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Idea Cellular response to TRAI's Consultation on 'Review of Interconnection Usage Charges" dated the 05th Aug, 2016

1 message

Rahul Vatts <rahul.vatts@idea.adityabirla.com> Mon, Oct 17, 2016 at 10:45 PM
To: Interconnection TRAI <interconnection.trai@gmail.com>
Cc: Gagandeep Bajaj <gagandeep.bajaj@idea.adityabirla.com>, Rahul Vatts <rahul.vatts@idea.adityabirla.com>

The Secretary,

Telecom Regulatory Authority of India,

Mahanagar Doorsanchar Bhawan,

Jawahar Lal Nehru Marg (Old Minto Road),

New Delhi-110002

.

Kind Attention: Advisor (Broadband and Policy Analysis)

Sub: TRAI's Consultation on 'Review of Interconnection Usage Charges" dated the 05th Aug, 2016

Dear Sir,

This is with reference to the TRAI Consultation Paper on "Review of Interconnect Usage Charges (IUC)" released on 05 August 2016.

In this regard, we would like to first draw the Authority's attention to our letter dated 13th Oct 2016 in which we have highlighted that the TRAI consultation on IUC is erroneous on facts and reason, in view of which, we had inter alia, suggested that the TRAI ought to re-consider the Consultation for the following reasons:

A. Timing of the Consultation violates Authority's own past decision on the issue.

B. The consultation exercise is premature, as legal challenges to the 2015 Regulations are sub-judice.

C. Apparent contradiction of TRAI's stand on Interconnect settlement principle vis-a-vis earlier years' and current consultation.

D. Fallacies in Consultation Paper – Misleading and wrong conclusions drawn based on incorrect and selective statements to advocate BAK regime / reduction in IUC.

E. TRAI oblivious of International Experience on Mobile Termination Charges.

F. Selective and misleading representation of international markets for advocating lower Termination Charges in India.

Without prejudice to the above, should the Authority still wish to pursue with the Consultation exercise, we would like to submit that Idea Cellular recommends a Cost Oriented or Cost based termination charge for the Indian telecom market. Further, as Idea Cellular, we strongly oppose the Bill and Keep (BAK) approach and would like the Authority to take note that Regulated Bill and Keep is not prevalent in any country with a CPP regime.

In that context, we strongly oppose Bill and Keep approach, the reasons for which are summarized as under:

A. Erroneous reasoning for review of prevailing Interconnect Usage Charges (IUC) regime.

I. Incorrectly using issues pertaining to "Internet Telephony" as the premise for reviewing prevailing IUC regime for termination charges on circuit switched networks.

II. Advocating an unsubstantiated technology under the garb of "March of Technology" that too without a comprehensive deliberation.

III. Complete ignorance of market suitability, current readiness with reference to introduction of new technology.

B. TRAI as a Regulator not empowered to govern technology choices of operators.

C. Incomplete understanding of Interconnect costs vis-à-vis telecom operations.

I. Reduction in IUC (Interconnect Usage Charges) does NOT reduce cost for telecom industry.

II. IUC in reality is only a settlement between operators for using each other networks.

D. Evolving cost structure of Indian Telecom Service Providers (TSP) from IUC perspective.

I. Holistic understanding of cost structures of the Indian Telcos necessary for any IUC workout.

II. IUC workout has to recognize the Role of liberalized Spectrum procured in auctions and its associated cost.

III. Cost of Capital and Return on Capital Employed (ROCE) need to be recognized.

IV. No clear relationship between Technology and IUC.

E. Only cost oriented or cost based termination charges can apply to India.

F. Present asymmetry does not justify BAK.

G. No logical or rational reason for BAK.

In addition, we recommend that the following broad principles be followed for any determination of IUC:

I. Approach to IUC has to be cost based.

II. Auction discovered spectrum Costs need to be considered.

III. Recognizes the asymmetry of traffic and the impact on terminating operator.

IV. Factors Impact on rural coverage

V. Factors Impact on competition

VI. Factors the financial stress in the Industry

VII. Promotes efficient network roll out

VIII. Follows principles of fairness, transparency.

In view of the above, please find enclosed herewith our detailed submission as Annexure A in response to the Authority's Consultation Paper.

We earnestly believe that the Authority will give due-consideration to our comments before formalizing the Regulation.

Should you require any clarifications or further information on the positions set out in this response, please do not hesitate to contact us.

Thanking You,

For **IDEA Cellular Limited**

Rahul Vatts

Senior Vice President – Regulatory & Corporate Affairs

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Idea response - IUC consultation - Annexure A (171016).pdf
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IDEA CELLULAR LIMITED

Response for

TRAI's Consultation Paper no. 17/2016

on

'Review of Interconnection Usage Charges"

dated the 05th Aug, 2016

Annexure A

Idea submissions on "Consultation Paper on Review of Interconnection Usage Charges" dated the 5th Aug, 2016

Introduction

(This may please be read as preface to queries no. 1 to 6 of TRAI consultation paper).

This is with reference to the Telecom Regulatory Authority of India (TRAI) Consultation Paper on "Review of Interconnect Usage Charges (IUC)" released on 05th August 2016. While Chapter IV has listed the Issues for Consultation where the questions have been listed, Chapters I to III contain the complete background and data on which questions are based. As our responses to points covered in these chapters cannot be given by responding only to listed Questions of the Consultation Paper, hence we have covered them in this Introduction. This section forms an integral part of our response.

Firstly, we are shocked by the timing, manner and the unclear intention behind the present consultation, which is clearly a document made in a hurry, providing no supporting data or empirical evidence or even analysis in support of several contentions including Bill-And-Keep (BAK).

While our specific responses to each of the questions sought by TRAI have been provided in subsequent sections, however, at the outset, we would like to make the following submissions which are relevant and essential for holistic understanding on the issue of IUC, and also highlight the misguided approach in rushing through this consultation paper.

In this regard, we submit that TRAI ought to re-consider the Consultation for the following reasons:

A. **Timing of the Consultation violates Authority's own past decision on the issue.**
B. **The consultation exercise is premature, as legal challenges to the 2015 Regulations are sub-judice.**
C. **Apparent contradiction of TRAI's stand on Interconnect settlement principle vis-a-vis earlier years' and current consultation.**
D. **Fallacies in Consultation Paper – Misleading and wrong conclusions drawn based on incorrect and selective statements to advocate BAK regime / reduction in IUC.**
E. **TRAI oblivious of International Experience on Mobile Termination Charges.**
F. **Selective and misleading representation of international markets for advocating lower Termination Charges in India.**

A. Timing of the Consultation violates Authority's own past decision on the issue

I. With respect to the timing of this present Consultation, we would like to draw the attention of the Authority to its "**The Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015 (1 of 2015) Regulation" dated 23rd February 2015**, wherein the Authority has itself stated under Para E.88 on Page 41:

*"The Authority is of the view that setting a specific timeline for undertaking such a review would impart **a modicum of certainty which is in the interest of all stakeholders**. Hence, the Authority has **decided** that it shall review the termination charges regime two years after it has been in force, i.e., the review will be **undertaken and concluded** in financial year 2017-18."*

II. It is also pertinent to mention here that the same view has been reiterated by the Authority in Para (1).20 on page number 10 of its **"The Telecommunication Interconnection Usage Charges (Twelfth Amendment) (2 0f 2015) Regulations, 2015** dated the 24th Feb 2015:

*"Hence, the Authority has **decided** that it shall review the carriage charges regime two years after it has been in force, i.e., **the review will be undertaken and concluded in financial year 2017-18**."*

III. It is clear from the above-quoted statements that the Authority had itself

a. Stated reasons why a specific timeline was needed (certainty and interest of all stakeholders),
b. Set a specific timeline wherein the review was to be undertaken and concluded in FY 2017-18.
c. Reiterated and decided upon that specific timeline

The Authority could not have been more explicit when it decided that it would undertake the next review only after two years of current termination regime has been in force. It is clearly mentioned that the review will be undertaken only in financial year (FY) 2017-18 and concluded in the same year giving a full twelve months for the review process to be completed. It did not state that the review will be undertaken in 2016-17, so that it could be implemented in 2017-18.

IV. Further, The Authority has itself stated that *"a comprehensive regulatory review exercise in TRAI takes six to nine months' time to complete and, hence, the present review exercise is being undertaken"*. Given this, it is easily possible to initiate and conclude the consultation process in the FY 2017-18 as committed and there is no need to advance the process by 8 months.

V. However, by floating the present Consultation on 05th Aug 2016, **the Authority seems to have disregarded its conscious decision, taken in the interest of all stakeholders**, to undertake the exercise in FY 2017-18. **The intention of the Authority to prepone the consultation is also not very clear. Typically no new data supporting the need for review has been shared.**

VI. Keeping in view that there is no pressing urgency and the fact that the Authority itself has in its present Consultation Paper dated 05th Aug 2016 drawn reference to the same past decisions (as quoted by us above), albeit selectively, **the Authority should in the interest of the basic tenets of transparency and predictability of regulatory regime, defer the proposed exercise to its earlier stated timeline of initiating review in FY 2017-18.**

VII. **Hence, we earnestly request the Authority to withdraw its present Consultation Paper (CP) which violates the Authority's own specific decision and commitment, and to re-introduce it with cogent reasons only in FY 2017-18 when the termination charges regime would have already completed two years after its being in force and the Authority would have obtained some credible data for the review.**

B. The consultation exercise is premature, as legal challenges to the 2015 Regulations are sub-judice.

As the Authority is aware, the 2015 Regulations of the Authority are under legal challenge in the High Courts of Delhi and Gujarat. The principle ground of challenge is an "error apparent" in the MTC calculation. Even though the matters are presently sub-judice, it would be proper that TRAI take cognizance of the legal challenge and not ignore the substantive issues before the Hon'ble High Courts.

C. Apparent contradiction of TRAI's stand on Interconnect settlement principle vis-a-vis earlier years' and current consultation.

I. The Authority at Para 2.42 of the CP has inter alia stated that "*the estimates of MTC using LRIC+ and LRIC method yielded approximately the same results on the afore-mentioned two separate occasions using the information on subscriber base, usage and network cost for the F.Y. 2010-11 and F.Y. 2013-14. Intuitively, any further exercise for estimation of termination charge using the same underlying network technology would yield nearly the same results as obtained in the afore-mentioned costing exercises.*"

II. **Thus by TRAI's own cost methodology there is a clear and applicable MTC and the same has remained unchanged. Ignoring its own admission and then trying to postulate BAK regime solely due to technology reasons, all of which were well known at the time of 2015 Consultation, is clearly flawed.**

III. The Authority in its report dated 29-Oct-2011 submitted to the Hon'ble Supreme Court has stated that "*The Bill and Keep regime, with all its advantages of simplicity and ease of monitoring, is best introduced in an environment where traffic flows are symmetric or close to symmetric between operators*". Further in its last notification while revising the Mobile Termination Charges dated 23-Feb-2015, Authority has stated that "a significant asymmetry in traffic flows between the TSPs still exists, the case for implementation of the BAK regime remains weak even in the present day conditions of the telecom market". The Authority would acknowledge that the asymmetry has only been increasing over time partly driven by below cost IUC and situation is becoming worse with the introduction of free voice services by a new entrant, hence its suggestion to consider BAK regime as an option in current consultation paper is clearly contradictory to the Authority's own views stated both in 2011 and 2015.

IV. **Here it is pertinent to mention that Mobile Termination charges based on Fully Allocated Cost (FAC) as computed for Idea's financials and detailed in subsequent section is 31.5 paise per minute. The current IUC charge of 14 paise, results in a loss on the asymmetric traffic to the extent of 17.5 paise per minute.** The monthly loss suffered by Idea is tabulated below.

		Mar'15	Sep'15	Sep'16	Oct'16
Local MOUs terminated on Idea*	**Mn MOUs**	**13,138**	**12,770**	**13,952**	**14,570**
Local MOUs Terminated by Idea*	**Mn MOUs**	**12,578**	**11,829**	**12,058**	**12,445**
Ratio of Asymmetry	**(IC / OG) times**	**1.04**	**1.08**	**1.16**	**1.17**
Asymmetry *	Mn MOUs	561	941	1,894	2,125
Loss per minute (31.5 ps - 14 ps)	Paise / minute	17.5	17.5	17.5	17.5
Annualised Loss *	**Rs. Mn**	**1,177**	**1,976**	**3,977**	**4,463**

**Oct'16 Figures extrapolated based on Actual traffic till 10-Oct-16*

Table: Annualized loss incurred by Idea from traffic asymmetry & below cost IUC

The annualised for loss for Oct'16 as shown above is Rs. 4463 million and this is increasing every month with continuously increasing traffic imbalance, due to traffic pumped in by a new operator who has introduced lifetime free voice, forcing Idea to pay (in form of losses incurred) for the free offer extended by it. **It is obvious that unless the IUC rate reflects the full cost of TSPs, these losses on asymmetric traffic will keep on ballooning.**

V. The Authority would also recall Paragraph 1.3 of its November 2014 IUC which inter *alia* provides ***"an IUC regime relates the transfer of network costs between service providers and thus affect the relative scale and prosperity. Therefore, the IUC regime should also ensure that the service provider does not pass on the burden of its own tariff decision to other networks involved in completing the call …".***

VI. In view of the above, we urge the Authority to understand and reflect on its own past submissions and current market realities driven by tariffs and promotions by new operator which are separately being examined for violation of TRAI TTO order dated 16th January, 2004, and then frame the consultation paper only after it has a holistic understanding of the entire situation and has enough empirical data to initiate fresh consultation.

D. Fallacies in Consultation Paper – Misleading and wrong conclusions drawn based on incorrect and selective statements to advocate BAK regime / reduction in IUC.

The consultation paper has made many arguments and statements which are incorrect and wrong conclusions are drawn based on such statements. Some of these are selective quotes which lead to wrong conclusions and erringly glorify the benefits of BAK regime or the supposed positive impacts of reduction in IUC. Some of these are listed below –

I. **Page 7 – Para 1.24**

a. It states that "*While revising the regime for termination charges in the country through the Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015, the Authority had indicated that the termination charges would be reviewed after two years of being in force. Generally, a comprehensive regulatory review exercise in TRAI takes six to nine months' time to complete and, hence, the present review exercise is being undertaken.*"

b. The above is an example of selective quoting. The complete statement was as under, which is not being followed-

"Hence, the Authority has decided that it shall review the termination charges regime two years after it has been in force, i.e., ***the review will be undertaken and concluded in financial year 2017-18****."*

II. **Page 9 – Para 2.3**

a. These state as under –

2.3 ……. The Adjusted Gross Revenue (AGR) of access services segment in the country has been growing at an impressive rate; the AGR of the Telecom Regulatory Authority of India access services segment has grown by more than 11.5% on year-on-year (Y-o-Y) basis in the past three years. Undisputedly, CPP regime has played a key role in the growth of the telecommunication services sector in the country.

b. The Authority is correct in stating that the CPP regime has supported growth of telecom services. However, this consultation is for "Review of IUC" and is suggesting reduction of IUC rate or making it absolutely zero (BAK). Hence, the relevant question to be asked is that since the time CPP has been in place, has the reduction in IUC rate benefited the telecom industry. The relevant data in this matter is as under –

FY	AGR of Access Service Segment (Rs.Cr)	Growth Rate %	IUC rate (paise)
FY09	96,671		30
FY10	96,395	-0.3%	20
FY11	97,471	1.1%	20
FY12	107,318	10.1%	20
FY13	111,256	3.7%	20
FY14	124,175	11.6%	20
FY15	138,566	11.6%	20
FY16	154,640	11.6%	14

Table: Annual Industry AGR Revenue as reported by TRAI with IUC Changes

c. As can be seen even when the IUC rate remained constant from Apr'09 (FY 2009-10) to Feb'15 (FY 2014-15), depending on change in competitive environment, the growth of AGR has varied in this period. Also the growth in AGR post reduction of IUC rate from March 1, 2015 has remained mostly unchanged in FY 16 at 11.6%, which is same as growth before reduction in FY 15 over FY 14. **Hence,**

the growth of AGR has no correlation with the IUC rate. Any advocacy that reduction in IUC will support AGR growth is not supported by past trends as clearly shown above. Hence, there is no case for reducing IUC rate based on this fallacious logic presented in the consultation paper.

III. **Page 10 – Para 2.4**

2.4 With retail charging regime as CPP, either of the following two regimes is used for wholesale charging between TSPs:
(i) Calling-Party-Network-Pays (CPNP) regime
(ii) Bill-and-Keep (BAK) regime

Bill-and-Keep regime is followed by operators when mutual traffic is symmetric and is only for ease of operation and settlement and based on mutual agreement. **As per our understanding, there is no country across the globe where the Telecom Regulator has imposed and regulated Bill-and-Keep regime with CPP. If the Authority is aware of any such countries, the same may be transparently shared with complete details. Hence, above statement in para 2.4 (ii) in the consultation paper needs to be corrected to:**

*(ii) "**unregulated** Bill-and-Keep" (BAK) regime in a symmetric traffic scenario as possible alternative to Calling-Party –Network-Pays (CPNP) regime.*

IV. **Page 12 – Para 2.10**

a. It states that *"In IP–based networks, traditionally, there has been no custom of levying termination charges for the traffic arriving in a particular network; BAK is the natural regime in the public Internet."*

b. This is incorrect. In IP based networks the call uses data on both the calling party and the receiving party and both the calling and receiving subscribers pay to their respective service providers for the use of data. **Hence, this is NOT BAK as stated in the consultation paper.** This is in fact equivalent of RPP, where the receiving party pays to its TSP (Telecom Service Provider) for use of data. Hence, with the growth of internet telephony, we will move from CPP to RPP regime and not CPP to BAK regime. BAK regime implies no charge to the receiving subscriber, which does not happen in case of Internet Telephony.

c. Authority has itself stated in para 2.3 that *"Undisputedly, CPP regime has played a key role in the growth of the telecommunication services sector in the country."* Hence, it needs to be considered if while promoting use of data for various services, is there a need to use data for voice services (internet telephony) and thus go back from the CPP regime to RPP regime.

d. Since internet telephony is not a BAK regime, the conclusions drawn in the consultation paper reproduced below are all incorrect –

"One argument is that the regime of termination charges works as a disincentive to the deployment of IP-based telecom networks by the TSPs. Moving towards BAK will encourage deployment of IP-based telecom networks. Since IP based networks are poised to be the networks of the future for providing telecom services, a BAK regime may be seen as a natural progression in line with the development of technology."

V. **Page 13 – Para 2.14 and 2.15**

a. This is reproduced below –

2.14 The Table 2.2 below depicts the subscriber base of wireline telephony and wireline broadband services and their annual growths. The Chart 2.1 depicts the annual growth of wireline telephony and wireline broadband services in a graphical manner.

