Quadrant Televenture Ltd, Punjab

CONNECT BROADBAND

RESPONSE TO THE TRAI CONSULTATION PAPER NO.13/2014

ON INTERCONNECTION USAGE CHARGES

Summary

Quadrant Televentures Ltd (QTL) at the outset proposes zero termination charges and recommends **Bill and Keep** regime as it establishes level playing field and promotes healthy competition.

The Onnet / offnet price discrimination deters customers of large networks from making calls to a small network, thus significantly reducing the usable value of small network to potential subscribers of the large networks. The On-net/ off-net calling tariff differential make large networks more attractive to subscribers then the smaller and newer networks. As the on-net calls are priced lower then the off-net calls, the subscribers of the large networks experience lower average call charges than subscribers of smaller and newer networks, since more of their calls are originated and terminated on their own networks.

Moreover, the Incumbent and large network operators engineer their networks on the basis of on-net/off-net retail price differential at the retail level and which makes their networks more attractive to customers. But smaller operators are 'forced' to offer low off-net call prices which leads to a large amount of off-net traffic and therefore there is a net outflow of traffic from the smaller network to the larger networks. Thus it makes it unprofitable and deters healthy competition as most incumbents set their on-net prices even below the level of the regulated MTC. Therefore thus the termination charges are anti-competitive and thus QTL strongly recommends to adopt **Bill and Keep** regime. The **Bill and Keep** regime is competitively neutral and prevents traffic skewness in favour of incumbent and larger operators.

In our view the **Bill and keep** is the best forward looking option as it avoids the complexities arising out of computing cost based termination charges, in the light of constraints of spectrum, Operators entering at various stages, and working at various size of operations including levels of competition & costs, technology challenges, etc.

The main cost component in a voice call is termination charges. Termination charges of 30 p/min was first notified in 2003 and since then it has been reduced to only 20 paise/min. To align termination charges to actual cost, QTL suggest that termination charges should be substantially reduced by adopting Pure LRIC methodology. Applying the pure LRIC method would ensure that only the cost related to additional network capacity to handle the incoming interconnecting traffic is taken into account while estimating the termination cost.

The termination charges should also reflect the market realities and it is essential that Pure LRIC based charges must also be benchmarked against commercially negotiated intra Circle call origination rates between operators. The prevailing intra circle rate is around 10

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paise per minute. As only avoidable costs are to be considered for providing termination services and these charges should be considerably lower than components involved in roaming and therefore termination charges should be significantly less than 10 paise per minute.

Issues for Consultation

Q1: Which of the following approaches would be the most appropriate for Mobile Termination Charge and Fixed Termination Charge:

(i) Cost oriented or cost based;
(ii) Bill and Keep

Please provide justification in support of your response.

The Bill and Keep (BAK) regime is superior to the cost based or cost oriented regime for the following reasons:

a) Enhancement of Competition
b) Simplicity of tariff formulations
c) Increase in Usage
b) Technology Neutrality
d) Elimination of traffic distortions
e) Ease of implementation

The above issues have been elaborated below.

i. **BAK Regime balances traffic between interconnected TSPs:** Incumbent of large networks design their on-net/off-net retail prices differentially at the retail level, in order to deter originating calls from their networks traversing to competing networks. In order that the smaller networks to remain competitive they have no other choice but to respond by setting even the off-net prices at the same level as the larger network's on-net price. The smaller operators are 'forced' to offer low off-net call prices which leads to a large amount of off-net traffic and therefore there is a net outflow of traffic from the smaller network. Due to this traffic anomaly and distortion, termination charges provide huge advantage to large incumbent networks. The BAK regime would prevent traffic anomaly and distortion and provide greater choice to consumer to choose the networks.

ii. **BAK Regime promotes competitive Termination cost recovery**: BAK transfers the cost of termination from the regulated space to the retail market. Thus recovery of access cost becomes subject of competitive forces and achieves the most efficient levels, leading to lower cost of service. In addition, since the cost of termination would no

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longer be subject to regulations, there would be greater certainty for all operators. This would ease capital allocation decisions, resulting in greater efficiency.

iii. **BAK Regime Promotes Simple Tariffs:** Under a BAK regime, the differential pricing between on-net and off-net calls, which currently results in complexity for the subscriber in understanding the cost comparison between service providers would be made simpler in the benefit of the consumer. This would result in simplification of tariff plans resulting with same tariff for off-net and on-net calls which would remove any confusion in the mind of a subscriber relating to cost of the call.

