

TATA COMMUNICATIONS LTD.
RESPONSE

TO

TRAI CP dated 23rd MARCH 2012

On

**Access Facilitation Charges and
Co-location Charges
At Cable Landing Stations**

Question-1

Which of the following method of regulating Access Facilitation Charges and Co-location charges (AFC & CLC) should be used in India?

- (a) The prevalent method i.e. submission of AFC & CLC by owner of the cable landing station (OCLS) and approval by the TRAI after scrutiny.
 - (b) Submission of AFC & CLC by OCLS and approval by TRAI after consultation with other stakeholders.
 - (c) Fixing of cost based AFC & CLC by TRAI
 - (d) Left for mutual negotiation between OCLS and the Indian International Telecommunication Entity (ITE)
 - (e) Any other method, please elaborate in detail.
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TCL Response :

The Access Facilitation Charges and Co-location charges (AFC & CLC) should as per the Option (d). The detailed justification for our response is as below:

Justification:

Background: The International Long Distance service was opened up in the year 2002. To ensure fair competition in the ILD services sector a concept of equal access to bottleneck facilities for international bandwidth was introduced.

The provision relating to access to bottleneck facilities for International bandwidth in the original ILD license of 2002 reads as under:

“2.2 (c)

Equal access to bottleneck facilities for international bandwidth owned by national and international band width providers shall be permitted for a period of five years from the date of issue of the guidelines for grant of licence for ILD service or three years from the date of issue of first licence for ILD service, whichever is earlier, on the terms and conditions to be mutually agreed”.

Until the financial year 2005-06, only four entities obtained license for the ILD services all of which were Indian companies and new entrants in the field of international carrier services. In November, 2005 the Government of India liberalized the Licensing regime for NLD and ILD services with measures such as reduction in entry fee for the License by 90% from Rs.25 crores to Rs.2.5 crores, reduction in License Fee from 15% AGR to 6% AGR etc. Thereafter about 19 operators obtained licenses for the service and as a result, the number of licensed ILDOs reached to twenty four as of 28.04.2009. As on date, there are 27 ILD service licensees in India.

The submarine Cable Landing Stations (CLS) and the associated international submarine cables landing in to India were considered to be a bottleneck facility at the time of opening up of ILD services sector and equal access to these facilities to the new ILD licenses was mandated for a period of three years from the date of licensing of the first Licensee. Since the creation of new infrastructure of CLS and international submarine cables was time consuming, perhaps concept of treating CLS a 'bottleneck facility' was introduced to facilitate quick rolling out of ILD services by new licensees in the interest of encouraging competition in the newly opening up international long distance communications sector. The equal access to these facilities to the new ILD licenses was mandated for a period of three years from the date of licensing of the first Licensee. This period lapsed in February, 2005.

Until then, there were only three international cable owner ILDOs (TCL, Bharti, RCOM) of which only two (TCL & Bharti) owned the CLS infrastructure in India. TRAI in June, 2005 initiated a Consultation on measures to promote competition in IPLC in India under which one of the issues was whether the submarine Cable Landing Stations could still be considered a bottleneck facility in India. TRAI gave its recommendation on the issue of access to essential facilities including landing facilities for submarine cables at CLSs in December, 2005. TRAI recommended that "equal access to bottleneck facility at the CLS, including landing facilities for submarine cables by licensed operators on the basis of nondiscrimination, without any sunset clause, should be mandated". TRAI also recommended that "The ILDO owning the Cable Landing Station should also be mandated to publish, with prior approval of the Regulator, the terms and conditions for all such Access provision. Regulator may also determine and specify

cost-based access charges through its regulation”. TRAI recommended that the ILD license should be suitably amended for this purpose.

Based on the TRAI recommendations of December 2005, DoT amended the ILD service license vide DoT amendment letter dated 15.01.2007 as under:

“2.2 (c)

Equal access to bottleneck facilities at the Cable Landing Stations (CLS) including landing facilities for submarine cables for licensed operators on the basis of non-discrimination shall be mandatory. The terms and conditions for such access provision shall be published with prior approval of the TRAI, by the Licensee owning the cable landing station. The charges for such access provision shall be governed by the regulations/ orders as may be made by the TRAI/DoT from time to time”.

