

## COAI Application of FLLRIC

We note that in a presentation made by the Authority in Hyderabad, it has made the following observations / comments on the FLLRIC model submitted by COAI.

In the said presentation, TRAI states that the suggested model

1. *“Considers both CAPEX & OPEX of a theoretical efficient operator/ hypothetical new entrant*
2. *Takes all costs for achieving desired coverage in various years. If all costs are recovered from termination charge then revenue from rental and other VAS will all be undue. Fact that origination is under forbearance has to be factored in.*
3. *Common costs are taken into account*
4. *Data based on inputs from Bharti, Vodafone, Idea and Aircel across 4 circles Delhi, Maharashtra, Kerala and Orrisa. Actual data has not provided.*
5. *Tilted annuity depreciation transfers large cost in initial years*
6. *The model is not able to demonstrate the cost per line and OPEX to CAPEX ratio in top down as well as bottom up methods*
7. *Required revenue calculations for future years are not given*
8. *Reconciliation details have not been provided.*
9. *The model transfers a large part of a service provider’s cost to their interconnecting operator increasing the latter’s input cost. This would reduce the new service providers’ ability to compete and offer innovative tariff plans.*
10. *Assumptions regarding sharing of infrastructure, call mix, market share, WACC etc. seem to have been taken in such a way that they are leading to higher termination charge.*
11. *Assumptions about traffic projections based on market share, % land by geotype, % coverage projections, possible spectrum availability and allocation, decline in SMS traffic, converting data/SMS into minutes, adjustment of global benchmarks to Indian conditions for network design, allocation fraction of elements, price increase of elements, common costs(land, building, utilities, personnel, corporate office) may be subjective.*
12. *“Scorched node” approach has been suggested. The network design has been done based on existing node configuration of an incumbent. “Scorched node” allows incumbents to base its costs on the existing network topology while ‘scorched earth’ may meet the demands of a new efficient operator.*
13. *Rental and other VAS revenues not accounted for*
14. *Estimates MTC as 0.35 p per minute for 3 years without inflation and 0.41 with inflation.”*

Our submissions in this regard are as below:

**1. TRAI notes that the COAI /SVP model “considers both CAPEX & OPEX of a theoretical efficient operator/ hypothetical new entrant”**

- a. It is first submitted as per international best practices, majority of the countries have modeled a hypothetical efficient operator for determination of cost based

termination charge. Many countries have widely used the World Bank model, which is a hypothetical operator model.

- b. Thus submission made by COAI and the Hybrid FLLRIC model developed by SVP-COAI is in consonance with the international best practices and there is no deviation from the same.
- c. A hybrid model overcomes the limitations of both the “top down” and “bottom-up” approaches and has therefore been adopted.
- d. The efficient operator approach is most consistent with the objective of price regulation. And it also affords greater flexibility and can be applied to all actual market operators even though there may be fundamental cost differences between them.
- e. Similarly, the consideration of both capex/cost of capital as well as opex too, is in consonance with internationally accepted best practices.

**2. TRAI has observed that the COAI /SVP model “takes all costs for achieving desired coverage in various years. If all costs are recovered from termination charge then revenue from rental and other VAS will all be undue. Fact that origination is under forbearance has to be factored in.”**

- a. It is most respectfully submitted that the COAI/SVP cost model takes into account all the internationally accepted cost elements which should be taken into account while developing a hybrid FLRIC model. For the purpose of the exercise, the cost elements used in developing the model have been benchmarked against similar models adopted by at least three countries which have used the LRIC model in determining the mobile termination charge i.e. Malaysia, Israel and UK.
- b. It is again reiterated that in any “costing” methodology it is incorrect to consider any aspect of revenues such as revenues from VAS or rentals or the fact that origination charge is under forbearance. The key objective of the Hybrid FLRIC model is to arrive at the “cost” of voice termination based on the cost elements which are used for the same.
- c. Such an approach is also against public interest as it encourages recovering from the consumers, the charges that should correctly and rightly be paid by interconnecting operators.

**3. TRAI has observed that “common costs are taken into account”**

- a. It is first submitted that Common costs are costs that are common to both the retail and the wholesale business. These are not directly attributable to the services modeled but are nevertheless incurred. Normally, costs such as head office costs (land and building, utilities, personnel), Corporate office costs (HR, Legal, regulatory) are included as part of the common costs.
- b. Common costs are included mainly because the costs are related to infrastructure that is integral to providing the mobile termination service. Without

incurring these costs it would not be possible for any operator to effectively provide wholesale termination or interconnection service.

