jio Infocomm Limited on the Consultation Paper on 'Estimation of Access Facilitation Charges and Co-location Charges at Cable Landing Stations' dated 18th October 2018.

Thanking You,

Yours sincerely,
For **Reliance Jio Infocomm Limited,**

Kapoor Singh Guliani
Authorised Signatory

RELIANCE JIO INFOCOMM LIMITED

Enclosure: As above.

RELIANCE JIO INFOCOMM LTD'S COMMENTS ON TRAI'S CONSULTATION PAPER ON "ESTIMATION OF ACCESS FACILITATION CHARGES AND CO-LOCATION CHARGES AT CABLE LANDING STATIONS" DATED 18.10.2018

General Comments:

1. At the outset, Reliance Jio Infocomm Limited (RJIL) thanks the Authority for issuing this focused consultation paper in a time bound manner so as to settle the most contentious issues. We also appreciate the Authority for fixing the entire timetable of the consultation process, including the date of Open House Discussions, so that the process may be completed within the prescribed time frame decided by Hon'ble Supreme Court.

2. We agree with the Authority that Submarine cables are backbone of global telecommunication, offering secure, reliable and high capacity links across countries with irreplaceable quality. The importance of submarine cable systems is well recognised and even the United Nations General Assembly has recognized submarine cables as 'critical communications infrastructure' through a resolution.

3. RJIL recognises the costs and efforts involved in setting up the submarine cable systems and therefore may warrant cost based compensation to Owner of Cable Landing Stations (OCLSs). However, we submit that the exponential growth of international communication and data services, that are essentially dependent on robust, reliable and reasonable submarine cable system, it is imperative that this critical infrastructure should not be permitted to be a source of supernormal profits to the incumbent players.

4. We submit that RJIL is in the unique situation of having the experience on both sides of the divide. We own two Cable Landing Stations situated at Mumbai and Chennai wherein two different submarine cables i.e. Asia-Africa-Europe-1 (AAE-1) and Bay of Bengal Gateway (BBG) are landing, respectively. Besides these capacities, RJIL is also a seeker for bandwidth in the submarine cables, which are landing in the Cable Landing Stations owned by other OCLSs. Thus RJIL can appreciate the perspective of both OCLS and capacity seeker and we feel that that charges should be reasonable and consistent with the regulatory principles and supportive of proliferation of telecommunication services.

5. The Authority has rightly concluded that, in compliance to the Hon'ble Supreme Court's order dated 08.10.2018, only two factors viz. 'utilisation factor' and 'conversion factor' are required to be reviewed under this consultation process, and the charges contained in Schedule I, II and III of "The International Telecommunication Cable Landing Stations Access Facilitation Charges and Co-Location Charges Regulations, 2012 dated 21.12.2012" (hereinafter referred as CLS Regulations dated 21.12.2012) will be

accordingly recalculated, considering the same network design, cost data and other cost factors used in the previous exercise.

6. **With regard to two factors viz. 'utilisation factor' and 'conversion factor', RJIL submits that both the values i.e. 'utilisation factor' of 70% and 'conversion factor' of 2.6 as considered by the Authority in the CLS Regulations dated 21.12.2012 are adequate and there is no need for any change in these factors.** We submit that these values are well in line with the best industry practices adopted worldwide and are sufficient for cost recovery. Our detailed justifications is provided in the response to respective questions.

7. We further submit that besides reconfirming these factors, the Authority should also bring in the requisite clarity and certainty with regards to settlement of charges. As per our understanding the revised Schedules I, II and III of the CLS Regulations dated 21.12.2012, to be prescribed post completion of this consultation exercise, will replace the existing schedules and thereby should be effective from the date of coming into force of 2012 Regulations i.e. w.e.f. 01.01.2013. **We request the Authority to kindly ensure that there is no ambiguity in the date of applicability of charges determined post consultation process and therefore, the Authority may kindly specify the date of effect of such schedules w.e.f. 01.01.2013.**

Issue wise response:

Q.1 What should be the 'utilization factor' for determination of annual access facilitation charges, annual operation and maintenance charges for capacity provided on IRU basis, and co-location charges in the Schedules appended to "The International Telecommunication Cable Landing Stations Access Facilitation Charges and Co-Location Charges Regulations, 2012" dated 21.12.2012 ?

RJIL Response:

1. While prescribing Access Facilitation Charges vide The CLS Regulations 2012, dated 21.12.2012, the Authority has used 70% capacity utilisation factor. **RJIL support the Utilisation factor of 70% adopted by the Authority, as this is as per the best industry practices worldwide.**

2. We understand that the purpose of applying the utilisation factor is to give relief to the OCLSs by determining the costs is such a way that the OCLS is able to recover its complete costs after selling the 70% of the capacity, while retaining sufficient capacity for redundancies. The Capacity utilisation of 70% is accepted to be is the threshold

beyond which an OCLS is required to enhance capacities and incur additional Capex and Opex, thus is optimum.