TRAI launched a Consultation Paper on “Access to Essential Facilities (Including Landing Facilities for Submarine Cables) at Cable Landing Stations” in April 2007. The Consultation Paper proposed a draft regulation in this regard. Subsequent to the Consultation process TRAI issued the International Telecommunication Access to Essential Facilities at Cable landing Stations Regulations, 2007 (5 of 2007) dated 7th June, 2007.

Thus it can be seen that regulation of CLS access is predicated upon CLS being an essential or bottleneck facility in India. It would be our endeavor to justify our response by establishing that at the present stage of proliferation of CLSs and OCLs in India, regulation of access to CLS is not warranted as it is no longer an essential facility, market forces have taken over in form of intense competition and lowering of regulatory barriers for establishing a new CLS etc.

Is CLS still a bottleneck/essential facility?

- **Status of CLSs and Cables Landing in India**

A submarine Cable Landing Station is a facility where the International Submarine Cable lands in a country and gets connected with the domestic network of that country. The ownership and

the operation of the CLS is dependent upon the regulations of the specific country where it lands. Typically, a submarine CLS would be a telecommunications equipment building where the submarine cable, after landing on-shore, would be terminated, i.e., it would be connected into a network(s) inside a physical building residing on-land. In India, as per the present regulations, a CLS can be owned and operated by either an ISP or an ILDO. The policy regarding setting up of CLS based international gateways was first liberalized in the year 2000 when the ISPs were allowed to establish their own CLS based international gateways. Thereafter in the year 2002, after introduction of competition in the ILD services sector, ILDOs were also allowed to establish their own CLS based international gateways.

At the time when the license amendment dated 15.01.2007 was issued, CLSs in the country were owned by TCL, Bharti , BSNL and RCOM and there were eight submarine cables connecting the country out of which four were consortium cables. As on date there are twelve submarine cables connecting the country out of which five are consortium cables. Additional submarine cables and associated CLS infrastructure has been created mainly by the existing ILDOs who have earlier also invested in the international connectivity. Sify another ILDO in India is also investing in the submarine cable connectivity and infrastructure and has commissioned an international submarine cable Gulf Bridge International (GBI) submarine cable system recently with landing station at Mumbai. BSNL also has plans to commission an international submarine cable system during next two years with two CLSs. **Thus India would have five owners of Cable Landing Stations (OCLSs) during this financial year itself with about fifteen international submarine cables landing on sixteen CLSs in the country in next two years. It would therefore be appropriate to surmise that the business related to international submarine cable and its associated infrastructure is no longer a bottleneck facility but has become highly competitive in India due to indulgence of multiple operators.**

- **Essential facility Test for CLS**

At the present stage of market maturity, CLS does not pass the test of being bottleneck /essential facility in India as per global benchmarking of the implementation essential facility concept/law:

The term essential facility has been defined and interpreted as follows:

Essential facilities are resources or facilities that have the following properties:

- They are critical inputs to retail production. Essential facilities are located at the wholesale level of the production chain, and are essential inputs in the production or supply of the retail product or service.
- They are fully owned and controlled by vertically integrated incumbent firms. The owner of the facility participates in the retail as well as the wholesale stage of the market.
- They are a monopoly. Retail competitors can only acquire an essential facility from the incumbent firm that owns and controls it.
- It is not feasible, either economically or technologically, for retail competitors to duplicate the essential facility or develop a substitute for it.

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"Essential facilities" mean facilities of a public telecommunications transport network or service that(a) are exclusively or predominantly provided by a single or limited number of suppliers; and(b) cannot feasibly be economically or technically substituted in order to provide a service.

TELECOMMUNICATIONS SERVICES: REFERENCE PAPER 24 April 1996Negotiating group on basic telecommunications

The essential facility doctrine.

‘The essential facility doctrine originated in the United States in a case brought under the Sherman Act in 1912. The European Union has also developed a corresponding doctrine which has been applied to infrastructural facilities such as ports. In practice, the essential facility doctrine is usually applied where the dominant position is either ‘an act of God’, i.e. caused by geographic conditions, or first mover advantages, e.g. an incumbent’s telecommunication network’.

‘Over the years, there are some criteria that have been enunciated in court cases and have become guidelines in the assessment of what should be ruled an essential facility. These criteria can be summarized in the following four points:

- The facility must be controlled by a dominant firm
- Competing firms must lack a realistic ability to reproduce the facility
- Access to the facility is necessary in order to compete in the related market
- It must be feasible to provide access to the facility

The ICT Regulation Toolkit-Practice Note

ESSENTIAL FACILITIES

In Snam /Tariffe di Vettoriamento, the Italian Competition Authority defined essential facility as:“ all infrastructure that is necessary for accessing a market and which is neither easily reproducible at a reasonable cost in the short term nor interchangeable with other products/services”

Essential Facilities

Agencies consistently identified the principal common elements of an essential facility as: (1) access to the facility must be essential to reach customers; and (2) replication or duplication of the facility must be impossible or not reasonably feasible.