Table 2.2: Subscriber base of wireline telephony and wireline broadband services* and their annual growths

As on the last day of	No. of Wireline Subscribers (in mn)	No. of Wireline Broadband Subscribers (in mn)	Annual Growth in Wireline Subscriber base (in mn)	Annual Growth in Wireline Broadband Subscriber base (in mn)
March, 2012	32.2	13.8	-	-
March, 2013	30.2	15.1	(2.0)	1.2
March, 2014	28.5	14.9	(1.7)	(0.2)
March, 2015	26.6	15.5	(1.9)	0.7
March, 2016	25.2	17.0	(1.4)	1.5

2.15 The above Chart demonstrates that the performances of both wireline telephony and wireline broadband services in terms of subscriber bases have improved significantly in the F.Y. 2015-16

with respect the previous three financial years. Clearly, the Authority's initiative to boost the wireline telephony and wireline broadband segments by way of prescribing BAK regime for fixed termination charges (i.e. wireless to wireline and wireline to wireline) as well as mobile termination charges from wireline (i.e. wireline to wireless) has been a success so far."

b. The above statements have several fallacies, and wrong conclusions have been presented to support BAK -

1. **Firstly the number of wireline subscribers has continued to decline even after the prescription of BAK for wireline networks. The quantum of reduction reduced from -2.0 mn in FY12-13 to -1.7 mn in FY 13-14 without any change in IUC regime. Hence, there cannot be a greater distortion of facts than to state that a slightly lesser decline in the number of wireline subscribers denotes improvement. There is no improvement at all.** In fact the correct presentation is as under which clearly shows that the number of wireline subscribers continue to decline.

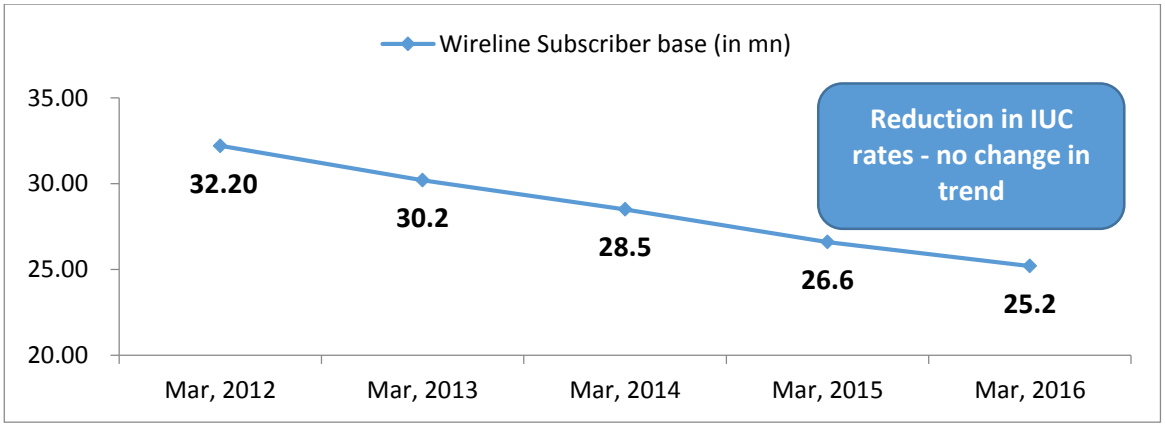

Chart: Annual trend of Wireline subscribers as reported by TRAI

2. Further, the growth in wireless broadband subscribers has no correlation with BAK regime, which only impacts the voice usage and has zero impact on data usage.

3. In fact, this is a case of Authority laying down wrong policies to subsidize inefficient wireline operators at the cost of wireless operators. The relevant facts are as under –

   a) The IUC charge before 1.3.2015 was 20 p.
   b) This was **revised to zero w.e.f. 1.3.2015**.
   c) Post this revision the asymmetry in traffic between wireline and wireless traffic has increased.

d) This has resulted in predatory pricing from BSNL (*Cross subsidising one category of service providers and thereby enabling them to offer below cost / free services is NOT innovative pricing. Every low pricing cannot be an example of innovative pricing*) which is being forcibly subsidized by the wireless subscribers.

Examples of the promotions / plans rolled out by BSNL since the revision in IUC to zero include:

- **Free Calling during night hours:** In May 2015 BSNL introduced unlimited free calling during night hours from its Landline phones to all Landline phones and Mobile phones of all service providers' network on All India basis. As per this feature Landline Customers can make unlimited calls to all networks across India from 9pm to 7am free of charge.

- **Free calling on Sundays:** On Independence Day 2016 BSNL further incentivized its customer base by offering free calls for that day (15th August 2016). It also announced that henceforth BSNL customers would enjoy free calling from their Landline phones (to any Landline or mobile in the country) on every Sunday.

- In August 2016 BSNL also launched their "EXPERIENCE LL49" Plan where the Monthly rental for the Landline was slashed to Rs 49 with zero Installation Charges. Like other customers these customers would enjoy free unlimited Night calling along with Free unlimited calling on Sundays.

e) The increased asymmetry in traffic from wireline operators has inflicted higher **losses quarter after quarter** as shown as follows for Idea –

Period	Incoming MOUs from Landline	Outgoing MOUs to Landline	Incoming minus Outgoing MOUs	YOY Increase	Net Annualised IUC Billing @ 20p/min (Rs.mn)	
A	B	C	D=(B-C)	E	F = (D X 20p)	
Oct-Dec'13	1,316	644	672		538	
Jan-Mar'14	1,295	618	677		541	
Apr-Jun'14	1,333	630	702		562	
Jul-Sep'14	1,350	632	718		575	
Oct-Dec'14	1,312	603	709	6%	568	
Jan-Mar'15	1,350	605	745	IUC reduced from 20 p to Zero		
					Annualised Loss @ 20 p/min on asymmetric traffic	Annualised Loss @ 31.5 p/min on asymmetric traffic
Apr-Jun'15	1,516	641	875	25%	700	1,103
Jul-Sep'15	1,671	650	1,021	42%	817	1,287
Oct-Dec'15	1,658	626	1,033	46%	826	1,301
Jan-Mar'16	1,731	608	1,123	51%	899	1,416
Apr-Jun'16	1,775	616	1,159	32%	927	1,460
Cumulative increase since change				63%		

Table: Increase in Wireline traffic asymmetry and loss due to IUC set to zero for Idea

c. **As can be seen from the table above, the annual increase in asymmetric traffic which was 6% when the IUC rate was fixed at 20p, has jumped significantly and has increased by 63% in 15 months since the IUC has been abolished (i.e. fixed at zero).** The annualized loss for Apr-Jun'16 for Idea is Rs.92.7 crores (Rs. 146 crores @ 31.5 paise/minute) and given that Idea has nearly 18.9% of mobility revenue market share, this implies an annual loss of approximately Rs.500 crores (approx. Rs. 770 crores) for the wireless operators in totality. This is a huge cross subsidization being done by wireless subscribers to wireline subscribers, which is enabling wireline subscribers to inflict further damage to wireless subscribers through predatory pricing.

d. **Now a "BAK regime" or "reduction of IUC for wireless traffic" being proposed is an effort to subsidize a new entrant who has declared free voice services for life by forcing existing wireless mobile operators to pay for its actions by carrying calls from its network at much below actual cost of 31.5 paise per minute and bear 17.5 paise per minute loss.** A reduction in IUC which is already below cost will further support such predatory pricing. We hope this is not what the Authority implies by "innovative and customer friendly offerings". In any case a TSP is free to offer attractive prices to its customers – we just want that this should not be paid for by other TSPs through a regime of below cost IUC resulting in cross subsidisation.

e. **In conclusion there is no improvement in performance of wireline services.** They have just benefited at the cost of wireless operators and passed on those benefits to subscribers in the form of predatory pricing. In fact this has resulted in exactly what has been stated in para 2.11 of the consultation paper –

"At the same time, it is argued by the detractors of BAK method that BAK may result in 'a race to the bottom' in which case the TSPs may be incentivized to set prices well below costs to enter new market segments and capture larger market share. This may result in inadequate investment in network infrastructure and consequent inefficiencies in capturing positive externalities. This is particularly important for India which suffers from poor rural coverage, both in fixed line and mobile. As on 31.05.2016, the rural wireless tele-density was 51.27 while rural wireline tele-density was only 0.47."

India needs heavy investments in infrastructure to take wireless services to the Bottom of Pyramid population and a below cost IUC regime will never allow the TSPs to make the required investment.

VI. **Page 16/17 – Para 2.24 / 2.25**

a. This is reproduced below –

2.24 At this juncture, it would be worthwhile to examine the impact of lowering of domestic termination charge through the Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015 dated 23.02.2015 which became effective from 01.03.2015 on the retail tariffs for voice calls in the country. The following Table depicts the trend of average

outgo per outgoing minute (a proxy for retail tariff for voice call) for GSM service segment3 in the country.

Table 2.3: Trend of retail tariff for outgoing voice calls

For GSM Service Segment in India

S. No.	Quarter Ending	Retail tariff for voice call per minute*
1	June, 2013	0.50
2	September, 2013	0.51
3	December, 2013	0.51
4	March, 2014	0.50
5	June, 2014	0.51
6	September, 2014	0.50
7	December, 2014	0.51
8	March 2015	0.50
9	June 2015	0.49
10	September, 2015	0.48
11	December, 2015	0.47
12	March, 2016	0.48

**Source: TRAI's Quarterly Reports on Indian Telecom Service Performance Indicators*

2.25 *As can be seen from the above table, the retail tariff for voice calls for GSM service, which was hovering in the range of 0.50 per minute to 0.51 per minute in the F.Y. 2013-14 and F.Y. 2014-15, started declining by 0.01 per minute in each successive quarter after the lowering of domestic termination charge through the Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015 w.e.f. 01.03.2015. It is worthwhile to mention that the AGR of access service segment has demonstrated an annual growth rate of 11.6% during the F.Y. 2015-16. One may conclude on the basis of the above facts that the lowering of domestic termination charge in the year 2015 did not result in the waterbed effect in the telecommunication services sector. Instead, it resulted in lower retail tariffs without, in any way, jeopardizing the overall revenue of the TSPs. Thus the lowering of domestic termination charges through the Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015 was essentially a win-win proposition for both, the TSPs as well as the consumers.*

b. This is again a clear case of selective presentation of data to arrive at wrong conclusions. The complete data over a longer timeframe and also with details of the impact on profits of Idea is as follows: –

S. No.	Quarter Ending	Retail tariff for voice call per minute*	Change	IUC Rate	Remarks	Idea's PAT (Rs. crs.)	Idea's ROCE
1	June, 2010	0.55	(0.02)	0.20	Retail tariff for voice reduced from Rs.0.55 to Rs.0.47 over 10 quarters due to increased competition. No change in IUC rate.	838	5.7%
2	September, 2010	0.55	-	0.20			
3	December, 2010	0.52	(0.03)	0.20			
4	March, 2011	0.51	(0.01)	0.20			
5	June, 2011	0.50	(0.01)	0.20		604	5.2%
6	September, 2011	0.50	-	0.20			
7	December, 2011	0.51	0.01	0.20			
8	March, 2012	0.49	(0.02)	0.20			
9	June, 2012	0.48	(0.01)	0.20		1008	6.0%
10	September, 2012	0.48	-	0.20			
11	December, 2012	0.47	(0.01)	0.20			
12	March, 2013	0.48	0.01	0.20	Retail tariff improved from Rs.0.47 to Rs.0.51 post cancellation of licenses and reduction of competitive intensity	1793	7.1%
13	June, 2013	0.50	0.02	0.20			
14	September, 2013	0.51	0.01	0.20			
15	December, 2013	0.51	-	0.20			
16	March, 2014	0.50	(0.01)	0.20			
17	June, 2014	0.51	0.01	0.20		3477	10.7%
18	September, 2014	0.50	(0.01)	0.20			
19	December, 2014	0.51	0.01	0.20			
20	March 2015	0.50	(0.01)	0.14	Declined due to aggressive pricing by operators and following reduction of IUC rate and cap on roaming charges	2677	7.4%
21	June 2015	0.49	(0.01)	0.14			
22	September, 2015	0.48	(0.01)	0.14			
23	December, 2015	0.47	(0.01)	0.14			
24	March, 2016	0.48	0.01	0.14			
25	June, 2016	na				497	4.9%

Table: Trend of Industry Retail tariff as per TRAI's Quarterly report along with IUC rate & Impact on Idea's financials

c. Our observations on the above table are as under –

1. Mobile retail prices in a market depend on many factors such as number of fixed and mobile operators, sequence of market entry, technologies deployed, market share of operators, user profiles of subscribers, brand loyalty, contractual lock-ins, price elasticity of demand, income elasticity of demand, levels of disposable income, business models used by operators, penetration of substitute technologies like fixed-line, communication laws and policies and many other social and economic factors. Constructing data sets with enough data points to account for such diversity is impossible. It is thus not understood how TRAI has been able to link the Mobile Termination Rates and Retail Prices.

2. With that background, we would like to submit that the retail tariffs have declined consistently from quarter ending Sep'10 (55 paise) to quarter ending Dec'12 (47 paise) on account of increasing competitive intensity, despite the IUC rate remaining flat at 20p. **Hence, it is clear that lower tariffs are not achieved due to lower IUC.** Thereafter post closure of operations by quashed licensees following the auction of Nov'12 and reduction of competitive intensity, the retail tariffs improved from QE Dec'12 (47 paise) to QE Dec'14 (51 paise) again in an environment of flat IUC rate. Hence, it is obvious that the retails tariffs have moved both downwards significantly as well as upwards in an era when IUC rates have remained unchanged and thus there is no correlation between IUC rate and retail tariffs. Thereafter, the IUC rate was reduced from 20 paise to 14 paise for mobile networks and to zero paise for fixed line networks. This resulted in aggressive pricing again from operators without any reduction in cost. Also the cap on roaming tariffs was reduced by TRAI, further adversely impacting retail tariffs without any cost reduction. **The Authority states that this has resulted in a win-win TSPs and consumers – nothing can be further from the truth as TSPs have lost heavily.**

   The TSPs have seen reducing profits and for Idea following have been the trends –

   a) Post reduction of IUC rate despite huge increase in spectrum costs, PAT for the company reduced by 23% to Rs.2, 677 crores in FY16. ROCE also declined from 10.7% in FY15 (already below cost of capital) to 7.4% in FY16. This trend continues in FY 17, where the annualized PAT based on Q1FY17 PAT of Rs.497 crores (only Rs.135 crores after excluding dividend

income of Rs. 362 crores) is further declining and the ROCE has declined steeply to just 4.9%.

b) With continuation of this trend of below cost IUC rate and predatory pricing it is very likely that the slim profit that exists today may convert to a loss.

c) **AGR growth is no measure of performance and it is only the profits and ROCE which are true reflectors of performance as telecom industry needs substantial investments in spectrum and capital equipment to meet the consumers' voice and mobile data needs. As stated earlier, the profits have declined because of significant increase in cost of spectrum and interest on account of the spectrum payments, increased capital intensity and the reduction of IUC in such an environment has only added to the misery of TSPs.**

3. In conclusion it is clear that the reduction in IUC rate has inflicted huge long term damage on TSPs who have seen reducing profits / increased losses and declining ROCE. **It has largely benefited the fixed line operators who have been indulging in aggressive pricing based on zero IUC rate causing huge losses to wireless operators. In short term, consumers have benefited somewhat at the cost of huge losses to the industry. However, if this trend continues it will lead to exit of telecom operators and consolidation of telecom market structure. In the long run, consumers will be at the mercy of oligopolies in creation.**

VII. **Page 17 – Para 2.26**

a. This para states that

"One may contend that the twin factors viz. (i) lowering of domestic termination charge resulted in overall good for the telecommunication services sector in the past one year; and (ii) the need to give a nudge to the sector for deploying more efficient network technologies, together suggest a need for adoption of BAK regime."

b. This is again drawing fallacious conclusions from arguments made before. The facts are as under -

1. **Entering a BAK regime for wireline traffic has resulted in loss of nearly Rs. 500 crores per annum for wireless operators (as explained in previous section). Wireless traffic is about 33 times the wireline traffic and any introduction of BAK for wireless traffic will create mayhem.** Predatory pricing like we have seen in the recent months will create huge losses and will

seriously impair the ability of TSPs to make further investments. In spite of the benefits of zero MTC to wireline operators, no increase in investments in wireline industry has been witnessed.

2. As already stated the new technologies would result in the principle of RPP and not BAK. Hence, there is no correlation between BAK and deployment of new technologies.

3. Significant investments have already been made in new technologies by Idea and major leading telecom operators in the last 2 years with acceleration in roll out of 3G and 4G networks. The highest roll out has been of 3G and 4G sites and the trend continues in this year. 2G sites are being rolled out to provide coverage in rural areas where 3G or 4G compatible devices may not be available. One cannot ignore 2G and 3G networks while keeping in mind that networks have to evolve based on the device evolution in a market.

Hence, there is no case for reduction of IUC rate given data and trends given in the consultation paper.

VIII. **Page 19 – Para 2.31**

a. It is stated that *"An access provider offers a wide range of services. While some services (viz. telephony, SMS, data transfer and other value added services) are offered in retail markets, some other services such as off-net incoming minutes are offered at a wholesale level. While the level of competition in the market for retail services is high, the same for wholesale services is much less, to the extent that the access service providers have a monopoly on carrying off-net incoming minutes in their network. In such a scenario, it is important that an incumbent access service provider does not charge a high price for wholesale services and uses the proceeds to subsidize low prices for its retail services. In many jurisdictions around the world, the regulators use long run incremental cost (LRIC) method to determine an appropriate level of termination charge for the off-net incoming calls."*

b. We do not understand what is implied here. The retail tariff for voice call per minute given in table 2.3 is 48 paise/minute (or 48p/min). The tariff for incoming minutes is 14p/min. So even if one deducts the 14 p/min, the net retail tariff for outgoing minute is 34 p/min, which is 2.5 times the wholesale tariff of 14p/min. So where does the question arise of *"incumbent access service provider does not charge a high price for wholesale services and uses the proceeds to subsidize low prices for its retail services".* In reality it is the wholesale price which is getting subsidized by the

TRAI mandated reduction of IUC to below-cost levels. Here and throughout the consultation paper the bias against incumbents and fallacious arguments to move to BAK / continue below cost IUC to unfairly support new entrants are obvious. This despite the fact that t**here is overwhelming international evidence that cost-based termination rates encourage competition and more affordable pricing. Cost based termination rates remove market distortions and provide efficient investment incentives. The net effect of fairer competition will be lower cost of communication, better services and more equitable returns on investment for all operators**

IX. **<u>Page 25 – Para 2.45</u>**

a. This states that "*The Authority also prescribed the mobile termination charge (i.e. domestic termination charge for calls terminating on wireless networks) for calls originated from wireline networks as 'zero'. This was done with an aim to promote investment in, and adoption of, wireline networks so that the wireline networks may become an effective vehicle for the delivery of high-speed Internet in the country*".

b. Again we would like to reiterate that there is no correlation between IUC rate and internet traffic and we are surprised that the two should be correlated. The two points should not be mixed up. The BAK regime adopted for wireline was clearly a case of subsidizing wireline operators at the cost of wireless operators (annualized loss of Rs. 500 crores for wireless operators). **The principal goal of regulating termination rates is to address imbalances and distortions in the wholesale market. However, what happened in this particular case was** most unfair and as demonstrated earlier has not resulted in any improvement as number of wireline subscribers continues to decline.

It is submitted that by aligning termination rates to true costs, and addressing distortions between the fixed and mobile markets, TRAI would be able to strengthen the competitive dynamics which in turn can be expected to generate greater consumer benefits and greater service innovation.