3. Further, the intent of using 70% utilisation factor in calculation of Access Facilitation Charges, Operation and maintenance charges or Colocation charges etc. is right because no supported technical infrastructure is loaded to 100% of its capacity due to a high probability of a breakdown.

4. It is to be noted that in the consultation paper dated 19.10.2012, while determining Access Facilitation Charges, the Authority has used costs of fully loaded DXC of capacity 640 G i.e. loaded with all STM-64 cards in all slots of DXC. However, after the consultation in the CLS Regulations, 2012 the network design was modified and DXC was loaded with all interfaces i.e. STM-1, STM-4, STM-16 and STM-64. Accordingly, the capacity of DXC was reduced and considered only 60G in protection mode, however, the same capacity utilization factor of 70% was again considered. Therefore, in the Regulations, the Authority has not applied the capacity utilization of 70% on fully loaded capacity of DXC but this factor has been applied on revised and reduced capacity of 60 G. It is not mandatory for OCLS to use various cards/ interfaces of DXC in the given combination only. As per the requirement, the DXC can also be loaded with higher capacity interfaces and it is also a fact that the costs of higher capacity interfaces is not directly multiple of capacity. Accordingly, adequate margin has been provided by the Authority and consideration of utilization factor of 70% is reasonable.

5. It is pertinent to mention here that this is not for the first time when 70% is being considered as utilisation factor. We invite your attention to Hon'ble TDSAT the judgment dated 28th November, 2005 in Appeal No.10 of 2005. In the case, VSNL (now Tata communications Ltd) filed an appeal challenging the International Private Leased Circuits (IPLC half circuits) Tariff Order of TRAI dated 8th October, 2005 (Telecommunication Tariff (39th amendment) order, 2005) whereby TRAI had fixed ceiling tariffs for what are known as IPLC half circuits. Vide para 13.3 of the judgment, Hon'ble TDSAT had observed

> *"During arguments we had occasion to see the papers submitted by TRAI which clearly brought out the position that the inspection team had unearthed certain information which had earlier not been given by VSNL. Also the figure of E-1s indicating capacity utilized was entirely based on the information given by VSNL.* ***Also VSNL itself had indicated that 30% of capacity was unutilized.*** *While we do appreciate VSNL argument that for efficient and reliable IPLC service some provision has to be made to provided for restoration / redundancy,* ***we see considerable merit in TRAI's argument that with only 70% capacity being utilized****, the remaining 30% un-utilized capacity would suffice for meeting the requirement of redundancy."*

6. In view of the above, RJIL submits that the utilization factor of 70% as considered by the Authority for determination of annual access facilitation charges, annual operation and maintenance charges for capacity provided on IRU basis, and co-location charges in the Schedules appended to CLS Regulations 2012 dated 21.12.2012 is adequate and there is no need for any change in this factor.

Q.2 What should be the 'conversion factor' (refer Para 2.22) for determination of annual access facilitation charges and annual operation and maintenance charges for capacity provided on IRU basis in the Schedules appended to "The International Telecommunication Cable Landing Stations Access Facilitation Charges and Co-Location Charges Regulations, 2012" dated 21.12.2012?

RJIL Response:

1. The Authority vide the CLS Regulations, 2012 dated 21.12.2012 had prescribed Access Facilitation Charges (AFC) for various capacities i.e. STM-1, STM-4, STM-16 or STM-64. To arrive at the AFC for different capacities i.e. STM-1, STM-4, STM-16 or STM-64, overall cost of Digital Cross Connect (DXC) having 60G capacity consisting of various interfaces as agreed by stakeholders was calculated. Thereafter, this cost of 60G DXC was apportioned to arrive at AFC of one STM-1, using the following mathematical formula consisting of No. of interfaces considered in the DXC and conversion factor of 2.6.

Total Cost of 60 G =

[{(No of STM-1 Interfaces) *(AFC of one STM-1 Interface)} + {(No. of STM-4 Interfaces) * (2.6)* (AFC of one STM-1 Interface} + {(No. of STM-16 Interface) * (2.6*2.6) * (AFC of one STM-1 Interface)} + {(No. of STM-64 Interface)* (2.6*2.6*2.6)* (AFC of one STM-1 Interfaces)}]"

After calculating AFC of STM-1 from the above formula, the AFC of higher capcities was arrived at by simply multiplying with 2.6 i.e. AFC of STM-4= 2.6* AFC of STM-1; AFC of STM-16= 2.6* AFC of STM-4 and so on.