International Competition Network report 2010

Thus it can be seen that the test of a facility being “essential” is not easily passed. The facility cannot be something that gives only a small or a short term advantage, it has to be a substantial and long term benefit. Alternative facilities would have to be such poor substitutes that they would not allow rivals to compete. The test is the ability to duplicate the input. In the case of a submarine cable landing station clearly there are robust alternatives. Thus in the countries where there are large number of international

submarine cables landing in to the country at number of CLSs owned by various OCLSs, the test for CLS being essential or bottleneck facility would not be able to pass. This would be more so since the Government and TRAI have already taken steps long back to remove legal barriers to the entry in the market of international telecommunication services to the international carriers which allows such global carriers to construct CLS infrastructure in the country. **Thus on interpretation of the essential/bottleneck facility global interpretation and practices, the CLSs in India at the present stage of maturity of the market cannot be treated as a essential/bottleneck facility and CLS Access Charges should be left to be governed by the market forces with attendant regulatory oversight in form of reporting requirement.**

- **Absence of monopoly situation in respect of CLS/ OCLS:**

Out of the three new Consortium cables which came in to being since 2006, two (IMEWE and SMW4) are landing at more than one CLS providing choice of cables, CLS and OCLS for the eligible ITEs to access the bandwidth. There are now 12 Cables landing on 12 CLSs owned by 4 OCLSs. Further, there are 4 terabit submarine cable routes going east of India (owned by 3 ILDOs) and 5 terabit submarine cable routes (owned by 3 ILDOs) , going to west of India and also 6 cables routes to gulf destinations from India (owned by 4 ILDOs). Each terabit cable is potentially capable of meeting entire country's current bandwidth requirement on that route. Thus on any given international submarine cable route from India, adequate choice of cables, CLSs and OCLSs at diversified CLSs as well as bandwidth is available for purchase. Therefore, there is intense competition amongst the various entities owning the Cable Landing Station/cable for providing international bandwidth capacities to the eligible Indian ITEs along with access to the Cable Landing Station. It is , therefore, no longer a valid statement that either the Cable Landing Stations or the international capacity in India is owned by a single or handful number of players. It is also observed that in similar scenarios in other markets globally, regulations are withdrawn once the competition matured like in Australia, US, UK etc. With so much capacity available, OCLSs are incented to compete for the wholesale business (as well as using it for enterprise offerings). OCLSs sole aim today is to earn

income from the investment made by way of sale of capacity as well as maximizing the access facilitation of capacity..

It is submitted that the terms and conditions for the access to the CLS of the OCLSs have already been standardized by the International Telecommunication Access to Essential Facilities at Cable landing Stations Regulations, 2007 and in view of the matured market and competition some minor regulation may only be desirable. Since in our view, CLS no longer remains the bottleneck facility from any angle and market forces are already working with each OCLS trying to grab a major share of the market, it is submitted that the charges for the CLS access should be left unregulated with regulatory oversight and reporting requirement.

Market maturity and Competition:

As per the extracts of the December 2005 Recommendations of TRAI, there were two issues regarding bottleneck to essential facilities at a landing station. One was denial of access to the international capacity of a Consortium cable by a CLS owner and the other was denial of landing facility to a third party who possess the requisite license desirous of landing new cable at the CLS of a carrier. The purpose of the regulatory action was to remove these bottlenecks. As on date, there is no known or reported case of denial of access to the international capacity of a Consortium cable by the CLS. On the contrary, CLS owners are competing against each other to land newly planned cable in to India purely with a view to effectively reduce their initial capex/opex burden due establishment of CLS. Also out of the three new consortium cables which have come up since 2006, two (SMW4 & IMEWE) are landing at more than one CLS providing choice of CLS and OCLS for the eligible ITEs to access the bandwidth. **Further, as multiple choices of CLSs as well as submarine cables from different OCLSs are available resulting in multiple choices for the eligible ITEs which is a clear sign of evolution and maturity of the competition and maturing of the market in India over a period, there is no justification to continue treating CLS as a bottleneck facility.**