We re-iterate that the consultation paper in its existing form has made several misleading conclusions on the basis of incorrect arguments and statements, and wrongly presents the case of introduction of BAK regime / reduction in IUC.

The conclusions of this section are summarised in the table below:

	Authority's comment in the consultation Paper	**Idea's evaluation and interpretation**
1	Current consultation is to be initiated as per the decision of 2015 regulation.	The 2015 regulation clearly stated that "***the review will be undertaken and concluded in financial year 2017-18***". Hence, issue of this consultation paper before April 1, 2017 is in violation of the said regulation
2	In para 2.3 Authority has argued that AGR has grown at an impressive rate under CPP regime. This is being used to support reduction in IUC rate.	It is right that the industry has done well under the CPP regime which has been in force since 2003. However, this is totally irrelevant for the subject of review of IUC charges. The growth of AGR / industry has been good in the CPP regime in a period of stable IUC rate.
3	Para 2.4 states that in a CPP regime, either of the two regimes is used for interconnect settlement between TSPs (i) CPNP or (ii) BAK	This is incorrect as we are not aware of any country in the word where in a CPP regime, BAK is prescribed by the regulator between wireless operators. This amounts to cross subsidization of one operator by other and cannot be part of regulation. Authority has not given any examples of countries with CPP where BAK is prescribed by the Regulator.
4	Para 2.10 states that BAK is the natural regime in the public internet.	This is incorrect statement. In case of calls running on IP based networks, both the calling and receiving party pay costs for use of data on their respective networks. Hence, this is RPP regime and not BAK. BAK is relevant only in a CPP regime.
5	Para 2.14 and 2.15 state that the reduction of MTC and FTC to zero from 20 p/min wef 1.3.2015 has resulted in improvement in wireline industry and has been a success so far.	The reduction to zero of terminations charges is resulting in a huge loss of Rs.500 crs per annum to the wireless operators and this loss continues to increase every month as zero IUC has allowed wireline operators (mainly BSNL) to indulge in offering freebies to their subscribers at the cost of wireless operators. This has not resulted in any improvement in wireline subscriber levels which continue to decline, but wireless operators continue to suffer.

6	Growth in wireline broadband subscribers is the result of fixing IUC to zero	IUC only affects voice subscribers which has continued to decline. Broadband subscribers are growing in all categories and since there is no IUC charge for data traffic, there is no correlation between reduction in IUC rate for wireline networks and growth of their broadband subscribers.
7	Para 2.24 and 2.25 – Retail voice Tariffs in India have benefited from reduction of domestic termination charge	Reduction in domestic termination charge has zero impact on the overall cost of the industry and hence no impact on the retail tariffs. Retail tariffs are a result of competitive dynamics in the market and the retail tariffs achieved (47p) post reduction of MTC in Mar'15 were already prevailing in Dec'12, when the MTC was 20p/min. Hence, retail tariffs have not benefited, but due to the predatory pricing supported by below cost IUC, the industry has seen significant erosion of profitability.
8	Para 2.26 – Need for adoption of BAK regime is being advocated based on positive effects of reduction in domestic termination charges	This has not resulted in any industry benefit, but has favoured one category of operators to dump traffic on other operators at below cost recovery for the incoming call operator. This has cause significant loss to wireless operators vis a vis wireline operators. The wrong /misrepresented conclusion derived as per points 5,6 and 7 above are being advocated to now subsidize new wireless operators at the cost of existing wireless operators. This has already resulted in predatory pricing (free voice services) resulting in huge erosion of margins and taking away the ability of the industry to make further investments.
9	Para 2.31 states that *", it is important that an incumbent access service provider does not charge a high price for wholesale services and uses the proceeds to subsidize low prices for its retail services"*	This is a misrepresentation. Based on data given in the Consultation Paper the retail tariff is 34p/min (net of IUC charge) and the wholesale tariff is 14p/min. The argument is actually the opposite i.e. the higher retail tariffs (34p) are subsidizing the wholesale tariff (14p). We do not understand whether the Authority is in favour of higher retails tariffs (as advocated here) or lower retail

		tariffs (as advocated in para 2.24 and 2.25). Our position is that IUC rates should be cost based which is fairly determined.
10	Para 2.45 – This states that the reduction in MTC for wireline networks was *"done with an aim to promote investment in, and adoption of, wireline networks so that the wireline networks may become an effective vehicle for the delivery of high-speed Internet in the country"*	We reiterate that there is no correlation between IUC rate (applicable for voice calls) and internet traffic and we are surprised that the two should be correlated. The reduction in MTC is resulting in continually increasing losses to wireless operators. Regulator needs to ensure fairness and should not promote one category of operators at the cost of the other. Incentives, if any, should be given directly by the government and not by way of cross subsidization through competing operators.

E. TRAI oblivious of International Experience on Mobile Termination Charges

I. The Authority in its previous recommendation on the topic through "The Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulation, 2015 (1 of 2015)" has highlighted some of the key observations with reference to BAK regime in other parts of the world. It had noted,

> *"International experience shows that not many countries have adopted the BAK arrangement. BAK has not yet been mandated by regulatory fiat even in those jurisdictions which have matured telecom networks. In countries where the BAK arrangement has been adopted, it has, generally, happened not by a regulatory action but through voluntary action of the TSPs themselves. BAK regime has been implemented in some countries where the CPP regime has not been put in place; instead, a Mobile-Party-Pays (MPP) regime (in which both calling party and receiving party pay for the call) is in force in such geographies".*

II. Further, the countries that did go ahead with BAK regime have done so with suitable amendments and provisions that address several issues pertaining to the BAK regime. Few examples are given below and in all these cases, the TSPs can charge subscribers for incoming calls.

1. **Singapore: MTR Regime is RPP (Receiving Party Pays)**

   RPP regime (no IUC regulation at all) has been there since the inception of the telecom services and Regulator has decided to leave the system as it is, and is against the adoption of CPP regime. As part of the RPP arrangement, operators offer monthly subscription fees or daily fixed charges for giving incoming calls. The cost of the incoming call is thus borne by the customer.

2. **USA: MTR Regime is Unregulated BAK with RPP**

   Termination charges are unregulated and are under agreement between operators with only few operators following the BAK regime. Other Operators which do not have a BAK arrangement pay a reciprocal compensation fee for local calls. So, in effect, it is an unregulated regime which is totally different from the regulated BAK as explained in TRAI's current Consultation Paper.

3. **Canada: MTR Regime is Unregulated BAK**

   Termination charges are unregulated with no IUC payment mandated by the Regulator. Operators are permitted to monitor the volume of traffic and to claim bilaterally agreed termination payments if there is a net traffic imbalance – a process known as "Mutual Compensation". Thus, in effect, their IUC regime is a far cry from the concept of regulated BAK as explained in TRAI's current Consultation Paper.

F. Selective and misleading representation of international markets for advocating lower Termination Charges in India

I. The Authority has cited examples of several international markets for advocating the case of a lower termination charge in India. However, it has refrained from presenting the complete landscape of these markets such as level of competition, tele-density levels, prevalent prices, nature of market in terms of pre-paid and post-paid split, etc. which are important considerations in determining the applicability of steps taken by regulators in these countries to the Indian context.

II. Given that India is world's second most populous country and seventh largest country by size, it is surprising that Authority has completely ignored large comparable countries in the consultation paper altogether. Based on available information, we have tabulated below latest comparative of world's top 5 countries by population.

	Country	Population (in Bn)	MTR Regime	Costing Model	MTR in Local Currency	Currency	MTR in US$	MTR in Rs.	Mobile Penetration
1	China	1.4	RPP & CPP	Mixed model	0.04	CNY	0.006	0.40	93%
2	India	1.3	CPP	LRIC model	0.14	INR	0.002	0.14	81%
3	US	0.3	RPP	Not Applicable as customers charged for incoming calls					103%
4	Indonesia	0.3	CPP	Top-Down LRIC	204	IDR	0.02	1.36	100%
5	Brazil	0.2	CPP	FAC Method	0.1	BRL	0.03	2.00	141%

Table: Comparative of MTR Regimes among World's Most Populous 5 countries

As evident from table above, India is in unique position of having both lowest Mobile Termination Rate and also lowest Mobile penetration levels. Generally any country which is in high investment phase necessarily needs to have a full cost based MTC to enable investments to continue. Idea itself has invested Rs.55,078 crores in the last 2 financial years in spectrum and capex which is ~ 6 times its average cash profit from operations in these 2 years (refer Table *"Idea Financials trend highlighting Negative Free Cash flows*" on Page 56 in section H.F "Financial Stress in Industry" under response to Q1) resulting in a negative free cash flow of Rs.36,476 crores and this clearly shows that the Indian telecom industry is in a phase of heavy investments. Here it is also pertinent to cite that China has both regimes wherein operators are not only allowed to charge customers for incoming calls but also have interconnect charges among operators at rate prescribed by Regulator. **Hence, the closest comparable example for India is Indonesia which has a termination rate equivalent to Rs.1.36 per minute or almost 10 times the current below cost IUC rate prescribed in India.**

III. One of the cited examples in the consultation paper is that of Australia, where gradual reduction in Mobile Termination Charges has been suggested by the Regulator ACCC (Australian Competition and Consumer Commission). **The reduction in MTC from historical levels is a function of where it was fixed earlier. MTC rate in Australia is currently Rs.1.83 per minute (AUD 0.036 per minute) which is more than 13 times current IUC rate in India. Even after adjusting for PPP, it is 3.2 times higher. Only conclusion that can be drawn from this example cited in the Consultation Paper is that the IUC rate in India needs to go up to reflect correct full cost.**

IV. Further as per information collated by us of other major Asian Pacific countries, Mobile Termination Charges set in India is significantly lower even when compared to them as tabulated below with lowest mobile penetration rates.

	Country	Population (in Bn)	MTR in Local Currency	Currency	MTR in US$	MTR in Rs.	Mobile Penetration
1	India	1.3	0.14	INR	0.002	0.14	81%
2	Indonesia	0.3	204	IDR	0.02	1.36	100%
3	Thailand	0.07	0.35	THB	0.01	0.67	105%
4	Malaysia	0.03	3.65	MYR	0.88	0.59	144%
5	Australia	0.02	0.036	AUD	0.03	1.83	132%

Table: Comparative of MTC rates of India with some major Asia Pacific countries

V. Also, we could understand that every Regulator has taken decision on termination charges based on the specific characteristics or conditions in their own country. Even TRAI has agreed in principle that (Para 5.3.2 of Explanatory Memorandum) *any approach to setting up of IUC needs to be adapted to local conditions and should be based on cost so that service providers are compensated for the use of their network by other service operators.* Thus, the case of reduction of MTC charges when it is already below cost merely on account of what other regulators have followed has no merit. Also as explained in multiple places, there is no country which has a "regulated BAK" as proposed in the consultation paper in a CPP environment.

We now proceed to answer specific TRAI queries.

Issues for Consultation

Q1. In view of the recent technological developments in the telecommunication services sector, which of the following approaches is appropriate for prescribing domestic termination charge (viz. mobile termination charge and fixed termination charge) for maximization of consumer welfare (i.e. adequate choice, affordable tariff and good quality of service), adoption of more efficient technologies and overall growth of the telecommunication services sector in the country?

(i) Cost oriented or cost based termination charges; or

(ii) Bill and Keep (BAK)?

Please provide justification in support of your response.

Idea Response:

Idea recommends that only a Cost Oriented or Cost based termination charge be prescribed in India.

We strongly oppose the Bill and Keep (BAK) approach.

Regulated Bill and Keep is not prevalent in any country with a CPP regime. If there are countries where "regulated BAK" is prevalent in a CPP regime, we would request the Authority to transparently share the complete list of such countries and let the respondents study and comment on that as a part of the consultation process.

In this regard Hon'ble Authority's has rightly concluded against Bill and Keep regime in its explanatory memorandum to the telecommunication interconnection usage charges (tenth amendment) regulation, 2009 (2 of 2009) dated 9-Mar-2009 that *"The bill and keep proposal of the service providers was analyzed and it was noted that this could mean return to situation prevalent before the present IUC regime was established i.e receiving party used to pay for incoming calls. One of the fundamental principles of prescribing IUC regime was work done principle. It was also noted that tariff before the IUC regime were very high tariff. The service providers may again resort to charging their own subscribers for receipt of calls or increase fixed charges of providing the services.* ***As the service providers do not have to pay for termination of calls into other service provider networks they may offer plans with free calls which could load other service providers' networks****. Bill and keep regime*

may also reduce call completion rate as the terminating network will not have any incentive to complete the call".

We concur to Authority's conclusion in 2009 regulation and strongly oppose Bill and Keep approach and our reasons are summarized as under:

A. Erroneous reasoning for review of prevailing Interconnect Usage Charges (IUC) regime.

I. *Incorrectly using issues pertaining to "Internet Telephony" as the premise for reviewing prevailing IUC regime for termination charges on circuit switched networks.*

II. *Advocating an unsubstantiated technology under the garb of "March of Technology" that too without a comprehensive deliberation.*

III. *Complete ignorance of market suitability, current readiness with reference to introduction of new technology.*

B. TRAI as a Regulator not empowered to govern technology choices of operators.

C. Incomplete understanding of Interconnect costs vis-à-vis telecom operations.

I. *Reduction in IUC (Interconnect Usage Charges) does NOT reduce cost for telecom industry.*

II. *IUC in reality is only a settlement between operators for using each other networks.*

D. Evolving cost structure of Indian Telecom Service Providers (TSP) from IUC perspective.

I. *Holistic understanding of cost structures of the Indian Telcos necessary for any IUC workout.*

II. *IUC workout has to recognise the Role of liberalized Spectrum procured in auctions and its associated cost.*

III. *Cost of Capital and Return on Capital Employed (ROCE) need to be recognized.*

IV. *No clear relationship between Technology and IUC.*

E. Only cost oriented or cost based termination charges can apply to India.

F. Present asymmetry does not justify BAK.

G. No logical or rational reason for BAK.

H. Idea recommendations on broad principles to be followed for IUC

A. Approach to IUC has to be cost based.

B. Auction discovered spectrum Costs need to be considered.

C. Recognise the asymmetry of traffic and the impact on terminating operator.

D. Impact on rural coverage

E. Impact on competition

F. Financial stress in the Industry

G. Promote efficient network roll out

H. Follow principles of fairness, transparency.

A. Erroneous reasoning for review of prevailing Interconnect Usage Charges (IUC) regime

I. The Authority is aware that there were "apparent errors" in its IUC regulation 2015 – specifically the clear omission of correct cost of spectrum with industry having incurred Rs. 3.44 lac crores in the last 6 auctions from 2010 to October 2016. The auction wise industry pay-out for spectrum acquisition is tabulated below.

in Rs. Cr	May'10	Nov'12	Mar'13	Feb'14	Mar'15	Oct'16	Total
Industry Payout for Spectrum	95,004	9,408	3,639	60,871	1,09,705	65,789	3,44,416

(The above table excludes the value of surrendered BWA spectrum by BSNL / MTNL in 8 circles, and an estimated gross amount of over Rs. 13,000 crores as per media reports on account of spectrum trading deals)

Had the consultation, been re-started for this specific reason, we would have understood that Authority wishes to make amends on in its earlier errors.

II. However on the contrary , Telecom Authority of India (TRAI, or authority in short) in its consultation paper on "Review of Interconnect Usage Charge (5th August, 2016)" cited the following three reasons for undertaking the process of reviewing the prevailing IUC regime:

1. **Addressing the issue of how voice calls travelling on public internet should be treated from the perspective of termination charges** in view of M/S BSNL's proposal to launch fixed mobile telephony (FMT) services.

2. With introduction of Packet Switched (PS) RAN in new networks, **concern around applicability of Mobile Termination Charges (MTC) determined for networks having Circuit Switched Radio Access Networks (CS RAN) on networks with PS RAN.**

3. Viability of standalone International Long Distance Operators (ILDOs) and need to set a floor for International carriage charge / International settlement rate.

With reference to the case of domestic termination charges mentioned in "1" and "2" above, Idea Cellular does not agree with the authority's rationale for embarking on this review as elaborated further in this response.

III. Incorrectly using issues pertaining to "Internet Telephony" as the premise for reviewing prevailing IUC regime.

1. We would like to submit here that the cited FMT service by BSNL, through which its customers travelling abroad will be able to connect their landlines through mobile phones and make calls through them without attracting ISD Charges, is completely against all regulatory and licensing principles. In fact, it:

    - Violates licensing conditions & fundamentals of routing
    - Modifies Caller Line Identification (CLI) & violates of National Numbering Scheme
    - Causes loss to exchequer
    - Poses grave security risks
    - Breaches existing Interconnect Agreement.

The Authority would recall that the Industry through COAI had raised all the above highlighted issues in detail vide its letter dated April 1, 2016.

2. **Further, it is clear that the said operator voluntarily did not start the service of Internet Telephony calls provided through the app, as it violated the licensing conditions and was not a legitimate licensing service. Thus, we would like to submit that the termination charge for the service which is in violation to the licensing conditions cannot be taken up through this Consultation.**

3. Further, we would like to highlight following points with respect to the Internet Telephony:

- Only Unified Licensee with Access Authorization can be allowed to provide unrestricted Internet Telephony.
- Any Consultation on the issue of Internet Telephony cannot be initiated as the fundamental issue of OTT Communication Services and corresponding issue of 'SAME SERVICE SAME RULE' remains unaddressed by the Authority / Licensor.
- Any such attempt to provide connectivity through other service provider's internet connection is equal to any OTT Communication Service and not a permitted Internet Telephony Service.
- An OTT Communication Service Provider who has not setup an access network cannot provide Internet Telephony services.
- Internet Telephony (VOIP) is Content as per TRAI regulations e.g. Regulation on Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016 wherein VOIP and Messaging Services Apps are "content" as per TRAI. Thus, there is no case for the interconnection between an Internet Telephony with the PSTN/PLMN networks as the former does not have any network.
- As per TRAI ACT, TRAI can ensure technical compatibility and effective inter-connection between different service providers only. Services Provider as per ACT is a licensee. TRAI cannot regulate interconnection between a licensed and an unlicensed entity.

4. In light of above, **we would like to submit that Internet Telephony cannot be said to be trigger for initiating this Consultation Paper, as this service can only be provided by entity having Unified License with Access Authorization & ISP and having its own Access Network (Last Mile), and not by OTT service providers who do not have own access network. Thus, before determining or discussing the issues pertaining to IUC for the Internet Telephony calls, TRAI needs to address the fundamental issue of OTT Communication Services and corresponding issue of 'SAME SERVICE SAME RULE' by the Licensor and the Authority.**

5. **We would further, like to submit that this process of determining the termination Charge for the Internet Telephony calls is akin to providing legitimacy to the service which in the first place is not allowed to be provided by any non- licensee and thus it amounts to facilitating a back door entry for that entity in terms of allowing it to provide the access service.**

6. **Further, the issue of treatment of voice calls travelling on public internet, with respect to termination charges categorically falls under the subject of "Internet Telephony" and involves a range of complex topics including inter-alia network architecture, routing scheme, roaming, numbering and location. As indicated by the authority, a separate Consultation Paper (no. 13/2016) on Internet Telephony (VoIP) dated 22.06.2016 has already been released seeking comments from stakeholders. Without even a conclusion derived from the Internet Telephony consultation, using the pretext of treatment of voice calls travelling on public internet for a full review of current IUC regime amounts to placing the cart before the horse.**

7. **Hence, in view of the prevailing lack of clarity in treatment of voice services delivered through Internet Telephony (including the subject of termination charges for the same), the requirement to review and potentially disturb the prevailing IUC regime is unwarranted. The Authority should in fact suspend, if not withdraw completely, the current consultation on Review of Interconnect Usage charge** till the time it concludes its consultation on "Internet Telephony" and hopefully, provides absolute clarity on the subject.