2. Therefore, in such apportionment of costs, TRAI has ensured that the charges of various capacity interfaces have been calculated in such a way that total cost is recovered from the interfaces for which DXC has been configured. From the above formula, it is also apparent that this conversion factor of 2.6 does not have any impact on the recovery of

the total cost. The impact of this conversion factor of 2.6 is only with respect to comparative AFC of different interfaces.

3. The conversion factor of 4 is relevant only to convert bit rate of different interfaces i.e. STM-1 to STM-4, or STM-4 to STM-16 or STM-16 to STM-64. However, it has no relevance with the costs. In case this higher factor of 4 is adopted then AFC of STM-1 will be very low and AFC of STM-64 will be on higher side, hence, this will not provide the advantage of economies of scale.

4. The Authority has already noted that the conversion factor of 2.6 was taken to give the advantage of economies of scale for access seekers who take higher bandwidth. It was also noted by the Authority that the ratio prevalent in the market for domestic leased circuit charges of STM-64 to STM-16 or STM-16 to STM-4 or STM-4 to STM-1 was 2.5 to 2.6. RJIL also supports this and is of the view that the conversion factor of 2.6 is a best practice followed by the Industry i.e. if you want to determine the pricing of STM4, it is not a multiple of 4xSTM1, but 2.6xSTM1. Similarly pricing of STM16 is not 4xSTM4, but 2.6xSTM4 and so on.

5. In this context, it is relevant to mention here that the Authority vide "The Telecommunication Tariff (Fifty Seventh Amendment) Order, 2014 dated 14.07.2014 has prescribed ceiling tariffs of STM-1 and STM-4 domestic leased circuits. The ceiling tariffs prescribed in the TTO for >500 Km distance for STM-1 and STM-4 are Rs. 69,65,000 and Rs. 18,108,000 and the ratio of such ceiling tariffs of STM-1 and STM-4 is also 2.6.

6. In Para 53 of the explanatory memorandum to the aforementioned Fifty Seventh Amendment to the TTO, in Table 3, the Authority has provided average capital cost and annual operating cost per terminal equipment for STM-1, STM-4 and STM-16. The said Table-3 is reproduced below for ready reference:

Table-3: Average present capital cost and annual operating cost per terminal equipment

Terminal Equipment	*Average cost per Terminal Equipment (in Rs.)*	
	Present Capital Cost	*Average Annual operating cost*
STM-1	*90,382*	*23,975*
STM-4	*240,766*	*45,016*
STM-16	*528,270*	*85,877*

From the above Table total costs (Capital Cost + Average Annual Operating Cost) of STM-1, STM-4 and STM-16 equipment comes out to be Rs. 1,14,357, 2,85,782 and 6,14,147, respectively. The ratio of such costs of STM-1 to STM-4 and STM-4 to STM-16 comes out to be 2.49 and 2.14, which further justifies the conversion factor of 2.6.

7. Further, Para 73(ii) of the explanatory memorandum to the Fifty Seventh Amendment to the TTO clearly provides that most of the TSPs use a multiplication factor (i.e. coefficient) of about 2.6 on the base tariffs for STM-1 capacity to derive base tariffs for STM-4 capacity. The said Para 73(ii) is reproduced below for ready reference:

> *"73(ii) From the information on base tariffs for DLCs submitted by TSPs to the Authority, it can be seen that most of the TSPs use a multiplication factor (i.e. coefficient) of about 2.6 on the base tariffs for STM-1 capacity to derive base tariffs for STM-4 capacity. The following Table presents the multiplicative factors used by major TSPs to derive base tariffs for STM-4 capacity from the base tariffs for STM-1 capacity:*
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> *Table-8: Multiplication factor used by the major TSPs to derive base tariff for STM-4 capacity from the base tariffs for STM-1 capacity*

TSP	*Multiplicative factor applied on the base tariff for STM-1 capacity to derive the base tariff for STM-4 capacity*
TSP-1	*2.5*
TSP-2	*2.5*
TSP-3	*2.5*
TSP-4	*2.6*
TSP-5	*2.6*
TSP-6	*2.6*
TSP-7	*2.6*
TSP-8	*3.1*
TSP-9	*3.1*
TSP-10	*3.1*

"

8. Accordingly, the conversion factor should follow the best industry practices regarding pricing of different capacities and ratio based on costs of different capacities rather than the mathematical ratio of 4, which is relevant only with respect to bit rates of different interfaces. Further, the economies of scale clearly imply that to support 4 times or 16 times of capacity, the investment is not a direct multiple.

9. In view of the above, RJIL support the use of conversion factor of 2.6 for determination of annual access facilitation charges and annual operation and maintenance charges for capacity provided on IRU basis in the Schedules appended to the CLS Regulations dated 21.12.2012.