- **No Disputes/Complaints regarding CLS Access**

While giving the Recommendations of December, 2005, it was noted by TRAI that on an average setting up of a CLS can cost between Rs.20 crores to Rs.50 crores depending upon the location in the country and the time taken to set up a CLS is normally more than a year. It was noted that as setting up CLS is very time consuming and capital intensive process, therefore, it is neither feasible for a new Operator to set up a CLS for new cables nor does it make economic sense to duplicate the infrastructure. It was therefore concluded by TRAI that multiple cables owned by different Operators should be made to land on a common CLS for economic reasons by a mandate through terms and conditions of the license. When we test this argument against the passage of time and the events, we note that the expectations have not borne fruit. One of the main reasons is that cost of building a Cable Landing Station although capital intensive is still a fraction of the cost required to build the international submarine cable itself and therefore most of the Consortium/Private owned cables landing in India since 2005 have landed on newly built cable stations instead of at existing CLSs mainly due to diversity reasons. For example, IMEWE , a consortium cable, is landing at Mumbai, India at two different new cable landing stations with in Mumbai each owned by Tata Communications Ltd and Bharti Airtel. Similarly, Sify , chose to build its own cable landing station in Mumbai for its GBI cable despite of the fact that there was a choice of existing and well established CLSs owned by Tata Communications Ltd , Bharti Airtel , and Reliance Communications Ltd available to Sify to choose from. *Further*, Sify, the latest entrant to land GBI cable in Mumbai never initiated dialogue with well established CLS owner like Tata Communications Ltd having 3 well diversified CLS in Mumbai on the possibility of landing GB in any of TCL CLS. The other reason for trend of each international submarine cable owner choosing to land on a new CLS is the QoS consideration. Due to very high dependency of customers/users on international telecom services, expectation of quality of service mainly uptime has gone up very high. One of the ways to maintain high uptime is to avoid any common point of failure. A CLS can potentially be a common point of failure with very severe impact effecting very large number of customers/ services. Government policies should also therefore *encourage* the building of

multiple cable landing stations in order to minimize common points of failure; Government policies should not incentivize new cables to land in exactly the same place as other cables. Current OCLSs (now that competition in India is firmly entrenched) have a financial incentive to allow new cable system builders to purchase the ability to use their existing cable stations. Builders of new cable systems have some incentive to avoid crowded CLS (where cables already land), as the bandwidth derived from cable(s) passing through such a CLS will be in less demand among customers.

Thus it can be clearly seen by the events which have happened since December, 2005, when the recommendations were given by TRAI for treating CLS as an essential/bottleneck facility, that in so far as landing of new international submarine cables in India is concerned, **Cable Landing Station facility is not a bottleneck facility. The aforesaid is also clearly established by the fact that since 2005, cable owners, by and large, continued to prefer establishing new CLS for their upcoming/planned cables in spite of the availability of choice of landing at existing CLS primarily due to the reason of introducing diversity into their international bandwidth network. It is also to be noted and appreciated by the Authority that not a single international cable operator/consortium/carrier/ entrepreneur or Indian ILDO has complained to Authority about denial of landing facilities by any of the OCLSs in India.**

- **No investment by new Carriers in CLS despite low barriers indicates access to CLS freely available :**

In 2007, when the International Telecommunication Access to Essential Facilities at Cable landing Stations Regulations, 2007 (5 of 2007) was issued there were nine CLSs which were owned by four OCLSs on which eight international Submarine Cables were landing. The OCLSs were TCL (4 CLSs – Cochin SMW3 & SAFE, VSB Mumbai SMW3, LVSMB Mumbai SMW4 & FLAG, Chennai TIC), Bharti (2 CLS - Chennai SMW4, Chennai i2i), RCOM (1 CLS – Mumbai , FALCON) & BSNL (1 CLS – Tuticorin Indo-Sri Lanka Cable). Out of the eight cables three were Consortium cables, one Hybrid cable and four private cables.