- c. Most LRIC models include a common cost mark up over and above the incremental costs for termination.
- d. As regards the allocation of common costs, this has been done using an Equi-Proportional Mark-up (EPMU) basis, which is also consistent with international practices.

**4. TRAI has observed that “Data based on inputs from Bharti, Vodafone, Idea and Aircel across 4 circles Delhi, Maharashtra, Kerala and Orrisa. Actual data has not provided.”**

- a. The model is NOT based on the data of only four operators but also draws from the industry benchmarking study and the TRAI PMR reports. Hence the model is based on data which is as robust as possible.
- b. It is submitted that in the entire duration of the IUC review exercise, the Authority has never once sought the data of individual operators from COAI. The said data has been sent by the operators directly to SVP and the same can be made available to the Authority should it so desire.

**5. TRAI has opined that “Tilted annuity depreciation transfers large cost in initial years”**

- a. It is submitted that tilted annuity method of depreciation is well accepted as a proxy for economic depreciation and is particularly appropriate and relevant in circumstances where the equipment prices are expected to change over the life of the asset.
- b. As the Authority is aware, an analysis /examination of global trends shows that the prices of active equipment have shown a persistent declining trend, whilst the prices of the passive equipment have shown an increasing trend with increase in steel prices, etc.
- c. We believe that with the upward/downward trends that have been /are being witnessed in the prices of active/passive equipment, the tilted annuity method is the most appropriate method to correctly capture the economic depreciation of the equipment/asset. Hence, this method has been used for the base case LRIC model for a hypothetical efficient operator.
- d. Furthermore, as the passive cost currently represent more than 50% of the cost of a site, and that given the global trends of rising prices of passive equipment, we believe that the Authority’s contention that tilted annuity depreciation results in front loading of depreciation is ill-founded.
- e. The tilted annuity method thus does not lead to front-loaded depreciation but truly captures the economic depreciation by reflecting the changes in the prices of equipment over the life of the asset.

**6. TRAI has opined that “The model is not able to demonstrate the cost per line and OPEX to CAPEX ratio in top down as well as bottom up methods”**

- a. It is submitted that the COAI/SVP model is fully able to demonstrate both the cost per line and OPEX to CAPEX ratio. However, as this was not the objective of the exercise, the same was not provided to the Authority.
- b. It is also most respectfully submitted that this information has never been sought at any stage during any of the interactions between the Authority and the stakeholders.
- c. We hereby confirm that should the Authority so desire, this information can be provided by us to the Authority.

**7. TRAI has observed that “Required revenue calculations for future years are not given.”**

- a. It is once again reiterated that the aim of the Hybrid FLLRIC model is to calculate the **cost** of Voice termination and therefore the model rightly considers only the costs/cost elements associated with providing mobile termination.
- b. A cost based model has no nexus with the revenues that will be earned by the service providers in future, its objective is only to fairly compensate/charge interconnect operators for the costs that are involved in the termination of a voice call.

**8. TRAI has observed that “Reconciliation details have not been provided”**

- a. In developing the hybrid model we have carried out a reconciliation exercise by checking the results of the bottom-up model against actual engineering and cost realities.
- b. Reconciliation has also been done by taking unit costs information from actual operators. The operator data for 2007 has been used to arrive at the prices of active and passive network equipment of the theoretical operator. The unit prices for passive network equipment are calculated based on the lowest prices provided by operators.
- c. As already submitted, the above data can be shared with the Authority if it so desires.

**9. TRAI has opined that “The model transfers a large part of a service provider’s cost to their interconnecting operator increasing the latter's input cost. This would reduce the new service providers’ ability to compete and offer innovative tariff plans.”**

- a. It is first submitted that only those costs that are associated with termination have been considered in the model. Further, the model adopts cost elements which are universally accepted and conceptual design principles which are well established.
- b. The Authority may note that OPEX costs associated with advertising and promotion, subscriber acquisition, general administration, manpower (not related to site maintenance), billing and customer care and miscellaneous expenses have not been considered.
- c. Further, even the CAPEX costs considered are only with regard to the network equipment which is actively used in terminating the call.
- d. CAPEX associated with Value Added Services and non-network CAPEX associated with land and buildings, furniture and fixtures etc have not been considered for the purpose of the model.
- e. Further, the use of the routing table allocates costs of individual network elements to the services which are provided ensuring that only the costs associated with mobile termination are considered for determining the Mobile termination charge.
- f. Hence it is factually incorrect and grossly misleading to suggest that the model transfers a large part of service provider's cost to the interconnecting operator.
- g. It is submitted that the COAI /SVP model in fact, correctly reflects the input costs of interconnecting operators.
- h. Such an approach will also encourage investment, promote the growth of the sector and encourage new technologies.