IV. Advocating an unsubstantiated technology under the garb of "March of Technology" that too without a comprehensive deliberation.

1. The Authority in the consultation paper (para 1.22) has stated that few of the TSPs in the recent past have built access 4G networks which have PS RANs and may carry voice on such networks using Voice-over-LTE (VoLTE) technology in near future. It has further questioned the applicability of MTC determined for CS networks for networks deployed with PS RAN.

Further the Authority at Para 2.10 has stated "…..One argument is that the regime of termination charges works as a disincentive to the deployment of IP-based telecom networks by the TSPs. Moving towards BAK will encourage deployment of IP-based telecom networks. Since IP based networks are poised to be the networks of the future for providing telecom services, a BAK regime may be seen as a natural progression in line with the development of technology.

2. In this regard, in the present Consultation Paper, the Regulator has been harping on the issue of "March of technology" and has cited examples of "Voice over PS RAN" and Internet Telephony e.g. BSNL FMT as a more efficient and possible solution for Telephony services in this country and thereby a reason for lower cost of delivery of services and lower IUC. **We submit here that TRAI seems to be "misguided" that the existing mobile operators are unnecessarily trying to protect the legacy technology for their own benefit and should shed the old technology fast. On the contrary, leading incumbent operators have been at the forefront of new technology introduction in the country. In fact, Idea Cellular along with other top operators in the country have already introduced 4G networks in the financial year 2015 – 16 itself, and are currently in midst of expanding the same. As of September 2016, Idea 4G services are available across 10 service areas in 2,343 towns and 7,495 villages, and with new spectrum procurement in October 2016, Idea 4G services will be present in 20 out of 22 service areas in the financial year 2016-17.** The company is committed to provide wireless broadband services (3G & 4G) pan India and intends to offer same to 70-80% existing 2G covered population (2G covered population presently at over 1 billion). Further, the introduction of 4G networks in 2015 has happened within a short span of launch of 3G services in 2011. Further, as explained later in section G.V.a (Page 52), investment in new technology generally happens in conjunction with growing consumer demand and trends, along with the development of the necessary supporting ecosystem for the new technology, and incumbent operators have continued to introduce new technology in line with market requirements.

3. **The Regulator should not get carried away by the argument of "March of Technology" and should first evaluate whether the new technology has even matured enough to provide robust Telephony services.** The technologies being referred to in the consultation (such as LTE) were never built for Telephony. In fact, a telephony service like VoLTE was an "after thought" to accommodate operators migrating from CDMA to LTE or rolling out green field data networks, who also wanted to access the voice market using the same LTE networks. Further, deployment of VoLTE network is very complex from 'Core' and 'Transport' perspective compared to deployment of a CS network. Presently, the VoLTE technology itself is struggling worldwide with several issues including far higher call drops and un-stability, and current global adoption of VoLTE is slow as research and development is still under progress. The full cost of carrying a call on VoLTE is not yet fully established in India and almost in most parts of the world. It may take another 3 to 5 years for full VoLTE cost to be established worldwide across most 4G telecom operators. There is no other country that we are aware of where MTC has been revised on account of determination of separate cost of termination on VoLTE networks.

4. **Further, implementations like BSNL FMT are "non-standard App based services like OTT services" which cannot be the backbone of Telephony services of any country. Telephony services delivered through such OTT application routes are plagued with multiple issues such as:**

   i. **Custom build nature of applications: These applications are custom build solutions of individual operators and therefore cannot be universally applied across all networks.**
   ii. **Compliance with all security norms: Such applications may not meet all security norms, including voice mentoring and location information as is mandated for any licensed telephony services today.**
   iii. **Provision of emergency call routing**
   iv. **Performance issues on account of service priority: Owing to its real time nature, telephony service is always given priority over any data service. However in case of OTT based applications, no priority can be provided leading to performance issues.**
   v. **Constant tuning of applications: It is not always guaranteed that the application will work in a hassle free manner without any issues with every operating system (OS) upgrade. Thus, constant tuning of app may be required.**
   vi. **Threat of security breach: Registration process to identify the customer may not be fool proof thus can be a security breach without any proper audit trail.**

   It is important to note that reliability of Telephony services are most critically viewed when it comes to security of the country and should not be abused and compromised just on the basis of commercial levers.

5. **The Authority is postulating VoLTE as future of voice without any global trends, corroborative data or sharing cost analysis of real data over relatively long periods of 3 to 5 years which could establish the efficacy as well as cost efficiency of the new technology. The Regulator cannot take IUC decision for the next couple of years based upon wild guesses into technology which may or may not play out much more than two years hence.**

V. Complete ignorance of market suitability, current readiness with reference to introduction of new technology.

The Authority has ignored several critical facets and present on-ground realities during this consultation, thereby ignoring the realities of the Indian market. We would like to bring the following to the Authority's consideration:

1. **India is a complex sub-continent with diverse needs ranging from demand of high speed data network by the rich, and knowledge workers and necessary support for growth of emerging Digital Services in the country to basic connectivity for nearly 50% of rural India, where hinterland population in spite of 20 years of services is still living in the Mobility Dark Ages.**

   a. By means of this consultation, **the Authority seems to be proposing to support one technology over the other by providing regulatory incentives for specific technologies, at the cost of ignoring the basic requirement of millions of Indians who still don't access voice services**.

   b. More significantly, there is an enormous geographic divide between urban and rural India. The rural wireless tele-density in the country is significantly lower at 50.95% in comparison to an urban wireless tele-density of 148.03% as reported by Authority (as per report for June'16). A large proportion of Indians from rural parts of the country are still deprived of basic telephony services. While another 300 – 400 million Indians are still expected to join the basic voice services category in coming years, most of them are likely to be from rural markets. This view is corroborated by the fact that 73% of net subscriber addition in India over last three years has happened from rural geographies as shared in table below as per Telecom subscription data reported by TRAI.

(In Mn)	FY13	FY14	FY15	FY16	Q1 FY17
Rural wireless base	342.5	371.8	414.2	444.8	446.3
Urban wireless base	525.3	532.7	555.7	588.8	588.8
Total wireless base	**867.8**	**904.5**	**969.9**	**1,033.6**	**1,035.1**
Growth					
Rural wireless base		29.3	42.4	30.6	1.5
Urban wireless base		7.4	23.0	33.1	(0.0)
Total wireless base		**36.7**	**65.4**	**63.7**	**1.5**
Rural Net Add%		80%	65%	48%	101%

Table: Trend of telecom subscription data as reported by TRAI

c. The deprivation of basic mobile voice telephony in rural India is evident by the fact that several state governments, especially in economically weaker regions of Bihar, Chhattisgarh, North Eastern States and Uttar Pradesh are subsidizing / distributing mobile handsets free of charge. The Authority would acknowledge that these phones would invariably be running on CS networks rather than PS networks. For e.g. In 2015 India Post started selling "PF 301 – Bharat Phone" on a pilot basis in the selected Post Offices of Andhra Pradesh, Karnataka, Tamil Nadu and Uttar Pradesh Circle. The phone costs around Rs 1,999 which includes 1,999 Minutes free calling on BSNL network.

The above clearly shows that basic rural telephony requirements remain intact and hence it is pre-mature to advocate any technology choice without taking into the existing latent need for voice services.

d. Owing to lower per capita income and higher incidence of poverty in rural areas, the new subscribers of mobile telephony services are most likely to enter the category with affordable feature phones which primarily support only CS networks, and are therefore going to be consumers of basic mobile voice telephony services. Thus, it is evident that networks running on CS technology are necessary for the inclusion of future 300 – 400 million rural Indians. All existing 2G and 3G networks need to be protected to service economically challenged, rural 300 – 400 million Indian population residing in remote hinterlands, who still have not adopted mobile services even after 20 – 22 years of introduction of these services in India.

2. **The authority has totally ignored the fact that one of the necessary enablers for consuming VoLTE services is a 4G VoLTE enabled handset.**

a. The authority would like to note that the current 4G smartphone penetration as a percentage of mobility subscribers in the country is abysmally low. As of June '16, Idea 4G smartphone penetration as a % of its subscriber base stood at 8.2%). The number of 4G handsets supporting the VoLTE feature is only a subset of this segment of subscribers, and the VoLTE enabled 4G smartphone penetration as a % of subscriber base on Idea network stood at 1.9% as of June '16. **This clearly indicates that more than 97% of the Indian mobility subscribers, if not more, still rely on 2G/3G CS RAN based technology for availing mobility voice service, therefore necessitating the Indian TSPs to continue running 2G/3G networks.**

b. Furthermore, even as on date, more than 50% of all handsets sold by volume in India are 2G feature phones that can only run on 2G CS RAN based technology. Most of these basic feature phones are consumed by the economically weaker sections and geographies in the country that remain deprived of basic voice telephony services.

c. Even when available, VoLTE enabled handsets have their own set of challenges such as:

   i. VoLTE handsets have special settings which are operator specific and should match with deployed LTE network. Thus, customer cannot be guaranteed telephony services on same handset over two VoLTE networks. This can be a big impediment for Mobile Number Portability (MNP).

   ii. Extensive testing is required before an operator can declare a VoLTE supported handset to be suitable for reliable VoLTE services on their network. This is a time taking process and can be an issue where the operator does not control the handset eco-system (like in case of India).

   iii. Roaming standards for VoLTE envisages multiple choices and thus, require a very close coordination between operators before VoLTE roaming can be deployed.

3. **Despite the increasing roll out of 4G networks by Indian TSPs, the adoption of new technology remains limited.** While the overall mobile broadband adoption (including both 3G and 4G) as a percentage of total mobility subscribers in India is in low double digits at approximately 14% after over 5 years of 3G launch (149 million mobile broadband users as per TRAI release of July 2016), 4G-only mobile broadband adoption will be still far lower. Based on Idea network statistics for the month of June ’16, only 14.3% and 1.0% of its total subscriber base had subscribed to 3G and 4G services respectively.

4. **All reported and charged voice traffic is presently carried on CS based 2G/3G networks**. Further, no immediate significant change in mix of voice traffic that will be carried on 2G/3G CS network and 4G PS network is expected in ‘near future’ (as a result of limited 4G device proliferation and miniscule VoLTE device penetration).

Basis our above submissions in points 1 to 4, it is conclusive that

- **The comparative lower affordability in rural markets vis-à-vis the urban markets in India will continue to lead to addition of subscribers from bottom of pyramid, typically with basic 2G feature phones that can support only 2G CS network based voice services. Nudging operators towards the new technology which will not support CS network based voice services by means of regulatory interventions at this stage of Indian telecom would further defer several millions of Indians from accessing basic voice telephony services for the first time and deprive them of its benefits.**

- **Given the current low proliferation of 4G handsets and limited adoption of 4G services in the country, a 4G network only approach by the Indian mobile telecom industry at this stage would also exclude the majority of existing Indians who are current users of voice telephony services. Indian incumbent TSPs have deployed 4G networks which offer voice services as a fall back on 2G/3G based networks, ensuring inclusion of the large Indian subscriber base as far as voice telephony service is concerned, while offering the opportunity to use latest 4G technology to subscribers wishing to do so.**

- **Under the above prevailing market realities of the Indian market, 2G and 3G CS network will remain as one of the most critical network infrastructure for mobile connectivity. As a result, the Indian TSPs will need to continue carrying and delivering voice services on 2G and 3G access networks, at least in the foreseeable future, and hence MTC based on CS costs are still applicable.**

- **On the other hand, 4G technology based on PS RAN will mostly be used for providing mobile broadband data services to consumers. The subject of Interconnect and IUC regime pertains only to delivery of voice services and is not applicable to data services.**

Hence, advocating the case for review of current IUC regime on grounds of deployment of PS RAN networks is invalid and cannot be accepted.

VI. We would also like to submit that as a regulator, it would have been prudent on TRAI's part to also deliberate on the possible pattern and pace the existing operators should follow in order to transform their existing networks which continue to provide cost effective mobile 2G telephony services best suited for the country, given the above highlighted nuances of both the Indian market and the new technology. It is critical to have a debate on various technology and market related aspects to emerge

with a balanced view point on future roadmap best suited for the country without compromising the fundamentals of Telephony.

VII. **In our view, following are the some of the far more critical issues that need to be deliberated carefully before using any of these as a premise for discussion on IUC:**

a. Who are the current Telephony services users? Is the new technology a service for the masses or a service for the elites?
b. What is the pace of adoption of new technology devices by the users required for telephony services on PS RAN? What is the market readiness of the ecosystem and the existing mobile telephony subscribers in the country?
c. Can VoLTE at its present avatar be accepted as backbone of Indian Telephony services? Is the service mature enough to replace the well-established CS based voice telephony services?
d. What is the timeframe required to fully transform to Telephony on PS network for any legacy network ensuring no compromise with existing services?
e. What are the possible areas compromised when any OTT type APP is used for Telephony services?
f. What are the cost elements in Telephony and what will be the benefit of adopting PS RAN? Has any country used this as the basic premise for rework of IUC?

VIII. However, the TRAI consultation is completely silent on these critical issues and ignorantly postulates the need for review of the current IUC regime based on erroneous reasoning. We would request the Authority to first assimilate the correct issues for consultation, before proceeding to cause undue disruption to an already financially fragile industry.

B. TRAI as a Regulator not empowered to govern technology choices of operators.

I. The direction taken by the Authority in the present consultation seems to suggest that the Regulator proposes to support one technology over other by providing regulatory incentives for specific technologies. This is surprising keeping in mind that **most developed world has not played one telecom technology over another, and never have global regulators intervened in support of one technology over the other. Market forces should be allowed to play out without incentivising or discriminating any specific technology.**

II. The TRAI as the Regulator cannot govern technology choices, nor can it discriminate between operators, or between technologies deployed, let alone for misguided reasons. There is no provision

in the TRAI Act which allows the Regulator to guide or nudge or discriminate between operators based upon this reason.

III. **Moreover the National Telecom Policy as well as the Unified License clearly specifies that the spectrum is technology neutral and the spectrum itself is liberalized and operators are free to deploy any technology they deem proper.** Hence any attempt to initiate consultation on the basis of technology choices is completely flawed. Interconnect Regime cannot infringe or over-ride the National Telecom Policy and Licensing Conditions, through the back door. Technology changeover or pushing/nudging operators towards one technology or away from another technology is not a function or mandate of the TRAI under the TRAI Act.

IV. The TRAI's own position is self-contradictory. The actions of the TRAI have to be consistent, not just inter-se IUC regimes, they have to be consistent across all actions of the TRAI. Not very long back, the Authority was proceeding to impose humongous penalties upon operators for not putting up more and more investments in CS equipment. Even on date, the Authority is placing unbearable and unrealistic financial and managerial pressure upon operators for providing capacities for terminating one-way traffic on CS networks, while in present consultation the Authority considers the CS equipment to be obsolete.

V. The TRAI cannot pursue directions which inadvertently have the effect of discriminating between operators. The TRAI cannot be indulgent about enforcement of regulations and end up encouraging asymmetric traffic from one operator, while pressuring other operators to invest in PSTN terminating equipment to unload an unwanted deluge, and then think of an IUC regime which further rewards the offender and punishes the victim.

C. Incomplete understanding of Interconnect costs vis-à-vis telecom operations.

I. Reduction in IUC (Interconnect Usage Charges) does NOT reduce cost for telecom industry

There is a misconception that reduction of interconnection charges will result in reduction in cost of telecom operators and consequently result in lower consumer tariff. The fact is that at an industry level IUC charge is a zero sum game. Thus, whatever is cost for one operator is revenue for the other operator. If the profit and loss account for the entire industry is consolidated, there will be no IUC revenue or cost and a change in IUC rate will have zero impact on the combined cost of industry. **Hence the myth that IUC reduction results in lower cost for telecom operators needs to be dispelled.**

II. IUC in reality is only a settlement between operators for using each other networks

If IUC is not a cost for industry, then what is it? It is only a means of settlement or a contractual arrangement between operators for use of each other's networks. Since the use is not equal, the most important factor for IUC is that it should provide a fair compensation to the receiver (everyone is a receiver and a payer of IUC in any case) for the work done by it to receive an incoming call on its network. It is by no means a price set to make profits. If it is not fair, it creates an advantage for one operator versus the other. **Hence, IUC has zero impact on cost for the industry, but may result in one operator subsidizing costs for another operator, if it is not fairly determined.**

In this context it is important to understand the history of why IUC started first of all, which is as under –

i. In the initial phase of mobility services in India, the telecom operators had adopted the concept of RPP i.e. Receiving Party Pays (RPP). Herein, each operator would charge its own subscriber for the services provided – whether it was outgoing or incoming call. The RPP regime still continues in many countries like US, Canada, China, Singapore etc.

ii. Subsequently as the RPP regime resulted in the incoming call subscriber having to pay for calls over which he had no control, the Authority introduced the CPP i.e. Calling Party Pays regime, for the convenience of the subscriber. In this regime, it is important that now the incoming call operator does not charge its subscriber, and the outgoing call operator charges its outgoing subscriber for the complete call (both outgoing and incoming legs). Hence having recovered the total charge from its subscriber, the outgoing call operator had to pay a fair compensation to the operator of the incoming call.

iii. The regulation does not give an option to the operator of the incoming call whether or not to receive the call. Given this background, it was necessary that the incoming call operator is allowed to recover the cost of use of its network from the outgoing call operator. Hence, the concept of IUC is integral to CPP regime and CPP cannot exist without IUC. Further, just having an IUC is not enough, but it is essential that IUC is fairly determined and the recipient is not forced to subsidize the operations of a dominant outgoing call operator in a scenario where the IUC is fixed below the cost of the incoming call operator.

iv. In light of the foregoing, there can be only two possibilities for telecom networks –

1. RPP regime, which existed at the beginning; OR
2. CPP regime, coupled with IUC charges

The concept of regulated Bill-And-Keep (BAK) as is being advocated by TRAI in the consultation paper is a scenario where the incoming call operator is being obligated (no choice) to offer his network to use by other operators "free of charge". No business enterprise could work if regulated BAK is enforced upon. There is no country in the world which has a CPP regime coupled with regulated BAK. When there is symmetry in traffic, operators may mutually decide to avoid settlement as net billing is close to zero which is called unregulated BAK. With the existing high traffic asymmetry between operators, a scenario of regulated or unregulated BAK does not arise in India currently.

D. Evolving cost structure of Indian Telecom Service Providers (TSP) from IUC perspective.

I. Holistic understanding of cost structures of the Indian Telcos necessary for any IUC workout

1. Robust telecom infrastructure, including both the core and the access network is the backbone of mobile telephony services. In the Indian context, most of the elements of this infrastructure are created, operated and maintained by TSPs themselves.