It may be recounted that up till the financial year 2005-06 only four Operators had taken licenses for ILD services and the number of Service Providers have significantly increased post liberalization of licensing regime for ILD service license. There were five licences issued in 2006, three in 2007, eight in 2008 and three up to April 2009 taking the number of ILD Service Licensees to 24. However, when we examine the status of the submarine cables landing in India, the associated CLSs and OCLSs, only one new OCLS (Sify) has emerged out of the >19 new ILDO Licensees having acquired Licenses since July 2006 . As on date there are 12 submarine cables landing in to India in the 12 CLSs owned by TCL (5), Bharti (4), RCOM (2) & BSNL (1) respectively. (Details attached as Annexure-1) Thus it can be seen that despite the liberalization of the licensing regime and the access to the landing station, the same has not acted as a catalyst for attracting investments from most of the post- July 2006 licensed ILDOs in the capital intensive submarine cable construction and the associated landing station infrastructure. The option to build CLS infrastructure along with associated international submarine cable landing in to India was and is open to all the ILDOs since 2006 under the liberalized policy regime. **The deliberate decision by the majority of such post- July 2006 licensed ILDOs, under current policies, to refrain from investing in building infrastructure in India clearly demonstrates that CLS access is indeed freely available to ILDOs and market has matured in India therefore there is no need to continue regulating access to the CLS.**

- Submarine cables and cable landing stations are not a type of natural monopoly like last mile access loops are. Each submarine cable investment can be evaluated on a standalone business case and is not intrinsically hampered by or dependent on prior investments in the sector. Both the i2i cable system and the Tata Indicom Cable required the creation of new cable landing stations in Chennai. These investments were justified based on the standalone business cases prepared for them. Therefore there is no basis for suggesting that only an erstwhile incumbent or selected few licensed ILDOs can justify or bear the investment in a cable landing station. **Since adequate time has been provided to new ILDO entrants to invest in cable infrastructure and there is neither any evidence of difficulty in accessing submarine cable capacity in India nor of a**

‘natural monopoly’ in this sector, extending the Bottleneck Facility clause is neither justified nor it would serve any benefit to the industry and the customers.

- **International Practice does not support CLS access charge regulation:**

In this respect, we would like to extract a table from the December, 2005 recommendations of TRAI regarding access to essential facilities with additional details of Indian position as on date highlighted in yellow as under:

Table 4.2: Details of Cable Landing Stations (CLS) and Cable Systems

Country	No. of CLS Owners	No. of CLSs	No. of cables landing at CLSs
Malaysia	1	4	9
Singapore	2	4	8
Hong Kong	4	6	10
United Kingdom	7	8	11
USA	17	22	30
Canada	3	3	4
Australia	2	7	8
Brazil	3	4	6
Russia	2	3	4
Philippines	3	3	5
India	2	5	8
India as on date	4	12	12
India projection 2013-14	5	>15	>13

From the above, it is very clear that the number of OCLS, CLS and cables landing in India have increased substantially as on date and is likely to grow further. On a comparison with countries like Australia, U K, Brazil, Philippines, Canada where the CLS access was not regulated in December, 2005 itself, the state of competition in India is now as fully robust. It is noted from examination of global practices that even in formerly CLS access regulated countries, the regulation of access to CLS was withdrawn when these countries had relatively lesser number of

Cables, OCLSs and CLSs as compared to India statistics as on date as the competition was adjudged to have matured by then in those countries.

From the global practices cited above as well as from our study of the general global practices it can be concluded that the prevalent regulatory practice for providing access to other Service Providers at Cable Landing Stations by owners of the CLS is to leave such access unregulated. The exceptions to the rule are in nations where the incumbent is the sole entity providing CLS or where the telecommunications market is so nascent that competition has not fully developed. In most of the developed/developing countries the access charges to the CLS by OCLS generally depend upon the market forces and market driven pricing. This has been facilitated by the increase in number of CLSs and OCLSs i.e. maturing of the CLS infrastructure which has been the result of removal/liberalization of entry barriers/conditions imposed upon a Service Provider for establishing the CLS infrastructure. This is true for most of the European countries, USA, North America and Asia Pacific Region. It is noted that even in most of the countries in African Continent including South Africa where the CLS infrastructure development is at a nascent stage, the prevalent regulatory practice is to leave the access to the CLS unregulated. In the countries where the market is still dominated by the Government owned incumbents like Saudi Arabia, Qatar, UAE, Egypt, Tunisia and China where either 100% or majority of the CLSs are owned by the incumbent the access charges to the CLS in such countries are also not regulated by the Regulator or the Government. In a very small number of countries like Singapore where the CLS infrastructure is majorly owned by the incumbent the access at CLS to other Service Providers is regulated. **Thus on the examination of the global practices as of December, 2005 and the current figures of India a clear case is made out for cessation of regulation in respect of access to the CLS due to market forces taking over.**

Question -2:

In case AFC & CLC are regulated using method (a) or method (b) above, is there a need to issue guidelines containing algorithm and network elements to be considered for calculating AFC & CLC to the OCLSs? If yes, what should be these guidelines?

