

**THE TELECOMMUNICATION INTERCONNECTION USAGE CHARGES
(SIXTEENTH AMENDMENT) REGULATIONS, 2020
(4 of 2020)**

**TELECOM REGULATORY AUTHORITY OF INDIA
NOTIFICATION**

New Delhi, the 17th April, 2020

File No. 6-19/2019-BB&PA --- In exercise of the powers conferred upon it under Section 36, read with subclauses (ii), (iii) and (iv) of clause (b) of sub-section (1) of section 11, of the Telecom Regulatory Authority of India Act, 1997 (24 of 1997), the Telecom Regulatory Authority of India hereby makes the following regulations further to amend the Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003), namely:

<p>1. (i) These regulations may be called the Telecommunication Interconnection Usage Charges (Sixteenth Amendment) Regulations, 2020 (4 of 2020).</p>
<p>(ii) They shall come into force from the 1st May, 2020.</p>
<p>2. In Regulation 4 of the Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003) (hereinafter referred to as the principal regulations), after clause (v), the following clause shall be inserted: “(vi) Every BSO, CMSP, UASP and Unified License (UL) licensee shall offer a termination charge, for international calls terminating on its network, in a non-discriminatory manner and within the range specified in Schedule I.”</p>
<p>3. In Schedule I of the principal regulations, in paragraph 1 in the table under column “Termination Charge”, for the words and figures “Re. 0.30 (paise thirty only) per minute”, the words and figures “Not less than Re. 0.35 (paise thirty five only) per minute and not more than Re. 0.65 (paise sixty five only) per minute” shall be substituted.</p>

(S.K. Gupta)
Secretary

Note 1. The principal regulations were published vide F.No. 409-5/2003-FN dated 29.10.2003 (4 of 2003) and subsequently amended vide notifications Nos. --

- (i) 409-5/2003-FN dated 25.11.2003 (5 of 2003) (First Amendment);
- (ii) 409-5/2003-FN dated 12.12.2003 (6 of 2003) (Second Amendment);
- (iii) 409-5/2003-FN dated 31.12.2003 (7 of 2003) (Third Amendment);
- (iv) 409-8/2004-FN dated 06.01.2005 (1 of 2005) (Fourth Amendment);
- (v) 409-8/2004-FN dated 11.04.2005 (7 of 2005) (Fifth Amendment), which has been set aside by Hon'ble TDSAT vide its Order dated 21.09.2005 in appeal No. 7 of 2005;
- (vi) 409-5/2005-FN dated 23.02.2006 (1 of 2006) (Sixth Amendment);
- (vii) 409-5/2005-FN dated 10.03.2006 (2 of 2006) (Seventh Amendment);
- (viii) 409-2/2007-FN dated 21.03.2007 (2 of 2007) (Eighth Amendment);
- (ix) 409-22/2007-FN dated 27.03.2008 (2 of 2008) (Ninth Amendment);
- (x) 409-12/2008-FN dated 09.03.2009 (2 of 2009) (Tenth Amendment);
- (xi) 409-8/2014-NSL-1 dated 23.02.2015 (1 of 2015) (Eleventh Amendment);
- (xii) 409-8/2014-NSL-1 dated 24.02.2015 (2 of 2015) (Twelfth Amendment);
- (xiii) 10-8/2016-BB&PA dated 19.09.2017 (5 of 2017) (Thirteenth Amendment);
- (xiv) 10-8/2016-BB&PA dated 12.01.2018 (2 of 2018) (Fourteenth Amendment);
- (xv) 6-14/2019-BB&PA dated 17.12.2019 (10 of 2019) (Fifteenth Amendment).

Note 2. The Explanatory Memorandum explains the objects and reasons of The Telecommunication Interconnection Usage Charges (Sixteenth Amendment) Regulations, 2020 (4 of 2020).

**Explanatory Memorandum to “The Telecommunication Interconnection Usage Charges
(Sixteenth Amendment) Regulations, 2020”**

A. Interconnection

1. Interconnection means the commercial and technical arrangements under which service providers connect their equipment, networks and services to enable their customers to have access to the customers, services and networks of other service providers.
2. Interconnection is extremely important from a consumer’s perspective. Subscribers of different service providers or network operators cannot communicate with each other or avail the services they demand unless essential interconnection arrangements are in place. Commercial and technical arrangements must be made to facilitate interconnection between network operators. Several issues must be agreed upon by the operators or determined by the regulator in order to finalize these arrangements. Interconnection is one of the foundations of viable competition and is very much essential for orderly growth of the telecommunications sector.