2. **Telecom infrastructure is characterized by two fundamental elements, namely the raw material, i.e. spectrum and the telecom equipment machinery, i.e. the various network elements. Creation of a massive telecom infrastructure that would meet the requirements of the scale and size of our country which is as large as a sub-continent would obviously imply huge investments in both spectrum acquisition and network.**

3. **With the shift from administrative allocation of spectrum to a market determination of spectrum prices through auctions from 2010, the investments needed for acquiring spectrum and hence the resulting costs have increased manifold at 10 – 30 times the administrated cost level.** Whereas a pan India license and spectrum was erstwhile available for a price of Rs. 1,658 crores under the administrative allocation regime, one block each (5 MHz) of 900 MHz and 1800 MHz spectrum for pan India operations now costs in excess of Rs. 45,000 crores and Rs. 15,000 crores respectively (based on auction determined prices).

4. Further, for utilizing the available spectrum and deliver mobile telephony to subscribers, TSPs have to invest capital in form of capital expenditure (capex) to establish the various network elements. The Indian TSPs have created a massive infrastructure for mobile voice telephony services on the 2G networks over the past two decades, and still continue to do so. Further, post 2010 auctions, 3G networks were rolled out and fresh investments for equipment were again undertaken. In fact, the leading TSPs continue to expand in 3G technology keeping in mind the prevailing device/handset ecosystem in our country. Further, in recent years, with advancement in technology, most of the leading TSPs have also introduced 4G networks ensuring that Indian subscribers are not deprived of the latest technology available in other parts of the world. **As an implication of these prevailing Indian market realities, the incumbent TSPs have to incur capex for multiple technologies in form of refreshing and modernizing their investments on 2G network (wherever required) as well as expansion of 3G and 4G networks.**

5. **Further, TSPs have to rely on external debt for financing the massive investment needs on account of expensive spectrum acquisition and network expansion. This further adds the burden of financial costs in form of interest that the TSPs have to incur.**

   In view of the above points, it is apparent that the cost structure of the Indian TSPs has undergone a drastic change in recent years. Most of the cost elements are shifting below Operational Profit / EBITDA in form of Depreciation of Capex, Amortization of Spectrum and Financing cost for both Capex and Spectrum.

6. The following table depicts the trending of key Idea financial parameters for the last 6 years. As evident, despite an EBITDA margin improvement of above 12.5% attributable to vigorous cost optimisation focus (contrary to Authority's claim of gold plated costs), the same has not reflected in PAT margin due to high incremental Spectrum, Capex and Interest cost (mainly result of high spectrum prices). Given the current trend of free voice services supported by below cost IUC, we will see further deterioration in PAT margin and it could also become negative in the coming quarters.

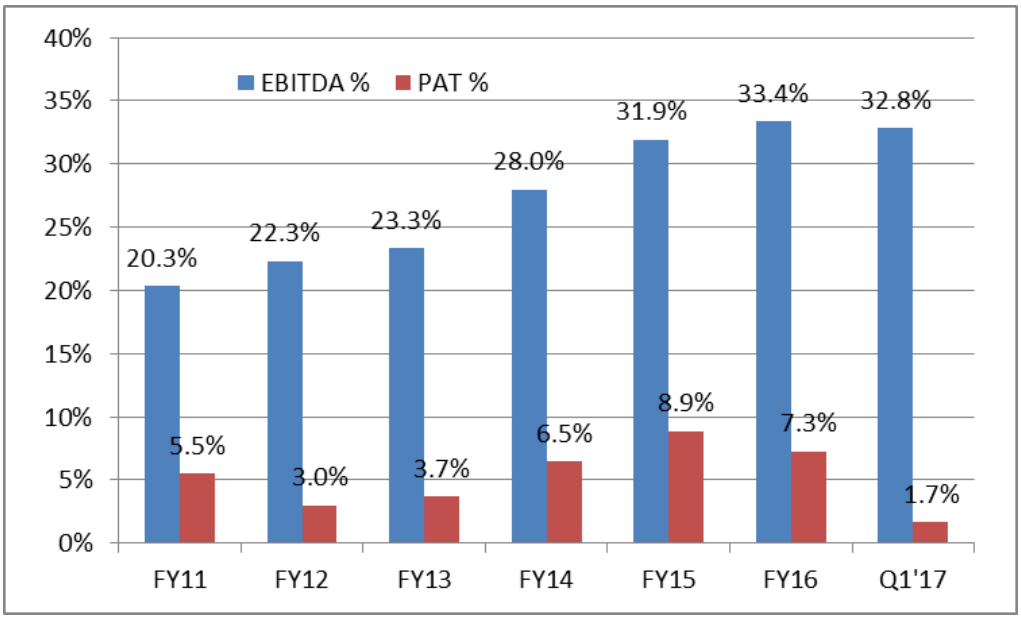

Table 1: ICL Reported Financial KPI's Trend

II. IUC workout has to recognise the Role of Spectrum and its associated cost

1. **Access spectrum is the centrepiece of concept of mobile communications and is the key 'raw material' in production of mobile telephony services.** Delivery of mobile telephony services is inconceivable without availability of relevant spectrum. It is the most critical network resource which is used for serving wireless subscriber's traffic including off-net incoming minutes terminating in the access provider's network.

2. **Another important feature that needs to be considered with respect to spectrum is the shift from administrative allocation of spectrum to a market determination of spectrum prices through auctions.** Earlier, access spectrum was given to the TSPs as a part of the license viz. spectrum was bundled with the license. However, since 2010 the Government has started assigning access spectrum to the TSPs through an auction process. The Authority in **'The Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulation, 2015 (1 of 2015)** had acknowledged that the cost of spectrum acquired through auction is significantly high and imposes large upfront costs on access service providers**. This is emphasized by its statement in the same regulation where in it had stated**, ***"the Authority is of the view that the entire cost of the 'work done' on carrying off-net incoming calls ought to be recovered from the MTC. Hence, inclusion of the cost of spectrum is necessary for ensuring full recovery of the cost incurred for the work done on termination service".***

3. **It is important to note that while spectrum constituted a relatively small proportion of costs involved in delivery of mobile voice telephony services in the pre-2010 era of the Indian wireless industry, spectrum related costs have multiplied manifold, especially after the previous three spectrum auctions conducted in February 2014, March 2015 and October 2016.** While a pan India license was erstwhile available for a price of Rs. 1,658 crores under the administrative allocation regime, one block each (5 MHz) of 900 MHz spectrum for pan India operations now costs in excess of Rs. 45,000 crores. The industry has invested an amount of nearly Rs. 90,000 crores as recently as in 2014 and 2015 for renewing the GSM spectrum for 20 years based on the policy of government in these two auctions. At this juncture, it is worthwhile to note that this indicated investment of nearly Rs. 90,000 crores can be reasonably split as Rs. 21,000 crores in February 2014 auctions and Rs. 70,000 crores in March 2015 auctions. More importantly, the costs of spectrum have only escalated further during the March 2015 auction process, averaging a multiple of 1.7 times of the set reserve price (the premium 900 MHz band saw escalation of 1.93 times). **Enforcement of such large costs for GSM spectrum renewal on the industry that too for a period of next 20 years mandates the need to include the latest spectrum related costs and the ROCE on same in any determination of IUC charge. Further, keeping in mind the escalation of these renewal costs, the spectrum cost per minute determined during the last round of consultation on the topic, warrants a re-assessment.**

III. Cost of Capital and Return on Capital Employed (ROCE) need to be recognized

1. **The Authority would acknowledge that the TRAI Act visualises protecting interests of service providers and consumers of the telecom sector together, so that the orderly growth of the telecom sector is ensured thereby.**

2. **Thus, the Authority has the responsibility of keeping the industry in a healthy state.** While this implies safeguarding interest of the consumer and ensuring adequate competition, the Authority needs to ensure the financial well-being of the industry and assess the impact of its policies on industry's financial health. It is important to note that while the Indian wireless industry remains one of the most competitive markets globally in terms of voice tariffs with 7 - 10 operators, it is also one of the worst in terms of financial health. The industry continues to reel under the mounting pressure of debt which has now risen to approximately Rs. 470,000 crores post the recent auction. The Authority cannot focus only on consumer interest, while the industry becomes financially unviable even for most efficient operators. We would like the Authority to

transparently share its views on financial health of the industry and how it proposes to address the same.

3. In various consultation papers, particularly those relating to valuation of spectrum and the IUC, industry has constantly given facts and figures in this regard and has pointed towards the declining returns for the leading players in the industry. The state of the industry today is that the top three players are not able to recover cost of capital and the other players (including BSNL and MTNL) are all loss making. With the recent developments of significantly higher spectrum cost and the entry of a new operator based on prolonged period of free services supported by a below cost IUC regime, the operators who are currently profitable are also likely to become PAT negative.

4. Despite the deteriorating financial health of the industry having been highlighted in multiple documents, the Authority has failed to take this into account and has come out with spectrum prices and IUC regime that would further worsen the financial health of the industry. There is little merit, if any in trying to increase competition in a market which already has 7-10 operators, while turning a blind eye to the financial health of the industry. (Other similar sized markets have only 3-4 operators compared to 7-10 operators in India. For e.g. China has only 3 operators). Further, international markets with higher intensity of competition have higher ARPU levels to sustain such high competition intensity, for e.g. US. The reduction in IUC rate at a time when the spectrum prices are being increased multifold is a clear example that no attention has been paid to the financial health of the industry. No industry will see consumer interest being served in the long run, when not a single payer in the industry is able to recover cost of capital.

5. We sincerely request and hope that the Authority will finally take into account the financial health of the industry in bringing any policy changes. It is essential to recognize that if the telecom operators are required to make investments, they should get a fair return on investment (ROI / ROCE).

IV. No clear Relationship between Technology and IUC

1. **The Advancements in network technology may not necessarily imply a reduction in overall costs for a TSP.** A telecom operator incurs several elements of cost that are independent of the technology being deployed, i.e. whether one uses Packet Switching based IP networks or Circuit Switching based TDM networks. These network technology-agnostic cost elements typically include:

a. Operational expenditure in form of:

i. Network expenses which mainly include costs towards Site Rental, Energy and Maintenance (O&M) of sites, etc.

ii. Cost of Acquiring and Servicing customers across 400,000 – 500,000 towns and villages spread over the country.

iii. Manpower and Administrative expenses required to support these services

iv. IT & connectivity cost

v. Marketing, advertising and other promotional costs.

vi. Government levies such as license fee charges including SUC

b. **Costs on account of**

i. Amortisation cost of spectrum which is the most significant investment toady and account for more than 50% of the gross fixed assets of leading TSPs.

ii. Return on Capital Employed for Spectrum

2. In a scenario where a TSP has to incur so many costs - most of which are technology agnostic – the Authority's claim that introduction of new technology will result in reduction of TSP's costs is incorrect. Further, no supporting data / evidence have been provided to substantiate the above claim.

We would urge the Authority to bear in mind that any realistic determination of IUC needs to take into account the above indicated cost elements after transparent discussion.

E. Only cost oriented or cost based termination charges can apply to India

I. **The design of IUC regime needs to balance disparate interests so that investments in network expansion and upgradation are incentivized while at the same time enhancing competition and consumer interest.** The regulator has also echoed the same view in its previous recommendation on the subject "The Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulation, 2015 (1 of 2015)" where it stated that *"While devising regulatory frameworks for telecom services in the country, the Authority has always aimed to balance the following twin objectives, viz.*

a. *to protect the interests of consumers - by way of ensuring adequate choice and affordable services to them by promoting competition and efficiency in the markets, and;*

b. *to create incentives for TSPs – by way of ensuring adequate (fair) returns on investment so as to stimulate orderly growth and innovation in the sector.*

II. At this juncture, it is important to closely analyse, understand and accept the present reality of the Indian telecom market under the current cost-based approach for IUC.

a. **India remains one of the most competitive markets with 7 – 10 operators per circle offering voice services, compared to a range of 3 – 5 operators in international markets globally.** Further, the DOT has permitted Virtual Network Operators in India. **Surely, the Indian consumer has a wide array of choice when it comes to choosing a TSP.**

b. **Indian voice tariffs are acknowledged as one of the lowest globally.** The equilibrium point of an affordable retail tariff is a function of the intensity of competition in the market. The hyper-competition in the country has not only imposed constraints on the operator's ability to raise retail tariffs (in fact the retail tariffs continue to decline) but has also ensured that these tariffs remains affordable for majority of Indians.

Thus, prevalence of hyper-competition in Indian telecom industry has safeguarded the interests of Indian consumers by ensuring more than adequate availability of choice and affordable telephony services.

III. However, in the Indian context, an additional factor that requires attention is the low penetration of telecom services in rural areas. Against a global average of 98.7%, the wireless tele-density in India is only 81.26% (Tele-density on active subscribers is even lower at 71.84% compared to global figure of 91.6%). While the rural penetration of wireless telephony services in terms of subscriptions as a percentage of population has significantly improved with passage of time, it still remains substantially lower than that the corresponding figure in urban markets. Against the urban wireless tele-density of 148.03%, the rural wireless tele-density is a low level of 50.95%. Further, keeping in mind the phenomenon of prevalence of multiple SIMs with the same subscriber, the actual number of wireless users in India will be still lower than what is indicated by the rural tele-density figure.

IV. **Several TSPs provide network access to bottom-of-pyramid / low income segment of the potential subscriber base (which are also characteristics of majority of rural subscribers). Such customers are known to majorly use their mobile for incoming calls. Thus, TSPs might initially have to incur losses while serving the outgoing voice call activity of such subscribers.**

V. **However, there is a social benefit in increasing the number of mobile users even if the incremental users have a very low usage and the priority for owning a mobile is to receive calls. More people are able to communicate and are contactable.**

A cost based MTC IUC regime ensures that the TSPs serving such subscribers at-least recover the cost of work done incurred for carrying the off-net incoming calls. This fair and reasonable use-based returns on the off-net incoming calls enables the TSPs to invest in rural areas.

VI. **On the contrary, the absence of a cost oriented MTC (such as one with Zero MTC as applicable under regulated BAK regime) where TSPs don't even recover the costs incurred on account of the work done by them in terminating off net incoming calls would discourage TSPs from investing in rural areas. In a phase where building and enhancing the telecom infrastructure in rural areas, and including all Indians under the umbrella of basic telephony services remains a policy and regulatory priority, BAK regime would seriously undermine this objective.**

As highlighted earlier in the section A.V.1 (Page 34-35), 2G networks are going to be vehicles of delivery of basic voice telephony services for another 300 – 400 million rural / economically weaker sections of Indian diaspora. **A below cost MTC or a regulated BAK regime would lead to death of 2G investments required to create the telecom infrastructure for serving aforesaid 300 – 400 million customers in the country.**

VII. The Authority had voiced similar views in its Recommendations for Accelerated Growth in Rural Telephony (dated 19th March 2009) where it had stated the below given points:

- *The issues in spreading the telecom services to Rural India are complex and multidimensional and deserve special attention.*
- *Communication is still a challenge in villages and remote places, while urban India witnesses a telecom revolution. The fruits of telecom liberalization have not reached the majority of rural masses.*

- ***In a market where margins are getting narrower, setting up of telecom infrastructure in rural areas is not very lucrative. To sustain this, the operators require facilitating measures to reach rural markets. There is a need for evolving the policy and regulatory environment necessary to encourage service providers to move to these apparently less lucrative markets.***

VIII. While substantial progress has been made in development of rural telecom infrastructure and rural tele-density have shown significant improvement from the time when the authority had given the above views, a lot needs to be still done in ensuring availability of telecom services for all rural Indians. **TRAI's policy interventions need to encourage service providers to not only continue their services in rural markets but also further expand the same.**

IX. In view of the above, a cost based IUC regime which fairly compensates TSPs for the costs incurred on account work done in carrying off-net incoming calls is necessary to incentivize TSPs to both continue investing and expanding in rural hinterlands of the country. Introduction of a below cost IUC rate or BAK regime at this stage of Indian telecom would only act as a deterrent for TSPs to invest in rural markets.

F. Present asymmetry does not justify BAK.

I. **BAK arrangements are best suited in an environment in which traffic flow between the networks is balanced, i.e. the off-net outgoing minutes and off-net incoming minutes are fully or nearly balanced. In such a situation, the BAK regime is unlikely to distort incentives for the TSPs in carrying off-net incoming calls.**

II. In India, the TSPs are at different stages of growth. While some networks are nearly two decades old, some others are only six to seven years old. Therefore, their sizes and particularly the profiles of their customers are vastly different. As a result, the traffic flows between the TSPs are significantly asymmetric.

III. While in its report in the Honourable Supreme Court in October 2011, it was stated that it would take another two years for the asymmetries in the traffic flows to converge to some form of equilibrium between the new and old TSP's, that had not transpired even at the time of previous consultation in 2014-2015. In fact, **the Authority had shown asymmetry in the region of 4-14% (for Pan India operators) in IUC Regulation 2015, and had further noted the following** in para 32 of the Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations 2015

"International experience shows that not many countries have adopted the BAK arrangement. BAK has not yet been mandated by regulatory fiat even in those jurisdictions which have matured telecom networks. In countries where the BAK arrangement has been adopted, it has, generally, happened not by a regulatory action but through voluntary action of the TSPs themselves. BAK regime has been implemented in some countries where the CPP regime has not been put in place; instead, a Mobile-Party-Pays (MPP) regime (in which both calling party and receiving party pay for the call) is in force in such geographies. ***In view of the fact that the CPP regime is the prevailing regime in India since 2003 and a significant asymmetry in traffic flows between the TSPs still exists, the case for implementation of the BAK regime remains weak even in the present day conditions of the telecom market."***

IV. **Further, this asymmetry of traffic has continued to worsen since the last regulation.** To illustrate the same, we are furnishing distribution of off-net incoming minutes on Idea network in the following table.

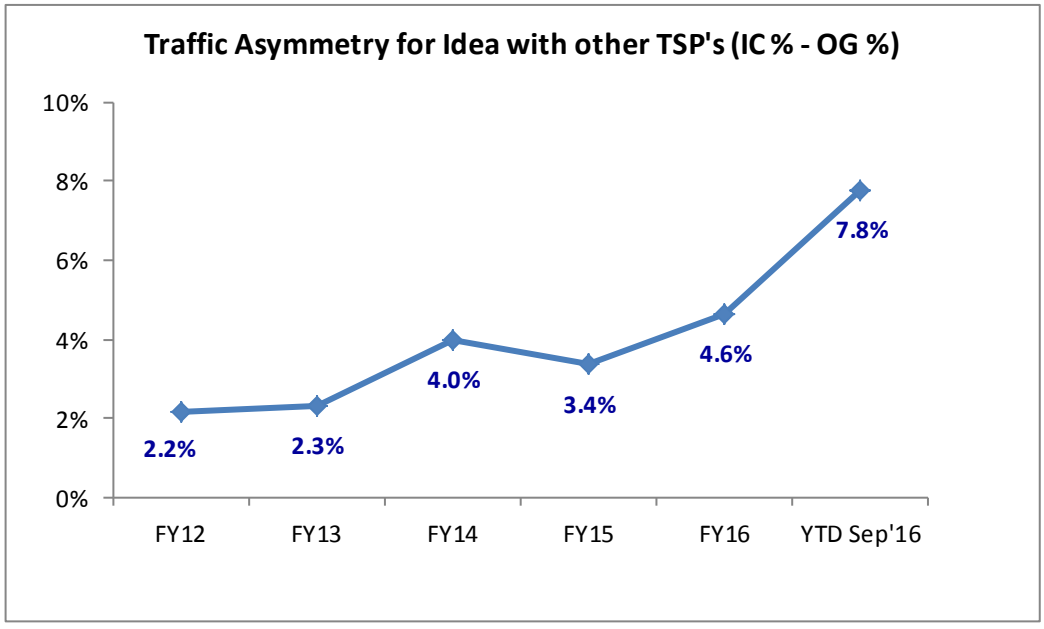

Table 2: Traffic Asymmetry trend of Idea with Rest of the Operators

Clearly, the asymmetry of traffic flow on our network has only worsened in recent past, in particular post Mar'15 regulation when IUC was set below cost. Further, with the advent of a new 4G operator who is offering free voice calls supported by below cost IUC rate, this asymmetry of traffic flow is only going to be worsened further as can be seen from our comments earlier. For the month of Sep '16, the level of asymmetry with the new entrant is as high as **89.8%**.