International examples also establish that BAK regimes tend to encourage more efficient retail pricing structure in the benefit of the consumers.

iv. **BAK Regime is Technology Neutrality:** The current network framework in India is quite complex on account of divergent network technologies and multiple network providers. TRAI has so far adopted uniform rates across all technologies irrespective of actual costs. The cost profile of every network is different and the calculation of termination charges may become extremely intricate. It would be difficult to justify uniform termination rates and may require calculation of separate charges for different technologies, making any regulations unwieldy and difficult to implement.

Within validity of the next IUC regime, subscriber would have option to call using VoIP, VoLTE, 2G, 3G, femto-cells, WiFi hotspots, BWA and fixed-mobile converged calling. In this scenario the BAK regime is more suitable as this regime will not provide benefit to any particular technology.

v. **BAK Regime is easy to implementation**: There is much greater ease of implementation for the BAK regime as TSPs are not required to settle account for calls to and from their networks. It is simple and low cost mechanism as it requires no billing and very tedious settlement system. There is no need of billing, reconciliation and settlement.

Most litigations are due to these anomalies in the system and settlement of license fee and SUC has also become complex due to the IUC regime as licensor requires clarification of all charges paid by one operator to the other operator to allow claims for pass thru charges. BAK regime would prevent disputes that frequently arise due to settlement of termination charges between the operators. Thus it would be most prudent to implement the BAK regime in lieu of the existing cost based termination charge regime.

vi. **BAK Regime facilitates adoption IP networks:As most of the networks are converging towards** IP based networks, there IS no need of any interconnection charges and networks can interconnect seamlessly without any need of paying interconnection charges. The termination charges work as disincentive and hindrance to deploy IP networks. Thus moving towards BAK would encourage the deployment of IP based

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telecom networks. Thus BAK regime is a natural progression in line with the development and convergence of technology.

vii. **BAK Regime Promotes Level Playing Field Between PSTN and OTT Service Providers:** The current IUC regime gives huge advantage to OTT players for providing telecom services likes voice calls and messaging services and they are not required to pay any termination charges. Players like Skype, Viber, Vonage, Whatsapp, Apple Facetime etc are being used to exchange billions of calls and messages. Such calls and messages are routed through internet and not conventional interconnection is done and therefore termination charges are not payable for such calls and messaging. BAK regime would provide equal field to PSTN operators to offer tariffs which are competitive and help reclaim the lost market to the OTT players.

viii. **BAK Regime increases usage:** Termination charge is a floor price for retail tariffs and therefore not much flexibility is available with service providers to design tariffs. BAK would help to remove this barrier and more flexibility will be available for packaging of inter-operator calls. It will result in higher take-off and will act as catalyst to the growth of mobile telephony in rural areas by offering very economical tariffs for them. International experience for BAK in countries like US, Singapore and Hong kong shows that BAK regime results in significantly higher levels of calling activity as service providers are given the flexibility to offer innovative customized tariff plans to their consumers.

In view of the above mentioned reasons, QTL strongly recommends adoption of BAK Regime.

Q2: In case cost-oriented or cost-based approach is used for determining Mobile Termination Charge and Fixed Termination Charge, is there a need to give a glide path towards Bill and Keep and what will be the appropriate time frame to migrate to Bill and Keep regime?

QTL suggests that the Bill and Keep regime should be adopted immediately due to the reasons mentioned in response to the Question 1. The Authority in its affidavit in Supreme Court in 2012 has also supported BAK regime from 2014 as it is has advantages of simplicity and ease of monitoring.

In case TRAI still wants to prescribe the glide period although already the IUC regime has outlived its validity in the present context of convergence of the technologies happening. It is suggested that the termination charges should be significantly reduced by adopting of Pure LRIC costing methodology. The Pure LRIC is most widely used methodology to estimate termination charges. In the 2009 EC Recommendation that all European Regulators should NRAs adopt Pure LRIC standard for the regulation of termination rates as opposed to an

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approach based on LRIC+. Thus most of European Regulators have already adopted Pure LRIC-based Mobile Termination Charge.

The termination charges must be lower than commercially negotiated intra circle roaming charges as the cost components for termination service are much less than providing roaming service. The prevailing rate for intra circle roaming is only around 10 paise per minute and therefore termination charge should be significantly less than 10 paise per minute.