TCL Response : Since we have in our response to question -1 opted for the method (d) ,the response to this question is not required to be given by us.

However ,without prejudice to our response to question1 , we would like to state that there is no' need to issue guidelines containing algorithm and network elements to be considered for calculating AFC & CLC to the OCLSs even in case method(a) or method (b) are considered.

Justification: -It is our observation that the variation of access facilitation charges at different CLS is minorly dependent on the algorithm and network element. Moreover in our view the algorithm and network elements to be deployed for the purpose should be a prerogative of the OCLS, as in a competitive and developed market with multiple CLS for major new consortium cables; it is one of the primary differentiator. Standardizing the network, on the other hand, would restrict CLS owners to deploy state of the art techniques/technologies to optimize the access facilitation process/ fee etc. .This would act as an inhibitor to innovation and use of new technology.

Question:-3

In case, AFC & CLC are regulated using method (a), (b) or (c) above, please suggest the value of pre-tax WACC, method of depreciation and useful life of each network element? Please provide justification in support of your answer.

TCL Response : Without prejudice to our response to Question 1 , we would like to submit following :

1. The value of Pretax WACC to be used should be 23.9%. The detailed Justification is attached.

Particulars	Value	Source
Rf	8%	India G-Sec
Rm	17%	NSE India
Rm - Rf	9%	Formula
Beta	1.1	NSE India
Ke (Post Tax)	17.9%	Formula
Ke (Pre Tax)	27.5%	Formula
Kd	10.38%	INR Borrowing for TCL
Debt	21%	
Equity	79%	
WACC (Pre Tax)	23.9%	Formula

2. Depreciation method used by the company is straight line method. Following is the life of the equipment taken.

Type	Life years	In
Buildings	25	
Accommodation plant facilities	15	
Standby generators	16	
UPS facilities	12	
Primary distribution systems	16	
DC power systems	16	
Digital transmission equipment	5	
Fiber-optic systems - cables	15	
Test equipment	5	

Question 4:-

Which cost heads/ network elements should be included/ excluded while calculating Access Facilitation and Co-location charges? Please enumerate the items with specific reasons.

TCL Response : Without prejudice to our response to Question 1 , we would like to submit following :

All the cost elements related to infrastructure/ equipment deployed directly and indirectly in the ITMC and MMR used for providing AFA should be included.

1. Equipment in ITMC/MMR.
2. Space and Power at ITMC/MMR used for telecom equipment, lighting, aircon and other infrastructure to support the operations
3. Cable Chutes/runways, power cables
4. Test Equipment
5. Power equipment (Mains power supply from diverse sources , transformers, Battery, UPS, Generator, distribution system, power factor improvement equipment etc.)
6. Fiber Connectivity cost (in building and between Locations, wherever applicable)
7. Manpower Cost, security cost.
8. Project Management Cost
9. Pre Tax WaCC.

All the above items are dedicated in full or part to form the NW component for the AFA/CLS. None of the above cost elements are reimbursed by consortium. Further none of the cost Components at the CLS which is part of the Consortium system are considered in the calculation of the AFA.

We would also like to refer to the comparison of CLS AF pricing given in Chapter 3 of the CP and state that AF pricing is function of network topology as well as infrastructure constraints. Thus the comparison given may not be applicable to the comparison in the example cited as per following:

Pls. note the following about the Interconnect sold in Tuas, Singapore:

1. This are the charges for Fiber cross connect only, this fiber interconnect is given directly from the consortium Equipment to customer equipment in MMR. With no involvement of any active transmission equipment. This is mainly because the CLS and the MMR are in the same proximity. These charges will remain the same irrespective of the capacity interface ie (STM-1/STM-4/STM-16/STM-64 are all charged at the same rate)

In case of SMW-4 Mumbai:

1. The CLS is at LVSB, Prabhadevi and MMR is at Fort Mumbai .The Charges the connectivity involves SDH/DWDM Transmission Equipment, fiber interconnectivity between 2 different locations and the regular O&M charges . This is to ensure that we drop down the capacity at the interface as required by the customer at the MMR location while maintaining the required SLA.
2. Further in case we would like to extend the same model of fiber extension directly between the CLS location and the MMR room, that may not be possible for the following reason:
 - ROW Permission is not available in south Mumbai. Even if available at some stretches, this are charged at ~95L/kms.
 - For each of the fiber pair a complete technical set up of SDH/DWDM will have to be deployed.
 - Also the fiber connectivity and equipment set up provisioned will have to be a protected (Primary and Secondary path).