V. **By TRAI's own logic and rationale used in IUC regulation 2015, the above signifies that the BAK cannot be INTRODUCED. In fact, given the increasing level of asymmetry, it is essential that IUC rate reflects the full cost of termination of 31.5 paise/minute. The current IUC rate of 14 paise/minute which is below the full cost is resulting in continually increasing losses for existing operators.**

G. No logical or rational reason for BAK.

I. **Setting MTC at below costs or Zero level as under a BAK regime may result in degradation of QoS parameters.** In a scenario where MTC is set at below cost level, TSPs would not have sufficient incentives to carry off-net incoming calls on their networks. The Authority itself had stated in its 2015 regulation on IUC that *"they (operators) may choose not to maintain the same standards of quality for off-net incoming calls as they do for their outgoing calls by not augmenting required number of E1 ports at point of interconnection. This would degrade consumer experience and, in turn, make telecom networks much less valuable. This risk is accentuated when MTC is set as zero (i.e. BAK arrangement) because in this case, the wireless access provider would get no reimbursement at all for the underlying costs in terminating off-net incoming minutes. Therefore, they would have absolutely no incentive to carry off-net incoming calls on their networks*."

II. While one can argue that the issues of a TSP choosing not to maintain the same standards of quality for both off-net incoming and outgoing calls, or its refusal to carry any off-net incoming traffic can be addressed by enforcing the strict QoS norms that the authority has already laid out, such provisions are not always fool-proof. In fact, TRAI in its earlier recommendation on the topic through "The Telecommunication Interconnection Usage Charges (Tenth Amendment) Regulation, 2009" had noted that under the BAK regime *"As the service providers do not have to pay for termination of calls into other service provider networks they may offer plans with free calls which could load other service providers' networks".*

The Authority would also recall Paragraph 1.3 of its November 2014 IUC which inter *alia* provides ***"an IUC regime relates the transfer of network costs between service providers and thus affect the relative scale and prosperity. Therefore, the IUC regime should also ensure that the service provider does not pass on the burden of its own tariff decision to other networks involved in completing the call …".***

As illustrated by this scenario, **an originating service provider can potentially start 'dumping' huge volume of traffic on the terminating service providers' network necessitating the need for the latter to make large network investments for handling these large volumes of off-net incoming traffic for which it would receive no compensation. This would enable the originating service provider to easily pass on the burden of its own tariff decisions on to the terminating service provider who does not have any control on the volume of off-net incoming traffic** but is mandated to comply with QoS norms.

III. **It is a settled principle that IUC can transfer network costs between operators and thus affect their relative scale and prosperity. Any reduction in MTC in the current context would tantamount to extending subsidy to competing and originating operators at the cost of terminating operator. Further, it should be taken into cognizance that the existing operators virtually have no freedom to increase tariffs due to the prevailing competition in the retail market and/or market condition. Hence, unrecovered termination cost cannot be recovered from anywhere**.

IV. In a PS network (data calls) scenario where voice calls would be transported as data, the call receiving party will have to pay for data charges, implying applicability of RPP regime again.

V. It has been suggested that the continuance of the present regime of cost-based domestic termination charge would hamper the movement of the sector towards (i) deployment of more efficient technologies; and (ii) more innovative and customer friendly tariff offerings; and, in turn, it would be detrimental to the growth of telecommunication services sector. It has been further argued that, in case, a TSP continues to get a cost-oriented termination charge estimated on the basis of yester-years' network technology (such as 2G or 3G), where is the incentive for him to migrate towards a more efficient network technology (such as 4G) requiring capital investments in short-run. However, the progress and the on-going developments of the Indian wireless telecom industry suggest otherwise.

   a. Investment in new technology generally happens in conjunction with growing consumer demand and trends, along with the development of the necessary supporting ecosystem for the new technology. Despite launch of 3G services more than five years ago, only one-fourth of the Indian mobility subscriber base has adopted 3G smartphones while the number of users of mobile broadband services remains at only 149 million, i.e. at a level of 14% only (based on TRAI July 2016 release). The Indian incumbent TSPs have continuously done sufficient investments in new technologies based on customer demand and market scenario.

As an example, the following table illustrates the time series chart of introduction of new technologies (both 3G and 4G) by Idea Cellular, the corresponding network roll out (i.e. number of 3G/4G sites), consumer uptake of these services and the supporting ecosystem penetration (number of 3G/4G devices and 3G/4G device penetration as a % of total subscriber base)

Parameters	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017 est.
No. of 3G circles (own spectrum)	11	11	11	11	12	13	
3G subscribers as a % of total base in Idea 3G circles			3.0%	7.0%	10.6%	16.8%	
3G device penetration as a % of total base in Idea 3G circles				13.3%	24.4%	36.0%	
2G sites EoP in Idea 3G circles	47,450	53,433	57,711	64,349	73,213	83,012	
3G sites EoP		12,825	17,140	21,381	30,291	50,060	
3G sites as a % of 2G sites in Idea 3G circles		24%	30%	33%	41%	60%	80%

Parameters	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017 est.
4G subscribers as a % of total base in Idea 4G circles						0.7%	
4G device penetration as a % of total base in Idea 4G circles						7%	
2G sites EoP in Idea 4G circles						67,135	
4G sites EoP						14,643	
4G sites as a % of 2G sites in Idea 4G circles						22%	50%

As evident from the above table, the consumer adoption of 3G devices has been gradual reaching only 36.0% at end of FY 2016 despite introduction of 3G services 5 years back. While Idea Cellular has continued to roll out 3G sites in line with growing 3G device penetration over the indicated period, the adoption of new technology (3G) has been still lower at 16.8% of Idea's consumer base using 3G services at the end of FY 2016. Similarly, Idea Cellular has already introduced 4G technology in line with consumer adoption of 4G devices. **Clearly, introduction of new technology goes hand in hand with market readiness and development of relevant ecosystem.**

b. In the past 12 months, many incumbent operators have already rolled out the latest 4G technology in several parts of the country. **The introduction of 4G technology, that too, in a short span of time following launch of 3G technology in 2011 dispels the myth that present cost-based termination charge regime would thwart the migration towards a more efficient network technology.**

c. The Indian wireless market is characterized by a very high intensity of competition (7 – 10 operators per circle), which continues to put downward pressure on the retail tariffs. The Indian tariffs are already acknowledged as one the lowest globally. The Indian TSPs have

continued to innovate their retail offerings and offer a wide bouquet of tariff options such as talk-time recharges, minutes pack, special lower tariff packs and many more depending on the need of the individual consumer. Consumer friendly tariff offerings have flourished under the present IUC regime.

VI. Further, as explained earlier, the present cost based IUC regime is essential for continued fresh investments on CS networks which would be critical for providing voice telephony services to another 300 – 400 million Indians. Hence, **we do not see any merit in the claim of incompatibility of the present cost based termination charges regime with the objectives of deployment of more efficient technologies, offering innovative consumer tariffs and overall growth of the telecommunications sector. On the contrary, a BAK regime would hamper addition of new subscribers, especially in rural markets doing more harm than good as far as growth of telecommunication sector in India is concerned.**

VII. The Authority in para 2.9 of the IUC consultation paper has inter-alia stated *"Supporters of BAK regime may cite the following advantage of adopting the same:*

a. "It addresses the issue of market power of call-terminating networks"

b. "Determination of costs a complex process, further everyone will not agree to the same cost estimation"

c. "Termination charge becomes an effective floor for retail tariffs"

d. *"BAK a natural regime in IP based networks & IP networks are networks of future"*

However, each of these points warrants a closer assessment.

a. Call termination does allot some "market power" to operators in regimes where inter-operator agreements are allowed based on negotiations between them. However, in regulated regimes such as India **the termination charges are set by the Regulator and as such the call terminating networks do not have any "market power"**. Further, a cost based IUC regime founded on work done principle provides a fair compensation to the terminating networks, irrespective of the size of the operator.

b. The Authority in para 2.9 has stated *"…that the theory and practice of identifying an optimal termination charge is complex. The result is that any determination of a termination charge, even if done with great care and at a cost, could be disputed by a set of TSPs who perceive it to be loaded against them"*. The complexity involved in the determination of costs does not pose

an unsurmountable challenge that would mandate a move to the BAK regime. While there may be issues pertaining to complexity in accurate determination of costs, the existing cost based accounting methods (FAC/LRIC/LRIC+/Pure LRIC) are operational across many countries in the world and provide an effective way to estimate the optimal termination charge. These methods have become much clearer over time with implementation. Determining IUC rate by taking the costs from audited financial statements, apportioning these costs between voice and data, and dividing the **costs allocated to voice by the volume of minutes is accurate and has very little room for error. Further, determination of costs with some approximation is a much superior solution than making it zero merely because it is difficult to calculate**. Consequently, BAK regime (i.e. zero IUC), in an asymmetric traffic environment, would sacrifice the reimbursement of net costs to the terminated network TSP which it incurs on account of work done in carrying off-net traffic, in favour of no reimbursement at all which would be a disaster for the industry.

c. The retail tariffs currently prevalent in India are already one of the lowest globally by a big margin. Arguably, customers are not being deprived of any voice services because of high-pricing of voice services. Further, hyper-competition in the Indian telecom space is a much bigger influencer on retail tariffs than termination charges. As has already demonstrated and explained in the introduction and other parts
    i. A lower IUC rate does not result in lower cost for operators
    ii. There is no correlation between IUC rate and retail tariffs, as argued by the Authority in the consultation paper (please see our response to para 2.24 and 2.25 in Section D.VI of the Introduction, Page 13-14).

d. In IP based networks, the call uses data on both the calling and receiving party and both the calling and receiving subscribers pay to their respective TSPs for use of data. This is RPP (Receiving Party Pays) and NOT BAK as claimed by the Authority. Further, proclaiming BAK as a natural regime in IP based networks is a complete reversal from the Authority's earlier stance on Interconnection in IP based networks as indicated in its consultation paper "Migration to IP based networks (dated 30th June 2014)". As a part of that consultation paper, the Authority has clearly denoted three different principles for wholesale termination charges viz. Capacity based, Volume based and Quality of Service based. It is surprising that the Authority has now totally abandoned these principles, let alone even mention these in current consultation, and declared BAK as a natural regime. Moreover, keeping in mind the current low penetration of

devices / smartphones, the migration to full IP networks is not imminent and not relevant at this stage.

VIII. The Authority has itself mentioned that in countries where BAK arrangement has been adopted, it has, generally, happened not by a regulatory action but through voluntary action of the TSPs themselves. On studying the interconnect scenario in few of such countries, one can conclude that operators have largely moved on to BAK to cut regulatory / administrative costs of settlement in case of balanced / symmetric traffic while ensuring that their business interests are taken care of. Thus, operators have been allowed to recover their costs either from other operators (IUC in case of asymmetric traffic) or from the customers (RPP regime).

H. Idea recommendations on broad principles to be followed for IUC

We would like to reiterate the following principles are followed for review of IUC:

A. Approach to IUC has to be cost based.

Any interconnection regime has to be cost based. All relevant costs including Capital Expenditure (CAPEX) and Operating Expenditure (OPEX) need to be included. The relevant costs include the operational costs being incurred by the mobile industry today, the capital expenditure, the borrowing costs, the spectrum costs based on prices as determined in the recent auctions, related depreciation and amortisation charges, the return on capital employed, etc.

B. Spectrum Costs need to be considered:

The Authority had rightly noted in its consultation paper on IUC dated 19th November 2014, *"An additional feature that needs to be considered in the present IUC exercise is the shift from administrative allocation of spectrum to a market determination of spectrum prices through auctions. The auction regime introduced in India since 2010 has imposed large upfront costs on access service providers for obtaining access spectrum. While spectrum is an intangible asset, the auction prices paid by service providers yield benefits over the tenure of license and the amortized cost of the spectrum may need to be treated in a similar manner as CAPEX"*.

Clearly above was borne out in the auctions held in 2015. Going forward, a huge financial investment in the form of spectrum cost will need to be incurred by various TSPs on ongoing basis. During last IUC regulation of 2015, the Authority while recognising the spectrum cost, failed to assign the correct value to the same.

The full impact of such spectrum to be procured from auctions would have to be necessarily considered while undertaking any cost exercise.

C. Recognise the asymmetry of traffic and the impact on terminating operator.

The IUC regime in place was formulated for normal traffic flow. Even the Authority in its IUC 2015 Regulation has represented (with data) that asymmetry existing between operators was in range of 4-14% **(for Pan India operators)**. However in current situation, wherein new operator is pumping tsunami of one-sided traffic, the traffic asymmetry has become acute.

While the new operator in question will pay incumbents the Interconnect Charge, it may be noted that the IUC regime is designed for normal market traffic flows, with reasonable asymmetry between Originating and Terminating traffic. It is not designed for abnormal, humungous, artificial, and one-sided traffic flows. Our network is subjected to real work done, and real costs incurred, to terminate such traffic, and the below cost IUC quantum does not even cover such costs. This abnormal traffic would bleed existing operators financially, and appropriating the network capacity which otherwise could be deployed more fruitfully, and also marring customer experience of subscribers.

D. Impact on rural coverage

As rural penetration is still low (in the range of 50%) and mostly existing GSM operators with large volume of terminating traffic are expanding into these rural areas, any negative change or reduction in the MTC will hasten to an end the journey of rural mobile telephony coverage expansion. This will be contrary to the stated objective of the Government that aims at bridging the digital divide. If MTC is reduced by the Government, a portion of network coverage assets will have to be relocated for reasons of non-viability and might also result in the need for some un-depreciated assets to be written off.

The Authority will agree that the most important element that allows an operator to invest and rollout for rural and low income users with their typical high incoming to outgoing call ratios, is the level of termination charge that it collects from the calls coming in to such users. **Any downward revision in MTC, thus carries a grave risk of reduction in geographic coverage in rural belts and impacts the connectivity to hundreds of millions of subscribers, and other consumers trying to reach them.**

E. Impact on competition

The TRAI has itself acknowledged in the past that if the interconnection price is set "too low" then inefficient competitors may enter the market.

If MTC is reduced, there would be large geographical pockets in India that will suffer a blackout of mobile services, the coverage will shrink and a large portion of existing rural customers will go out of service or quality of service will suffer as Incumbent operators will not have any incentive to invest in rural networks or maintain its quality.

F. Financial stress in the Industry

As per published data of TRAI, it is observed that the wireless industry is making losses for last few years and industry's Return on Capital Employed (RoCE) is abysmally low. Such financially stressed status acts as a disincentive for any future investments in the sector. In fact, overall debt level for the Mobile industry has risen to whopping ~ Rs 470,000 crores (post the Oct'16 auctions) against a consolidated gross block investment of over Rs. 900,000 crores. No Industry can sustain such stress for long. Moreover the hyper competitive environment driven by large number of players and below cost IUC in the market do not provide any flexibility for tariff revisions/cost recovery to improve the situation. We would like to know from the Authority as to what steps do they plan to take to improve the health of the industry. In our view the least the Authority can do is to restore the IUC rate to full cost so that the operators do not incur losses on this account.

The following table details Idea's Free Cash Flow of last 6 financial years. This clearly indicates cumulative Net Negative Cash flow of Rs. 42,444 crores from its operations and highlights severe financial stress despite being one of the fastest growing and third largest telecom operator in India. Post the recent auctions, Idea's leverage will increase to over Rs. 50,000 crores with a leverage ratio of ~4.

Rs Crores	FY11	FY12	FY13	FY14	FY15	FY16	Total FY11-16
Profit After Tax	838	604	1,008	1,793	3,477	2,677	
Depreciation & Amortisation	2,173	2,728	3,214	4,129	4,899	6,232	
Deferred Tax	64	273	475	508	75	1,180	
ESOP Charge	15	4	-	4	31	32	
Cash Profit	3,090	3,608	4,697	6,435	8,482	10,120	36,432
Capex	3,619	4,251	3,772	4,356	4,688	9,829	
Spectrum	5,769	2,031	-	-	10,424	30,138	48,362
Free Cash Flow	**-6,298**	**-2,674**	**925**	**2,079**	**-6,630**	**-29,847**	**-42,444**

Table 3: Idea Financials trend highlighting Negative Free Cash Flows

With high spectrum costs, the amortisation and interest costs have been increasing exponentially as shown below and company will incur a loss going forward based on current trends which are further deteriorating due to predatory pricing by new entrants supported by below cost IUC rate –

Rs Crores	FY 14	FY 15	FY 16	FY 17 (Q1x4)	FY 17 adj. for auction purchase	% increase over FY15
EBITDA	7,286	9,673	11,824	12,272	12,272	27%
Depreciation	3,462	4,143	4,748	4,892	4,892	
Amortisation	631	712	1,451	2,753	3,420	**381%**
Interest	587	479	1,615	3,631	4,870	**916%**
PBT	2,605	4,339	4,010	996	-910	**-121%**
Tax	916	1,529	1,394	354		
PAT	1,689	2,810	2,617	642	-910	**-132%**

The entire industry is seeing declining return on investments. Given below is the trend of ROCE for Idea, which is among the top two operators in the industry in terms of financial performance (most industry players have – ve ROCE).

Rs. Crores

Financial Year	Avg. Capital Employed	PAT + Interest (less Tax)	ROCE
2008-09	12,225	1,363	11.1%
2009-10	16,013	1,267	7.9%
2010-11	19,043	1,084	5.7%
2011-12	23,198	1,164	5.0%
2012-13	25,409	1,323	5.2%
2013-14	30,365	2,070	6.8%
2014-15	34,931	3,120	8.9%
2015-16	49,308	3,670	7.4%
Extrapolated based on Q1FY17 financials adjusted for additional spectrum acquired in Oct'16 Auction	70,278	2,313	3.3%

ROCE has seen some improvement till 2014-15 post touching a low of 5% in 2010-11. However, post the reduction in IUC rate from 20p to 14p w.e.f. Mar'15 and the high spectrum costs, the ROCE has started declining again in FY15-16 and will touch the worst ever figure in FY16-17. As can be seen in the last 10 years, the company has never been able to recover its cost of capital (WACC @ 12%) despite more than 20 years of operations and an investment in gross fixed assets which will be ~ Rs.120,000 crores by Mar'17. This has been mainly due to the following -

a. High number of operators (9, despite several licenses having been cancelled) not seen in any other country because of indiscriminate issue of licenses in 2008 and efforts to increase undue competition to the detriment of the financial health of the industry.
b. More competition beyond a point is detrimental to consumer interest with operators not generating enough profits to invest – with lowest tariffs in the world even market leaders in India do not recover their cost of capital.
c. High Spectrum Costs.
d. Persisting regime of below cost IUC, which has worsened over time, as the Authority has arbitrarily fixed IUC without transparently sharing how the costs have been determined.