In view of the above QTL suggests that :

- ***(i) Implement BAK immediately;***
- ***(ii) In case TRAI believes glide path still needed then termination charges should be based on Pure LRIC methodology with the target to implement BAK by 2016;***
- *(iii)* ***During the glide period the termination charges should be based on pure LRIC.***
- *(iv)* ***Termination charges should be significantly lower than the prevailing commercially negotiated intra circle roaming charges.***

Q3: Which method of depreciation for the network elements should be used and what should be the average life of various network elements?

The straight line method (SLM) should be used as depreciation expenses is evenly distributed over the life of the asset on uniform basis. SLM is a prescribed method for determining depreciation as mentioned in the Companies Act and is being followed by all TSPs. SLM is also used being typically used by telecom operators.

Q4: Should TRAI continue with a pre-tax WACC of 15% as used in framing other regulations, tariff orders, and regulatory exercises? If not, please state what pre-tax WACC would be appropriate for the present exercise, along with justification and computations.

The WACC depends up on the cost of equity, the cost of debt, debt equity ratio and prevalent tax rates. Higher the debt equity ratio, lower would be WACC. Considering very high debt, equity ratio for the telecom sector, the pre-tax WACC of 15% is reasonable.

Q5: In case a cost-oriented or cost-based approach is used for prescribing Mobile Termination Charge and Fixed Termination Charge, which method would be the most appropriate for estimating these costs?

In case TRAI decides to use cost oriented or cost-based approach for prescribing MTC or FTC then these should be based on Pure LRIC methodology. Pure LRIC is being used by most Regulators as only unavoidable costs are considered relevant for termination charges.

Q6: In case your response to the Q5 is fully allocated cost (FAC) method, would it be appropriate to calculate IUC using historical cost data submitted by the service providers in

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Accounting Separation Reports (ASRs), Annual Reports/published documents or other reports submitted to TRAI?

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Q7: In the FAC method, what items/nature of OPEX should be considered as relevant for the termination cost? Please provide justification in support of your opinion.

QTL does not support Fully Allocated Cost (FAC) as it includes costs corresponding to each and every network element. Termination charges should be based only on avoidable costs for providing termination services. FAC based termination charges are very high and does not reflect cost of a competitive market.

The FAC methodology is totally against the philosophy of market led pricing. The FAC regime would protect inefficiency by guaranteeing a rate of return on all costs and investments. The FAC regime in fact is a cross subsidy for the incumbent networks paid for by new entrant and smaller operators. Therefore, the Authority should out rightly reject FAC regime.

QTL strongly believes against the use of historical cost or data provided under ASR for estimation of termination charges. Historical Costs are not reflective of the changes in business and operating conditions. In a competitive market recovery of inefficient costs are not possible. The regulatory principle of costing and pricing is to mimic the competitive market and use most recent costs based on latest technologies. ASR is based on historical costs and therefore termination charges based on such cost would not reflect pricing of a competitive market. Adoption of ASR would result in transferring of inefficient costs to the other operators.

Q8: Should CAPEX be included in calculating termination cost? If yes, what items of fixed assets from the ASRs ought to be considered relevant for termination cost? How should costs incurred by service providers for acquiring usage rights for spectrum be treated?

QTL suggests to use Pure LRIC method to calculate termination charges. Pure LRIC includes CAPEX and OPEX for all unavailable network elements.

Under Pure LRIC model, spectrum cost is not relevant and is not required to be included to estimate the termination charges. The willingness to pay for spectrum required to deliver off net terminating traffic is same as the additional network costs for the additional capacity to deliver offnet terminating traffic i.e. the network equipment rather than spectrum were used to provide the additional capacity.

The Pure LRIC methodology has been explained in figure 1 below in which network costs are estimated with and without terminating traffic. Thus model measures the avoidable network costs for the traffic increment for termination of calls received from other operators. Viewed

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in this way, spectrum value or spectrum CAPEX is not required to be included in the pure LRIC model of Mobile Call Termination.

Q9: Would it be appropriate to take an average life of 10 years for all network elements without any salvage value for the purpose of depreciation in the FAC method? If not, please suggest an alternative method keeping in view the categorization of network elements prescribed in Accounting Separation Regulations, 2012, along with justification.

The average life of all network assets should be taken as 10 years. The life of cables, buildings, ducts, towers and other passive infrastructure items is much more and should as per the schedule XIV of the Companies Act

Q10: Is there any need to adjust costs associated (as reported in ASRs) with products other than voice calls, for the purpose of computing termination cost using the FAC method? If yes, please suggest the appropriate cost driver along with justification.