- Each of the interfaces will be a different NW in itself and will be difficult to maintain from the O&M perspective.
3. In the present scenario, TCL, is Demuxing the capacity given from the consortium at suitable level because STM-1/STM-4/STM-16 interface are not provided separately by the consortium, it is part of the higher level capacity which needs to be de-multiplexed. And all the AFA requirements are carried on the protected SDH/DWDM set up between Prabhadevi-Fort. In fact the present topology as adopted by TCL between VSB Fort and LVSB Prabhadevi is the best Topology in terms of the commercial and technical set up. This is also evident from the fact that the customers Cable access from VSB have had uninterrupted services for multiple years now.
 4. These charges have been deliberated in multiple rounds with TRAI and thereafter approved..
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Question: 5

What should be periodicity of revision of AFC & CLC? Support your view with reasons.

TCL Response : Without prejudice to our response to Question 1 , we would like to submit following :

The Periodicity of the revision of the AFA and CLS should be kept at 5 years. Following is the reason behind the same:

1. There are no more cables planned for the coming 5 years. And we have the fair visibility of the capacity to be activated in each of the cable during this period.
 2. We do not see much change in the Transmission technology in the delivery of these capacities for the coming 5 years that may warrant the revision because of change in the cost elements.
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Question: 6

In case, cost based AFC & CLC are fixed by TRAI, which costing methodology should be applied to determine these charges? Please support your view with a fully developed cost model along with methodology, calculation sheets and justification thereof.

TCL Response : Details attached.

Question 7:

Whether Access Facilitation charges and O&M charges should be dependent on capacity (i.e. STM-1, STM-4 or STM-16) activated? Support your view with reasons.

TCL Response : Without prejudice to our response to Question 1 , we would like to submit following :

There is no benefit in the economies of scale in case of higher capacity, since it is proposed to take the cost of the Network element(s) to be used for AFA and its actual equipped capacity., there after it is proposed to apportion the related network elements allocated for the purpose of AFA based on business forecast. This will give the cost of the Apportioned NW elements for AFA from which the per STM-1 cost can be calculated.

As seen here, using this principle we would be able to make a balance of charges on cost basis for both STM-1 as well as that of higher capacity. Further since this is worked out on cost basis (total cost/total capacity), the principle of Multiplication factor of 3 for driving the next higher interface is not valid. In most of the countries where access facilitation charges are regulated the access facilitation charges are dependent on the capacity being activated. Even in a regulated market like Singapore the access facilitation charges are dependent on the capacity being activated

Question 8:

If Access Facilitation charges and O&M charges are fixed on the basis of capacity activated;

- (a) Should the charges be linearly proportionate to the capacity activated; or**
- (b) Should the interface capacity as provided by the submarine cable system at the cable landing station be charged as a base charge while higher or lower bandwidth be charged as the base charge plus charges for multiplexing/ de-multiplexing?**

TCL Response : Without prejudice to our response to Question 1, we would like to submit following :

The charges should be linearly proportional to the capacity activated.

While projecting the 5 year requirement for equipping the AFA/CLS set up it would be difficult to predict the mix of Customer requirement in terms of interface. This will eventually leave the OCLS owner to Plan and Build for the delivery of all using its resources. In such a scenario it is advisable to proportionally allocate the capex of the Build as suggested in answer 7, on the forecasted capacity for 5 years, which will ensure that the lower rate capacity are not charged heavily and the Higher interface are not discounted. Further direct delivery of capacity may not be possible in cases where the CLS and the MMR room are at different location, since in such a scenario the seeker/OCLS will have to Lay its own fiber from the CLS to MMR room and the cost of Building e-2-e fiber will technically as well as commercially be un viable.

Question 9:

Whether there is a need to fix Access Facilitation charges for all types of submarine cables? If no, which kind of submarine cables may be exempted and why?

TCL Response : Without prejudice to our response to Question 1 , we would like to submit following :

According to us ,Private cables may be kept out of the preview of the AFA charges.