G. Promote efficient network roll out

TRAI has earlier recognized that 'good interconnection arrangements promote efficient infrastructure developments providing incentives to operators to build network and use other networks'. While most of the investments in telecom infrastructure, are by only few operators, given the fact that the telecom investment has a direct correlation to the GDP growth of the country, any shrinkage of these large investments as a result of reduced MTC will be a colossal national waste, and will shake investor confidence, making it difficult to attract investments for future country needs.

H. Follow principles of fairness, transparency. TRAI has the duty and responsibility to:

i. Disclose to industry participants a detailed description of the specific cost based approaches (LRIC, LRIC+, etc.) it was considering using to calculate the MTC;

ii. Provide industry participants with sufficient information to understand if and / or how the cost based approach would be applied, if at all, so that they could properly understand how the application of each different approach would impact their businesses;

iii. Provide industry participants with sufficient time to properly consider and analyse each of the different proposed cost based approaches;

iv. Undertake consultation with industry participants at a time when the proposed approaches are being finalized.

Without prejudice to the above, we have been consistently maintaining that cost oriented or cost based approach is the only option available for regulated tariff for Termination charges. The same was also submitted in our earlier response to IUC consultation paper dated 19th Nov, 2014.

Q2. In case your response to the Q1 is 'Cost oriented or cost based termination charges', which of the following methods is appropriate for estimating mobile termination cost?

(i) LRIC+

(ii) LRIC

(iii) Pure LRIC

(iv) Any other method (please specify)

Please provide justification in support of your response.

Idea Response:

Idea recommends that Fully Allocated Cost (FAC) model is the only appropriate model be used for cost determination in the Indian context. **Based on Idea's reported financials, Mobile Terminating Charges per minute under FAC is 31.5 paise/minute as detailed in section below.** **In case the Authority considers LRIC approach, we submit that the same be transparently discussed for correct determination.** **Based on model computed by Idea, Mobile Terminating Charges per minute under LRIC is 29.6 paise/minute.**

Please also refer to the Idea submissions made in the summary submissions.

With respect to LRIC and its variants we would like to submit that LRIC is computed based on model of hypothetical operator involving multiple assumptions. Authority has rightly highlighted in its Explanatory Memorandum to IUC Regulation 2009 that *"…it would not be appropriate to use a model, which is complex, subjective and does not seem to confer any great advantage for calculating mobile termination charge. On the other hand the top down model taking data from annual report, account separation report etc. of the service providers with proper normalization and adjustment would be less subjective, verifiable and would not lead to of much difference in estimating the termination charge."*

We would also like to submit following comment on LRIC;

a. **It is based on theoretical network architecture and difficult to replicate in practice with actual ground realities varying across vast geographies**
b. **Requires multiple data points in turn requiring multiple assumptions**
c. **Unlike the situation in India, it is adopted in countries where much higher mobile penetration levels and full rural coverage has been achieved**

Fully Allocated Cost (FAC) on the other hand has the advantage of simplicity for computation as well as verifiability. Based on Idea's reported audited financials after allocating costs between voice and data, mobile termination cost per minute for Idea works out to be **36p per minute under FAC** as tabulated below.

(Ps per Min)	Q1 FY17	FY16	FY15	FY14
Relevant Opex Cost	14.9	14.0	14.9	16.2
Cost of Capex	7.1	7.1	7.9	9.2
Relevant Opex & Capex Cost for MTC	**22.0**	**21.0**	**22.9**	**25.4**
Cost of Spectrum	9.8	6.5	4.4	3.9
Licence Fees & SUC	4.2	3.6	3.4	3.7
Mobile Termination Cost under FAC	**36.0**	**31.2**	**30.7**	**33.0**

Table: Mobile Terminating Charges per minute trend under FAC method on Idea's reported financials

TRAI as per its report dated 29th October 2011 submitted to Hon'ble Supreme Court has detailed the methodology of computation of Mobile Termination Charges based on FAC, in which it has considered Sales and Marketing, Legal & Audit cost as non-relevant and also considered only 20% of General and Administrative Expenses as relevant cost. Without Prejudice, Idea considers such exclusion as without any logic. For example, Telecom service provider incurs cost to acquire customer which is categorized under Sales and Marketing, and since a customer acquired is not only for making outgoing call but for outgoing as well as incoming call, excluding such costs for determining Mobile Termination Charges only causes under recovery of actual work done.

However, even following the methodology enumerated by TRAI in its above said 2011 report, mobile termination cost per minute for Idea works out to be 31.5p per minute under FAC as tabulated below.

(Ps per Min)	Q1 FY17	FY16	FY15	FY14
Relevant Opex Cost [1]	10.9	10.0	10.8	12.0
Cost of Capex	7.1	7.1	7.9	9.2
Relevant Opex & Capex Cost for MTC	**18.1**	**17.0**	**18.7**	**21.1**
Cost of Spectrum	9.8	6.5	4.4	3.9
Licence Fees & SUC	3.7	3.1	2.9	3.2
Mobile Termination Cost under FAC	**31.5**	**26.6**	**26.0**	**28.2**

Note 1: Relevant Opex computed excluding 80% of G&A, Sales, distribution & Mktg & legal cost as computed by TRAI's as per its Report dtd 29-Oct-2011 to Hon'ble Supreme Court. Idea is in-principle not in agreement of such exclusion as it is without logic but even considering such exclusion derived MTC is much higher then current MTC set by Authority causing severe under recovery and losses to even efficient TSP's.

Table: Mobile Terminating Charges per minute trend under FAC (TRAI method) for Idea

As evident from the table, MTC under FAC method up to Relevant Capex and Opex cost excluding cost of spectrum has shown a decline of 14.6% over last 3 years. As already shared in previous section also, this clearly proves that Idea is consistently focused on being cost efficient and benefitting from the adoption of new technology and volume growth. It also clearly allays any fear that incumbent TSP's would gold plate their cost under FAC method. Spectrum costs is the only component showing steep increase of 2.5 times which is because of the steep increase in cost of spectrum as per government policy. **Hence, we recommend that Authority should adopt FAC method for estimating mobile termination cost. We will be pleased to engage with the Authority to explain our working if required.**

We believe that FAC model is the only right appropriate for Indian situation given the following situation –

a. India is in a high investment phase with the highest ever investment being made for both spectrum and capex for network rollout.
b. Traffic Asymmetry is increasing thereby resulting in losses for efficient operators due to below cost IUC rate and constraining their ability to make desired investments. As covered in the section H.F (Page 58) on Financial Health, the telecom industry has about the highest gearing ratios and unsustainable negative cash flows.
c. Authority has stated *"Though market costs of telecom networks declined significantly, incumbent TSPs continued to carry historical costs, albeit depreciated, on their balance sheets. Since the incumbent TSPs had an incentive for gold-plating their costs, the information on costs*

furnished by them in the ASRs started becoming more and more removed from the actual level of current costs. Further, ironically, the incumbent TSPs were being rewarded for their inefficiencies, if any, in running their networks; because full historical costs were being recovered through the termination charges". **The statement is incorrect and shows a clear lack of understanding of facts and data on record and a clear bias against incumbent operators.**

The following may be noted –

i. Incumbent TSPs have made continual significant investments in new technology with the growth of device ecosystem with the customers (please refer section G.V.a under response to Q1, Page 52)

ii. Most of the investments of incumbent operators are of more recent times and there is no significant legacy factor. It may also be noted that most benefit of reduction in equipment prices in USD terms over the years has been taken away by the depreciating INR.

iii. In any case if we look at the components of costs shown above, out of the total cost of 31.5 paise / minute, it is only the cost of Capex and ROCE on the same being 7.1 paise / minute which is dependent on historical costs. The remaining costs of 24.4 paise / minute are all based on current costs which reflect the current environment. These are 10.9 paise for opex, which is all based on current opex levels which are independent of technology, 9.8 paise for spectrum which is based on recent spectrum costs determined in auctions and License Fee and SUC cost of 3.7 paise which is again dependent on government policy. **Hence, the argument on gold plating of costs is incorrect and shows a bias against incumbent operators and a predetermined mindset that the IUC rate needs to be brought down without even looking at facts and data.**

d. There is no clear definition of the LRIC model and it is very subjective by nature – it is based on assumptions of a hypothetical operator rather than facts. Depending on the assumptions, we can have a wide range of results. In case of FAC, it is based on audited financial statements and also cost data which is certified by a cost auditor and filed with TRAI. There could be a limited range of variations because of different stage of evolution of TSPs, but the range would be narrow. In any case the cost can be taken to be an average of all operators who make a profit (if there is a concern that inclusion of data of inefficient loss making TSPs may increase the average cost for industry). While our FAC cost based on relevant costs defined by TRAI is 31.5

paise per minute, we are sure that the cost per minute of the MOST EFFICIENT operator in India will not be less than 30 paise per minute, which is still much higher than the current below cost IUC rate of 14 paise per minute.

e. Authority has supposedly used the LRIC model while fixing the last IUC rate of 14 paise per minute. Despite several requests and reminders, the Authority has not shared the working of the LRIC model and the only conclusion that can be drawn from there is that given the subjectivity of the LRIC model and the fact that the cost derived is much lower than the actual FAC in India and hugely lower than the termination costs prevailing in other large comparable markets, the Authority feels that they will not be able to support their own model. This is especially relevant for spectrum costs where the spectrum cost of 0.78 paise per minute with the high spectrum costs prevailing in India is beyond our comprehension.

Without prejudice to our above submissions in support of FAC model, we have the following points on the LRIC model –

a. In case Authority feels that LRIC model is the right model to be used despite whatever has been stated in the foregoing paras in support of it not being suitable for the India context, the Authority must first bring out a white paper to explain the LRIC methodology being adopted by the Authority along with the assumptions being followed. Currently no one is aware of the LRIC model and there is no literature available which will give a clear explanation of LRIC. Different countries have used different variants and while cost accounting based models are understood commonly by all, there is no clarity on LRIC model.
b. If LRIC model has been used for the determination of cost last time by the Authority, the Authority should first transparently disclose the model and calculations and allow the TSPs to provide their comments on the same. Post this consultation process on the model itself and a clear definition of the model, each TSP can be asked to provide calculation of cost under the clearly documented LRIC model.

Given this background, we have done calculations under LRIC model as we understand it for four of our circles, one each from Metro, A, B and C category circles as tabulated below.

Ps per min	Metro	A Category	B Category	C Category	All India (Weighted Avg)
LRIC cost	21.4	15.2	18.2	19.7	17.4
Common cost	8.8	4.9	4.7	3.8	5.3
Spectrum cost (including ROCE @15%)	1.4	6.7	9.8	1.0	6.9
Mobile Termination Cost	31.5	26.8	32.7	24.5	**29.6**

Table 5: Mobile Terminating Charges per minute under LRIC model

The cost for an incoming minute based on an ROCE of 15% on Capex and Spectrum costs for individual circle varies from 24.5 paise / minute to 32.7 paise / minute and the weighted average is 29.6 paise / minute. This is also over 2 times the current IUC rate of 14 paise / minute, signifying the under recovery which needs to be corrected. We will be pleased to engage with the Authority to explain our working if required.

Q3. In view of the fact that the estimates of mobile termination cost using LRIC method and LRIC+ method yielded nearly the same results in year 2011 (as filed in the Hon'ble Supreme Court on 29.10.2011) and in year 2015 (as estimated for the Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015 dated 23.02.2016), would it be appropriate to put to use the estimates of mobile termination cost arrived in the exercises of year 2011 and year 2015 in the present exercise?

Idea Response:

As per our response to Q2 above, Idea recommends FAC method and following any variant of LRIC will be wrong estimation of Mobile termination cost for Idea.

The specific question asked is would it be appropriate to use the estimates of mobile termination cost arrived in the exercises of year 2011 and 2015 in the present exercise. This question cannot be answered unless we know the complete details of calculations done in 2011 and 2015, which despite our several requests have not been provided by the Authority. It is difficult to comment whether the model is faulty or the model is right, but the calculations are incorrect without knowing the actual calculations. In fact the reality is that -

- **Our own FAC and LRIC calculations give a much higher figure of cost per minute as already explained in response to earlier questions.**

- **The IUC rate fixed by the Authority at 14 paise is much lower than all other benchmarks of comparable markets provided by us (the lowest IUC rate in any market is equivalent of 59 paise per minute for Malaysia (for China it is 40 paise per minute, but in a RPP regime and hence the effective recovery on incoming call in China will be higher).**

- **It is clear that there is some error in the model and the calculation, otherwise we do not see any reason for Authority's unwillingness to share the information. It is a matter of grave concern that the IUC regime of the country is being managed on arbitrarily determined IUC rates with total lack of transparency.**

Further, Idea submits that MTC computed as per LRIC model has been challenged in Gujarat High Court in 2015 and the matter is sub-judice. We once again reiterate our concerns on the calculation made by the Authority in 2015.

1. **Calculation of LRIC of 11.83 paise is not shared or transparently computed.**

2. **Spectrum cost of 0.78 paise per min. by TRAI is incorrectly calculated & grossly understated. As per our calculation based on Q1FY17 cost of spectrum, the cost comes to 9.8 paise per minute.**

3. **License fee & SUC cost has not been considered by TRAI in the computation. As per our calculation this comes to 3.65 paise / minute.**

4. **Incorrect mark up of 10% instead of 15% on common cost earlier followed by TRAI. In any case we believe that the common costs should be determined from actual costs and not calculated in ad-hoc manner as a % of LRIC costs.**

Without prejudice to our submission that FAC is the correct cost methodology to be adopted, even if we take the LRIC cost of 11.83 paise per minute calculated by the Authority as correct for the time-being , the calculation would be as under, where the IUC would be 27 paise per minute for Idea after making the adjustments as stated above. This is as under -

Working of IUC Cost		As per TRAI	For Idea
Costs as Considered by TRAI			
Cost per minute as per LRIC model	paise / min	11.83	11.83
Markup for common cost (TRAI-10%/Idea-15%)	paise / min	1.18	1.77
Spectrum cost per minute (Q1FY17)	paise / min	0.78	9.80
		13.79	23.40
Costs not considered by TRAI			
LF & SUC (Q1FY17)	paise / min	-	3.65
Total Mobile Termination Cost		13.79	27.05

It appears that if the above stated adjustments are made to the cost calculations done by the Authority, we will come close to the LRIC costs calculated by us for Idea (29.6 paise per minute based on LRIC cost for Q1FY17). Hence, the issue is the erroneous calculation done in 2015.

As explained in our summary submissions, Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015 dated 23.02.2016 have been challenged and the matter is sub-judice in the Gujarat High Court. Without pre-judice we would like to submit that estimated

mobile termination cost arrived by the Authority using LRIC method and LRIC+ method both in year 2011 and in year 2015 was without any detailed deliberation or transparency. Authority would appreciate that unlike termination cost arrived by Fully Allocation Cost (FAC) model which is based on audited and published cost records and standard Accounting and Cost methodology, computation of LRIC is based on multiple assumptions. These assumptions takes into account spectrum holding, technology deployment, handset ecosystem, busy hour usage, etc. Since in Indian context each of these mentioned factors are fast evolving and changing, deploying LRIC model computed based on assumptions considered will yield varying results and needs to be thoroughly studied and debated.

We would like to highlight the report dated 10-Mar-2015, "MCT Review 2015-2018: Mobile Network cost modelling[1]" submitted by Analysys Mason under commission by Ofcom which was based on similar detailed consultation and review exercise of costing model of Mobile Network by all operators in which the Annex B lists out over 26 areas which required correction or adjustments based on error identified in structural calculation of model used in 2014. It demonstrates requirement for detailed consultation to estimate Mobile Termination cost as near to actual cost to ensure efficient operators are not wrongly penalised by under recovery and encourage them to continue rollout and deploy new technologies.

[1] https://www.ofcom.org.uk/__data/assets/pdf_file/0029/76385/mct_final_statement.pdf

Q4. If your response to the Q3 is in the negative, whether there is a requirement of running the various LRIC methods afresh using the information on subscriber, usage and network cost for F.Y. 2015-16 for estimation of mobile termination cost?

As explained in our response to Q1, Q2 & Q3, we believe that Fixed Allocation Cost model is the only appropriate methodology to correctly estimate mobile termination cost in the Indian context.

We are not in a position to respond whether the LRIC model of 2015 is appropriate or we need to run LRIC models afresh, until we get the details of the model, the costs included and the calculations done in 2015 to arrive at the termination cost. Yes, as mentioned in response to Q3, there is a clear case of erroneous calculation / model in 2015, which needs to be rectified. We urge the Authority to share the complete details of 2015 calculation without further delay. In any case if the Authority wants to compute Termination cost using LRIC model, then we would recommend Authority to do detailed consultation on the model itself including explaining their understanding of the model and various assumptions to be considered in the LRIC model in transparent manner before arriving at any decision. Different countries have had different variants of LRIC and as opposed to FAC which is based on standard cost accounting principles, there is no clear standard for calculating costs under LRIC model.

Q5. In what manner, the prescription of fixed termination charge as well as the mobile termination charge from wire-line networks as 'zero' through the Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015 is likely to impact the growth of the Indian telecommunication services sector as a whole? Please support your viewpoint with justifications.

Idea Response:

1. **The prescription of fixed termination charge as well as the mobile termination charge from wire-line networks as 'zero' through the Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015 has resulted in severe losses to wireless operators due to aggressive pricing by wireline operators supported by Zero MTC.** This is shown below.

Period	Incoming MOUs from Landline	Outgoing MOUs to Landline	Incoming minus Outgoing MOUs	YOY Increase	Net Annualised IUC Billing @ 20p/min (Rs.mn)	
A	B	C	D=(B-C)	E	F = (D X 20p)	
Oct-Dec'13	1,316	644	672		538	
Jan-Mar'14	1,295	618	677		541	
Apr-Jun'14	1,333	630	702		562	
Jul-Sep'14	1,350	632	718		575	
Oct-Dec'14	1,312	603	709	6%	568	
Jan-Mar'15	1,350	605	745	IUC reduced from 20 p to Zero		
					Annualised Loss @ 20 p/min on asymmetric traffic	Annualised Loss @ 31.5 p/min on asymmetric traffic
Apr-Jun'15	1,516	641	875	25%	700	1,103
Jul-Sep'15	1,671	650	1,021	42%	817	1,287
Oct-Dec'15	1,658	626	1,033	46%	826	1,301
Jan-Mar'16	1,731	608	1,123	51%	899	1,416
Apr-Jun'16	1,775	616	1,159	32%	927	1,460
Cumulative increase since change				63%		

Table: Increase in Wireline traffic asymmetry and loss due to IUC set to zero for Idea

As can be seen from the table above, the annual increase in asymmetric traffic which was 6% when the IUC rate was fixed at 20p, has jumped significantly and has increased by 63% in 15 months since the IUC has been abolished (i.e. fixed at zero). The annualized loss for Apr-Jun'16 for Idea is Rs.92.7 crores (Rs. 146 crores @ 31.5 paise/minute) and given that Idea has nearly 18.9% of mobility revenue market share, this implies an annual loss of approximately Rs.500 crores (approx. Rs. 770 crores) for the wireless operators in totality. This is a huge cross subsidization being done by wireless subscribers to wireline subscribers, which is enabling wireline subscribers to inflict further damage to wireless subscribers through predatory pricing.