**10. TRAI has opined that "Assumptions regarding sharing of infrastructure, call mix, market share, WACC etc. seem to have been taken in such a way that they are leading to higher termination charge."**

**AND**

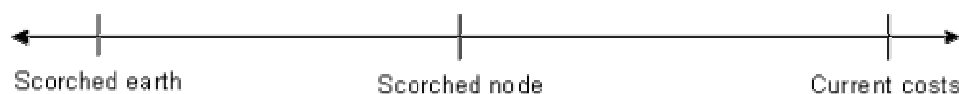
**11. "Assumptions about traffic projections based on market share, % land by geotype, % coverage projections, possible spectrum availability and allocation, decline in SMS traffic, converting data/SMS into minutes, adjustment of global benchmarks to Indian conditions for network design, allocation fraction of elements, price increase of elements, common costs(land, building, utilities, personnel, corporate office) may be subjective"**

- a. We wish to clarify that there is no element of subjectivity. All the cost elements which have been considered in the model are in line with the internationally accepted practices. Also the data which has been used for modeling has been taken from the operators.

- b. Several meetings were held in COAI to discuss the assumptions in which all the member companies were involved. Expert views and inputs were sought from all members/ stakeholders and the same were also incorporated in the model. The Model is this thus based on assumptions which were arrived at after seeking and incorporating consensus views of all members.
- c. Thus the assumptions are neither subjective nor leading to a higher termination charge.
- d. Notwithstanding with the above, if the Authority has any concern or varying views with regard to any assumption made in the model, we would be pleased to discuss the same and share all rationale and justification with the Authority.

**12. TRAI has observed that “Scorched node” approach has been suggested. The network design has been done based on existing node configuration of an incumbent. “Scorched node” allows incumbents to base its costs on the existing network topology while ‘scorched earth’ may meet the demands of a new efficient operator.”**

- a. It is first submitted that the MTC is being determined for the entire industry and not separately for existing and new operators.
- b. The scorched node approach is a well accepted best practice in countries which have deployed the LRIC. Regulators in countries like UK, Malaysia and Israel. Australia, New Zealand, Austria, Switzerland, Denmark, the Netherlands, and Ireland have adopted the scorched node approach.
- c. A “scorched-node” approach to building an efficient network takes the number and location of nodes of existing networks as given and then uses best available technologies to connect them.
- d. The scorched earth approach represents one extreme. It assumes that nothing is fixed, not even the location of the nodes. The scorched earth network is what an entrant would build if no network existed, based on the location of customers and forecasts of demand for services. This approach would give the lowest estimate of LRIC, because it removes all inefficiencies due to the historical development of the network. **This is an ideal situation which does not exist in the real world.**
- e. At the other extreme, LRIC can be estimated from the current costs of the existing firm, using a top-down modeling approach. This will give the highest estimate of cost because it does not allow for optimization.
- f. The “scorched node” approach to LRIC estimations represents a compromise between the two extremes. It assumes that the location of network nodes is fixed, and the operator can choose the best technology to configure the network around these nodes. Scorched node models are common internationally.



g. Thus the scorched node approach is the most practical and reasonable because:

- It provides a **more accurate reflection of real world networks**
- It does not penalize operators for making efficient decisions in the past which may have turned out to be suboptimal in the current situation

**13. TRAI has opined that “Rental and other VAS revenues not accounted for”**

- a. It is once again most respectfully submitted that in a cost based model, it is both anomalous and incorrect to account for any elements of revenues.
- b. Such an approach is completely out of line with all international practices. All internationally accepted cost based methodologies take capex/cost of capital into account for determination of termination charge. While FAC approach takes into account historical capex, the FLLRIC approach takes into consideration the incremental capex of the network elements used for completion of the calls.
- c. Without prejudice to the above, it may be appreciated that, in the case of mobile, prepaid forms the bulk of the subscriber base at 95% or more. Since there are no rentals in case of pre paid and the Authority at best allows the service provider to recover a processing fee of Rs. 2 as administrative charges, we fail to understand how capex /cost of capital can be recovered from rentals.
- d. Telecom is highly capital intensive, each subscriber adds to cost, in fact, traditionally, operators always talk in terms of capex per subscriber. This cost goes up significantly when the rollout is in the rural areas. It is therefore important that capex /cost of capital be taken into consideration for determination of cost based IUC charge.

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