QTL does not agree with the proposal of termination charges based on fully allocated historical costs. TRAI should consider pure LRIC model and further taking into cognizance the technological advancements, spectrum band, growth in traffic, cost allocations for growing usage of data services etc. QTL suggests that the TRAI should use bottom up Pure LRIC methodology based on current costs rather than using Fully Allocated Costs.

QTL suggests that only forward looking current costs should be taken in to consideration and not historic costs while determining the termination charges. The costs reported in "ASR"s should not be used for the purpose since they incorporate historic costs and are not reflective of the changes in business and operating conditions. Adoption of ASR would result in transferring of inefficient costs to the other operators . ASR costs are also not reliable as it is open for TSPs to select cost drivers for apportionment of common costs to various segments.

In view of the above QTL suggests that the TRAI should consider only forward looking current costs for the purpose of deciding termination charges.

Q11: Do you agree with the methodologies explained for various variants of LRIC, including the detailed description of computation of the termination cost using LRIC model in the Annexure? If not, please give your answer with justification.

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Q12: In case it is decided to go for an LRIC model for determining termination cost, which is the most suitable variant of LRIC for the telecom service sector in the country in the present circumstances and why?

(i) LRIC
(ii) LRIC+
(iii) Pure LRIC

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Q13: In case your response to the Q12 is LRIC+, what are the common costs that should be considered for computation of termination costs?

QTL agrees with various LRIC variants discussed in the consultation paper. Internationally regulators such as the European Commission have recommended to **use pure LRIC model**. QTL suggests that Pure LRIC methodology should be used in case BAK regime is not immediately possible. Applying the pure LRIC method would ensure that only the cost related to proving additional network capacity to handle the incoming interconnecting traffic is taken into account while estimating the termination cost.

Internationally, most regulators have started using PURE LRIC methodology. In Europe Regulators from the following countries have used Pure LRIC to estimate termination costs.

Under the Pure LRIC model, the total network cost to carry all traffic is first calculated, followed by calculation of the cost, without considering the minutes of traffic terminating from other networks. The cost of terminating traffic is held to be the difference between the two results. This cost is then divided by the number of minutes to estimate the MTC. The non-incremental common and joint cost should not be part of the cost considered for estimating termination charges. The following schematic representation explains the Pure LRIC methodology:

The Authority should calibrate the Pure LRIC based termination cost with the commercially negotiated intra circle roaming rate which is only around 10 paise per minute. As cost components relevant under Pure LRIC methodology for termination service are much less than cost components relevant for the intra circle roaming service, the termination charges should be significantly lower than 10 paise per minute. QTL member in 2012 has demonstrated using LRIC method that the mobile termination charge is only 6 paise per minute.

Q14: In case there is a significant difference in the mobile termination cost and fixed termination cost, will it be appropriate to prescribe different mobile termination charge and fixed termination charge?

TRAI should decide termination charges on the basis of Pure LRIC costing methodology for mobile as well as fixed line termination charges.

As incremental cost in case of fixed line access is much lower than the wireless mobile access, the fixed termination charges should be lower than the mobile termination charges. Therefore, TRAI should prescribe lower fixed termination charges compared to Mobile Termination Charges.

In fixed line networks the cost of the access network is subscriber driven i.e. each subscriber needs a line and a line card regardless of usage levels. On the other hand a mobile network's costs are driven by usage as both spectrum and equipment is shared between

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subscribers and the amount required is driven by usage. Thus the incremental cost for mobile networks is much more than the fixed line networks.

In India the termination charge for fixed line network is higher as cost of transit from TAX is also added to the termination. The flaw in the costing methodology should be corrected in the current review and fixed line termination charges should be lower than mobile termination charges.

Q15: The Authority has already prescribed access charges to facilitate the introduction of calling cards. Is there any other issue which needs to be addressed so that the consumer gets the most competitive tariff for ISD calls?

There is no additional issue with regard to Calling Cards which requires Authority intervention at this stage.

Q16: Do you feel that the Authority's intervention is necessary in the matter of International Settlement Rates? If so, what should be the basis to determine International Settlement Rates?

No regulatory intervention is required to for the settlement in India for international long distance calls. These rates are commercially negotiated and it would not be in the interest of the country to intervene in a competitive market.