2. **The prescription of fixed termination charge as well as the mobile termination charge from wire-line networks as 'zero' has resulted in predatory pricing from BSNL (Cross subsidising one category of service providers and thereby enabling them to offer below cost / free services is NOT innovative pricing. Every low price cannot be called innovative pricing) which is being forcibly subsidized by the wireless subscribers.**

Examples of the promotions / plans rolled out by BSNL since the revision in IUC to zero include:

- **Free Calling during night hours:** In May 2015 BSNL introduced unlimited free calling during night hours from its Landline phones to all Landline phones and Mobile phones of all service providers' network on All India basis. As per this feature Landline Customers can make unlimited calls to all networks across India from 9pm to 7am free of charge.
- **Free calling on Sundays:** On Independence Day 2016 BSNL further incentivized its customer base by offering free calls for that day (15th August 2016). It also announced that henceforth BSNL customers would enjoy free calling from their Landline phones (to any Landline or mobile in the country) on every Sunday.
- In August 2016 BSNL also launched their "EXPERIENCE LL49" Plan where the Monthly rental for the Landline was slashed to Rs 49 with zero Installation Charges. Like other customers these customers would enjoy free unlimited Night calling along with Free unlimited calling on Sundays.

3. **The performance in terms of number of wireline subscribers has continued to decline even after the prescription of BAK for wireline networks. The quantum of reduction reduced from -2.0 mn in FY12-13 to -1.7 mn in FY 13-14 without any change in IUC regime. Despite the subsidy given by the Authority, the number of wireline subscribers continues to decline.**

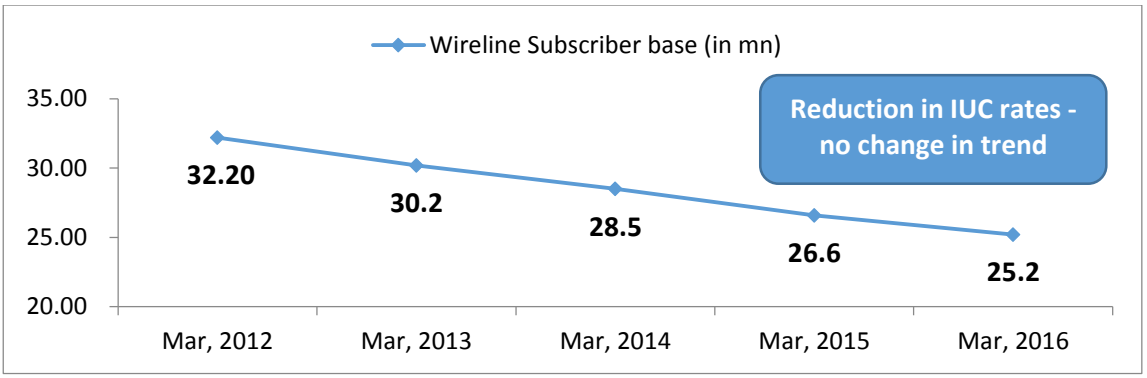

Chart: Annual trend of Wireline subscribers as reported by TRAI

4. In conclusion there is no improvement in performance of wireline services. They have just benefited at the cost of wireless operators and passed on those benefits to subscribers in the form of predatory pricing. In fact this has resulted in exactly what has been stated in para 2.11 of the consultation paper –

"At the same time, it is argued by the detractors of BAK method that BAK may result in 'a race to the bottom' in which case the TSPs may be incentivized to set prices well below costs to enter new market segments and capture larger market share. This may result in inadequate investment in network infrastructure and consequent inefficiencies in capturing positive externalities. This is particularly important for India which suffers from poor rural coverage, both in fixed line and mobile. As on 31.05.2016, the rural wireless tele-density was 51.27 while rural wireline tele-density was only 0.47."

We recommend Authority should immediately reinstate the termination charges between wireline and wireless network.

Q6. Whether termination charges between different networks (e.g. fixed-line network and wireless network) should be symmetric?

As explained in preamble and in response to previous question, we recommend termination charges be arrived basis work-done principle and hence be computed based on Fully Allocated Cost. To determine MTC for different network cost needs to be arrived and in case values are similar then termination charges can be symmetric but in case they are different then it can be asymmetric to reflect actual cost. As detailed previously as cost based on Fully Allocated Cost method can be easily computed based on reported financials and Accounting Separation Record which are readily available and verifiable, there would be full transparency and acceptable by all.

Q7. Which approach should be used for prescribing International Termination Charge in the country? Should it be kept uniform for all terminating networks?

Idea Response:

At the outset, we agree with and endorse the following aspects related to International Termination

- **Issue of whether the International and Domestic IUC should be the same:**

  - TRAI had set the International Termination Rate (ITR) to Rs 0.40/ min in the IUC regulation of 2009, when the domestic termination rate was set at Rs 0.20/ min. Thus there is a precedent of TRAI having set a differential rate for ITR. TRAI then further increased the ITR to Rs 0.53/ min in the IUC regulation of 2015, when it reduced the domestic termination rate to Rs 0.14/ min.

  - As elucidated clearly by TRAI, this is necessitated by the fact that the India suffers from a very low ITR in comparison with other countries where the ITR is typically 10 times the current ITR in India. In fact on an average, the Indian ILDOs (and in turn the Access providers) pay around Rs 4/ min to their International counterparts for outgoing calls.

  - This is leading to a loss of revenues for the Indian ILDOs as well as the Indian Access Providers. This is also loss of Forex earnings for the India. On the other hand, the foreign carriers see a very low cost of termination into India.

  - In addition, this has also led to a very skewed ratio of Incoming to Outgoing International calls of 18:1 as pointed out by TRAI in the CP. In fact for Idea, this ratio stands at 60: 1. This higher asymmetry in for Idea is due to the fact that the Outgoing International calls from Idea network are lesser than Industry average predominantly due to rural bias of Idea's retail subscriber base and also due to lack of Idea's presence in the Enterprise market. Such skewed ratio puts the Indian Operators at a negotiation disadvantage vis-à-vis their foreign counterparts as they have a much larger (India Incoming) traffic to trade as compared to Indian operators. This results in disparity in negotiating power in ILD business which essentially is similar Export-Import scenario. Thus there is a need to correct this traffic imbalance by pricing parity.

- **With this background, it is strongly recommended to keep the International Termination Rate at a different level than the domestic termination rate. In fact in the current regulatory climate, the ITR should be further enhanced. We have further elucidated on the appropriate levels of ITR in the responses to follow.**

- **Should the International Termination Rate be different for different countries:**

  - TRAI has discussed in the Consultation Paper about the possibility of charging differential International termination rate for different countries based on reciprocal arrangements. In our view, this will lead to operational and reconciliation related complexities.

  - As pointed by TRAI itself in the CP, there is also possibility of traffic getting hubbed to a particular country from which we would have a low termination rate. This would be achieved through CLI translation and routing of traffic to that country from where it would then get terminated into India. Thus the very purpose of seeking higher termination rate and revenues for India would stand defeated. **Hence country-wise differential ITR is not recommended.**

- **What should be the value of ITR?**

  - **As we have explained above, ITR rates should be at a different level than that of the domestic termination rate. This is a methodology followed by TRAI in having a different ITR than the domestic termination rate since 2009.**

  - The appropriate value of ITR is influenced by two factors – (1) changes in Rupee USD conversion rate and (2) ensuring parity with the International Settlement Rate (ISR) being paid by Indian ILDOs to International carriers for Outgoing calls.

  - Rupee Dollar conversion rate: In 2015, TRAI increased ITR from Rs 0.4/ min to Rs 0.53/ min, as the USD appreciated from Rs 47 to Rs 62 in the period between 2009 to 2015 (2009 was the last IUC review before 2015). The logic is that ITR becomes cheaper for foreign carriers as the Dollar appreciates against Rupee. Since February 2015, the dollar has now appreciated by 8% to Rs 67 and thus there is a case to increase the ITR to Rs 0.57/ min(53

paise*1.08) based on dollar appreciation alone. Also the USD has appreciated at a CAGR of 8% in the last 5 years (2011 -2016) . As TRAI has set the IUC review schedule of generally 2 years, it is pertinent that the benefit for US Dollar appreciation be given in the intervening period as well. We propose the ITR increase anticipating at least 1 year of future dollar movement. Thus the ITR can be pegged at Rs 0.61/ min assuming CAGR of 8% on the basis dollar appreciation alone, projecting USD @ Rs 71-72 by 2017.

- Parity with ISR paid by Indian ILDOs to foreign carrier: As is the general prevalent case in the ILDO market and as TRAI has pointed in the CP, Indian ILDO pay very high ISR to foreign carriers for Outgoing calls. For some destinations in Middle East, ISR is as high as Rs 9/ min, almost 18 times the ITR in India. The issue is not confined to the countries in the Middle East only but applies to many other countries too. On an average, ISR for outgoing calls is Rs 4/ min as against the ITR of Rs 0.53/ min, almost 8 times.

    - Reduce imbalance between ISR and ITR: There is thus a need to ensure some parity between ITR and ISR to reduce this imbalance.

    - Price elasticity: For ILDOs based on the experience over last 2-3 years of India total carriage rate (including ITR) changes, tells us that till 80ps – 85ps rate the traffic volume into India shows no drop, thus traffic is inelastic till 85ps / min level. This seems reasonable as traffic comes into India from affluent countries with higher purchasing power where Indian expatriates go for work in large numbers.

    - Incoming to Outgoing traffic imbalance: Due to the disparity in the ITR and ISR, the ratio of Incoming to Outgoing calls as cited by TRAI is 18:1. For Idea, this ratio is even higher at 60:1 due to lack of Enterprise traffic and less customers in urban areas. The ILDO market is essentially an Export-Import scenario where the Incoming and Outgoing traffic is traded. The skewed traffic ratio leads to bargaining power imbalance. Indian carriers have less traffic to trade as compared to larger India incoming traffic sent by foreign carriers.

    - Higher Forex earnings that India loses currently to foreign carriers: If ITR were to be kept at levels of Rs 0.8/ min; the earning due to Access Providers will go up from ~Rs 5000 Cr per annum (with 8Bn ILD Incoming MOUs per month@ 53 paise) to

about Rs 7600Cr per annum at 80 paise for the same traffic as above.. There is thus a significant gain in the Forex earnings for Indian operators and India as a whole if the ITR were to be pegged at Rs 0.80/ min.

Thus we believe the ITR should be set at Rs 0.80/ min considering all the relevant factors such as Rupee depreciation, Incoming & Outgoing rate imbalance & Higher Forex earning & affordability in the originator countries mostly affluent.

Q8. Whether, in your opinion, in the present regulatory regime in the country, the standalone ILDOs are not able to provide effective competition owing to the presence of integrated service providers (having both ILDO and access service licenses) and, therefore, there are apprehensions regarding sustainability of the stand-alone ILDOs in the long-run?

Idea Response:

- The Indian ILDO industry has 11 active players (Idea, Airtel, Voda, RCom, Aircel, Videocon, Sify, BSNL, TCL, TTSL, and Telenor as compared to the 5-6 competitors in the Mobile industry.

- Thus the Indian ILDO industry is quite competitive. The ILDO segment also has low entry barriers with the license fee being on Rs 2.5Cr and easy entry conditions including very low Capex.

- Based on an analysis of the TRAI quarterly financial reports, the standalone ILDOs enjoy 45% market share (based on AGR). This a very healthy market share that the Standalone players hold the ILDO market.

- In addition to Voice services, Indian ILDOs can also offer the fast growing and higher margin international data services. The demand for International data (IPLC + International IP port) will only grow with the expected data growth of India's Mobile and Broadband segment. In fact, most of the standalone ILDOs offer data services as well and are showing significant growth in this area. The regulatory framework for ILD data services is also friendly, where standalone ILDOs can not only offer facility based IPLC services but also carry out IPLC resale under the IPLC resale licenses.

- The ILDOs thus have a healthy product mix of Voice and data services that they can offer to continue sustaining their growth. Thus, the standalone ILDOs do not enjoy any competitive advantage over the Integrated Service Providers. This makes the ILDO segment adequately competitive and growth oriented.

This in our view, standalone ILDOs are able to compete quite effectively in the competitive low entry barrier ILDO industry.

AND

Q9. If your response to the Q8 is in the affirmative, which of the following approach should be used as a counter-measure?

(i) Prescription of revenue share between Indian ILDO and access provider in the International Termination Charge; or

(ii) Prescription of a floor for international settlement rate (levied by ILDO upon the foreign carrier) for international incoming calls; or

(iii) Any other approach (please specify)

Please provide justification in support of your response.

Idea Response:

As we have explained above, the ILDO industry enjoys healthy competition bordering on being hyper-competition. The standalone ILDOs are profitable and also hold a healthy market share. Thus there are no regulatory interventions needed in this regard.

Q10: Is there any other relevant issue which should be considered in the present consultation on the review of Interconnection Usage Charge?

Idea Response:

In addition to the submissions made in the introductory remarks and specific responses to the Authority's questions, please find below our additional comments:

1. **Re-iteration of fallacies in the consultation paper:** As explained in details in the introductory remarks, the consultation paper if fraught with several fallacies, and misleading and wrong conclusions have been drawn based on incorrect and selective statements to advocate BAK regime / reduction in IUC. The same are being tabulated below:

	Authority's comment in the consultation Paper	**Idea's evaluation and interpretation**
1	Current consultation is to be initiated as per the decision of 2015 regulation.	The 2015 regulation clearly stated that "***the review will be undertaken and concluded in financial year 2017-18***". Hence, issue of this consultation paper before April 1, 2017 is in violation of the said regulation
2	In para 2.3 Authority has argued that AGR has grown at an impressive rate under CPP regime. This is being used to support reduction in IUC rate.	It is right that the industry has done well under the CPP regime which has been in force since 2003. However, this is totally irrelevant for the subject of review of IUC charges. The growth of AGR / industry has been good in the CPP regime in a period of stable IUC rate.
3	Para 2.4 states that in a CPP regime, either of the two regimes is used for interconnect settlement between TSPs (i) CPNP or (ii) BAK	This is incorrect as we are not aware of any country in the word where in a CPP regime, BAK is prescribed by the regulator between wireless operators. This amounts to cross subsidization of one operator by other and cannot be part of regulation. Authority has not given any examples of countries with CPP where BAK is prescribed by the Regulator.
4	Para 2.10 states that BAK is the natural regime in the public internet.	This is incorrect statement. In case of calls running on IP based networks, both the calling and receiving party pay costs for use of data on their respective networks. Hence, this is RPP regime and not BAK. BAK is relevant only in a CPP regime.

5	Para 2.14 and 2.15 state that the reduction of MTC and FTC to zero from 20 p/min wef 1.3.2015 has resulted in improvement in wireline industry and has been a success so far.	The reduction to zero of terminations charges is resulting in a huge loss of Rs.500 crs per annum to the wireless operators and this loss continues to increase every month as zero IUC has allowed wireline operators (mainly BSNL) to indulge in offering freebies to their subscribers at the cost of wireless operators. This has not resulted in any improvement in wireline subscriber levels which continue to decline, but wireless operators continue to suffer.
6	Growth in wireline broadband subscribers is the result of fixing IUC to zero	IUC only affects voice subscribers which has continued to decline. Broadband subscribers are growing in all categories and since there is no IUC charge for data traffic, there is no correlation between reduction in IUC rate for wireline networks and growth of their broadband subscribers.
7	Para 2.24 and 2.25 – Retail voice Tariffs in India have benefited from reduction of domestic termination charge	Reduction in domestic termination charge has zero impact on the overall cost of the industry and hence no impact on the retail tariffs. Retail tariffs are a result of competitive dynamics in the market and the retail tariffs achieved (47p) post reduction of MTC in Mar'15 were already prevailing in Dec'12, when the MTC was 20p/min. Hence, retail tariffs have not benefited, but due to the predatory pricing supported by below cost IUC, the industry has seen significant erosion of profitability.
8	Para 2.26 – Need for adoption of BAK regime is being advocated based on positive effects of reduction in domestic termination charges	This has not resulted in any industry benefit, but has favoured one category of operators to dump traffic on other operators at below cost recovery for the incoming call operator. This has cause significant loss to wireless operators vis a vis wireline operators. The wrong /misrepresented conclusion derived as per points 5,6 and 7 above are being advocated to now subsidize new wireless operators at the cost of existing wireless operators. This has already resulted in predatory pricing (free voice services) resulting in huge erosion of margins

		and taking away the ability of the industry to make further investments.
9	Para 2.31 states that *", it is important that an incumbent access service provider does not charge a high price for wholesale services and uses the proceeds to subsidize low prices for its retail services"*	This is a misrepresentation. Based on data given in the Consultation Paper the retail tariff is 34p/min (net of IUC charge) and the wholesale tariff is 14p/min. The argument is actually the opposite i.e. the higher retail tariffs (34p) are subsidizing the wholesale tariff (14p). We do not understand whether the Authority is in favour of higher retails tariffs (as advocated here) or lower retail tariffs (as advocated in para 2.24 and 2.25). Our position is that IUC rates should be cost based which is fairly determined.
10	Para 2.45 – This states that the reduction in MTC for wireline networks was *"done with an aim to promote investment in, and adoption of, wireline networks so that the wireline networks may become an effective vehicle for the delivery of high-speed Internet in the country"*	We reiterate that there is no correlation between IUC rate (applicable for voice calls) and internet traffic and we are surprised that the two should be correlated. The reduction in MTC is resulting in continually increasing losses to wireless operators. Regulator needs to ensure fairness and should not promote one category of operators at the cost of the other. Incentives, if any, should be given directly by the government and not by way of cross subsidization through competing operators.

2. **International examples:** As described in our introductory remarks, the consultation paper has cited examples of several international markets for advocating the case of lower MTC in India, without representing the complete telecom landscape in these countries. Any comparison with chosen international markets is incomplete without taking into consideration the fitment and appropriateness based on parameters such as population, tele-density levels, level of competition, prevalent prices, etc. Accordingly, a comparison between India and some of the appropriate countries has been tabulated below.

	Country	Population (in Bn)	MTR in Local Currency	Currency	MTR Rate in US$	MTR in Rs.	Mobile Penetration
1	China	1.4	0.04	CNY	0.006	0.40	93%
2	India	1.3	0.14	INR	0.002	0.14	81%
3	US	0.3	Not Applicable as customers charged for incoming calls				103%
4	Indonesia	0.3	204	IDR	0.02	1.36	100%
5	Brazil	0.2	0.1	BRL	0.03	2.00	141%
6	Thailand	0.07	0.35	THB	0.01	0.67	105%
7	Malaysia	0.03	3.65	MYR	0.88	0.59	144%
8	Australia	0.02	0.036	AUD	0.03	1.83	132%

Table: Comparative of MTC rates of India with some major countries