These proposed regulations will not be in practice relevant to the private cable systems. It is due to the reason that there is only one seller of the capacity, who is also owner of the cable himself and owns the CLS in India or has an arrangement with OCLS for the same. In this scenario, only when ILDO or eligible ISP buys capacity from the private cable owner himself, the access would be needed and provided otherwise not. This private cable owner ,integrated with OCLS

or otherwise may, in fact, even offer access at “Zero” cost as his cost towards access is bundled with the cost of capacity itself. In order to make the proposed regulation effective in real sense, the private cable owner should be obligated to a ‘must provide’ regulation, subject to technical feasibility and availability of the capacity.

The proposed regulation may not be effective in case of private cables landing in India, Private (non-consortium) Cable owners would obviate the need for colo service at their CLS by other competing back-haul providers, as they can bundle the cost of capacity with that of backhaul and access into the final price agreed for the capacity from buyer. Private Cable owner will either patronize his own domestic network in India or some one of his preference. Under the situation, even the investment towards colo equipment and annual rent etc., paid by back-haul service provider shall go waste, as he would not get any business for backhaul provisioning in the private cable landing station.

Question 10:

Is there a need to introduce any new provision or to modify/delete any of the clauses of the ‘International Telecommunication Access to Essential Facilities at Cable Landing Stations Regulation 2007’, in order to facilitate access to essential facilities at cable landing station?

TCL Response: Since we have advocated method (d) in our response to Question 1, the provisions of ‘International Telecommunication Access to Essential Facilities at Cable Landing Stations Regulation 2007’ need to be modified to expressly permit the settlement of Access facilitation charges for cable landing stations by mutual negotiations subject to a general reporting requirement as in case of forborne telecom tariffs and with the obligations to follow the principles of non-predatory pricing and nondiscriminatory pricing.

	Description	Capex	Opex p.a.	Factor	Capex	Opex p.a.
		Total			Apportioned	
A	ONE TIME COSTS					
	EQUIPMENT COSTS					
1	ITMC					
1.1	Equipment -1	a	-	d	=a*d	= (a*d) * AMC rate of the equipment -1
1.2	Equipment-2	b	-	e	=b*e	= (b*e) * AMC rate of the equipment-2
1.3	Equipment-3	c	-	f	=c*f	= (c*f) * AMC rate of the equipment-3
2	MMR					
2.1	Equipment-4	g	-	J	=g*j	= (g*j) * AMC rate of the equipment-4
2.2	Equipment-5	h	-	k	=h*k	= (h*k) * AMC rate of the equipment-5
2.3	Equipment-6	i	-	l	=i*l	= (i*l) * AMC rate of the equipment-6
3	CONNECTIVITY COST (OFC)					
3.1	Inter/Intra floor	m		o	=m*o	= (m*o) * O&M rate of Inter/Intra floor
3.2	Inter Building(Different Location)	n		p	=N*p	= (N*p) * AMC rate of Inter Building fiber(Different Location)
4	OTHER COSTS					
4.1	Manpower Cost towards installation				q	
B	ANNUAL RECURRING COSTS					
	DIRECT COSTS					
5	Space & support infrastructure					
5.1	Equipment 1 in ITMC	r		d		=r*d
5.2	Equipment 2 in ITMC	s		e		=s*e
5.3	Equipment 3 in ITMC	t		f		=t*f
5.4	Equipment 4 in MMR	u		J		=u*j
5.5	Equipment 5 in MMR	v		k		=v*k
5.6	Equipment 6 in MMR	w		l		=w*l

	5.7	Manpower Cost		x	J		=x*j
C		TOTAL DIRECT COST-Capex & Opex				Sum of Capex-AA	Sum of Opex-BB
6		INDIRECT COSTS					
	6.1	Project Mgmt				CC	
D		TOTAL COST-Direct & Indirect				=AA+CC	-
E		Add:					
		Pre-Tax WACC	16%				
		RSA	6.00%				
F							
		Capex recovery - WACC	25%			=25%*(AA+CC)	
		Opex	Per STM1			=BB/DD= EE	
		Overheads	29%			29%*EE	
		IRU Cost - Pre RSA				=([(AA+CC) + (25%*(AA+CC))]/DD) = FF	
		RSA	6.00%			FF*6%	
		Total IRU Cost				=FF+(FF*6%)	
		Annual Recurring Charges				=EE*(29%*EE)=GG	
		Licence Fees	6.00%			=GG*6%	
		Total Recurring Charges				=GG+(GG*6%)	
		Forecasted STM-1	DD				