Q17: Is there a need to fix a floor for international carriage charge for incoming international traffic or prescribe some revenue share between access service provider and the ILDO to safeguard the interest of ILDOs?

The international carriage charge market is competitive and rates are under forbearance. ILDOs are free to increase or decrease carriage charges depending on the market forces. There is no need of regulatory intervention to provide any support to ILDOs.

There is no case to fix any floor price for international carriage charge as floor pricing is prescribed only in instance of predatory pricing. As there is no complain of predatory pricing, we do not support any floor price for international carriage for incoming calls.

Q18: What is the most appropriate level for International Termination Charge? Should it be uniform or should it depend on the originating country/region? Please provide full justification for your answer.

The international termination charges cannot be prescribed on the basis of cost as these are decided through commercial arrangement between ILDOs and foreign operators. The International Termination Charges of 40 paise/min fixed by TRAI during the last review of IUC,

put Indian TSPs in a hugely disadvantageous situation vis-a-vis foreign operators. In many countries termination charges are 8-10 times higher than Indian termination charges.

The international termination charges must ensure that Indian operators are not at any disadvantage vis-a-vis foreign operators who receive much higher termination charges. Higher termination charges not only cause loss to the Indian operators but also result in huge

FOREX outgo. Higher termination charges would help Indian TSPs to rationalize ILD tariffs to the benefit of consumers as well as service providers.

In view of the above it is suggested that International Termination Charges should be increased to at least Re 1/min.

Q19: What should be the methodology for determining the domestic carriage charge? Is there a need to specify separate carriage charges for some specific geographic regions? If yes, on what basis should such geographic regions be identified? How should the carriage charges be determined separately for such geographic regions?

There is a need to review ceiling for domestic carriage charge, Since notification of the last carriage charge with a ceiling of 0.65 paise per minute, significant changes pertaining to technological advancement, reduction of network element cost, changes in architecture etc have taken place. The prevailing market rates are significantly lower than the ceiling tariff. In view of that, we suggest ceiling of carriage charge should be reviewed and fixed at much lower level.

The Authority may continue to use bottom up costing methodology based on current costs to estimate per minute carriage charges. However these must also be benchmarked against prevailing market rates for carriage charges which are only around 10 paise per minute. Any rates which are much above prevailing market rate would defeat the purpose of regulatory intervention to prescribe the carriage charges.

There is no need of specifying separate carriage charge for some specific geographical reasons. It may please be noted that the key impediment of the growth of services in the rural and remote areas is the cost to serve and any regulatory intervention for having deficient / high carriage charge in these areas would further increase the service cost and will affect the uptake of services by subscribers.

Q20: Is there a need to regulate the TAX transit charges or should this be left to mutual negotiations? In the event, the transit charge is to be regulated, please provide complete data and methodology to calculate TAX transit charges.

Private operators continue to be constrained by BSNL to handover their traffic to BSNL at Level II TAX and compulsorily pay the transit carriage charge which are much above actual cost. If a mobile operator is present in the SDCA and willing to interconnect at SDCA level

but still they are forced under the TRAI Direction to interconnect at Level I and pay the carriage charge. This makes this segment totally un-competitive and clearly not in the best interest of the 930 million mobile consumer who have to pay mandatory additional carriage charge for making calls to a fixed line subscriber.

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b. In view of the above QTL suggests that the TRAI must either ensure increased competition in this segment by allowing access providers to allow NLDOs for their intra circle long distance calls or TAX carriage charges should be abolished.

In case, the Authority is then unable to abolish immediately these charges should be aligned to the actual cost. A simple model based on leased line cost for the local loop, distance band involved and discount available in the market on local loop should be used to estimate TAX carriage charge. The TAX transit charge should not be more than 1 to 2 paise per minute.

Q21: How can the cost of providing transit carriage be segregated from the cost data in the ASR? Please provide a method and costing details to separately calculate this charge.

The cost of providing transit carriage cannot be segregated in the ASR since the distance based data is not captured in the ASR. ASR data should not be used to estimate cost of transit carriage charge. The Authority is requested to estimate cost on the basis of bottom up model based on current costs.

Q22: If the costs of all relevant network elements are taken into account in the calculation of the fixed line termination charge, is there any further justification to have a separate transit carriage charge? Please give reasons for your answer.

Fixed Line Termination Charges should be estimated using Pure LRIC methodology. In wireline network, no element is depended in usage and therefore incremental costs in long run are negligible. The Fixed Line Termination Charges should be much lower than mobile termination charges.