B. Interconnection Usage Charge (IUC)

3. Interconnection Usage Charge (IUC) is one of the most important commercial issue for a successful interconnection arrangement. A brief description of the various components of IUC is explained underneath.

(1) Domestic Termination Charge

4. Domestic termination charge (DTC) is the charge payable by an access provider, whose subscriber originates the call, to the access service provider (ASP) in whose network the call terminates. In a Calling-Party-Pay (CPP) regime, the calling subscriber pays for the call to his access provider and the calling party’s access provider usually pays the termination charge to the called party’s access provider to cover the network usage cost.

(2) International Termination Charge

5. International termination charge (ITC) is the charge payable by an Indian International Long-Distance Operator (ILDO), who carries the call from outside the country, to the access provider in the country in whose network the call terminates.

(3) Transit Charge

6. When two telecom networks are not directly connected, an intermediate network is used through which calls are transmitted to the terminating network. Such an intermediate network is known as a transit network, and the charges to be paid to the transit network to cover the interconnection/network usage cost are called transit charges.

(4) Carriage Charges

7. Access providers in India can offer access services within the Licensed Service Areas (LSAs), also known as circles; the inter-circle traffic is required to be routed through a National Long-Distance Operator (NLDO). The charges to be paid by an access provider to the NLDO to cover the cost for carrying the inter-circle calls are called carriage charges.

(5) Origination Charges

8. The calling party's access provider collects call charges from the calling party (i.e. the subscriber) as per the applicable tariff. From the amount so collected from the subscriber, the access provider has to pay termination charges to the called party's access provider and carriage charges (in case of an inter-circle call) to the NLDO. The access provider retains the balance amount to cover the cost of originating the call. The amount so retained by the calling party's access provider is called an origination charge. In India, origination charges have not been specified by the regulator and are under forbearance.

(6) International Settlement Charge

9. International settlement charges are the charges exchanged between foreign service providers and Indian ILDOs for exchanging international traffic. The international settlement charge includes international carriage charge, national carriage charge (if any), and the domestic termination charge.

C. Evolution of regulatory regime for ITC In India

10. Telecom Regulatory Authority of India (hereinafter, referred to as, TRAI or the Authority) established a regulatory framework for Interconnection Usage Charges, including ITC through 'The Telecommunication Interconnection Usage Charges (IUC) Regulation, 2003 (1 of 2003)' dated 24.01.2003. For further improving and streamlining the IUC regime, the Authority issued 'The Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003)' dated 29.10.2003. This Regulation, which superseded the earlier IUC Regulation dated 24.01.2003 and came into effect from 01.02.2004, is the principal IUC regulation in the country as on date. There have been 15 (fifteen) amendments to this regulation since its inception.
11. Through 'The Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003) dated 29.10.2003', the Authority, *inter-alia*, prescribed ITC as Re. 0.30 per minute. Since then, the Authority has made three revisions in ITC as below:
 - (a) revision of ITC to Re. 0.40 per minute with effect from 01.04.2009 through the Telecommunication Interconnection Usage Charges (Tenth Amendment) Regulations, 2009,
 - (b) revision of ITC to Re. 0.53 per minute with effect from 01.03.2015 through the Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015 and
 - (c) revision of ITC to Re. 0.30 per minute with effect from 01.02.2018 through the Telecommunication Interconnection Usage Charges (Fourteenth Amendment) Regulations, 2018 (hereinafter referred to as IUC Regulations, 2018).

D. The present exercise for review of ITC

12. In 2018, while analyzing the issues involved in deciding the ITC, the Authority noted that:
- (a) carrier route for carrying international incoming voice traffic is facing a fierce competition from Over-The-Top (OTT) route and grey route; and
 - (b) international incoming voice traffic through carrier route has begun to decline from F.Y. 2016-2017.
13. The Authority further noted that if the arbitrage opportunity i.e. the difference between ITC and tariff for domestic voice call is plugged or kept to a minimum, the attractiveness of the grey route for carrying international incoming voice traffic would subside, and thereby, the carrier route for international incoming traffic would witness a legitimate growth. Accordingly, the Authority in the Explanatory Memorandum (EM) annexed to the IUC Regulations, 2018 has noted that:
- “The Authority would closely monitor the trends and patterns of ILD voice traffic in the country. The Authority, if it deems necessary, may review ITC from time to time”.*
14. In view of the above, the Authority has been continuously monitoring the developments in telecommunications market, and the trends in incoming and outgoing International Long Distance (ILD) voice traffic volume. To analyse the trends in incoming and outgoing ILD voice traffic volume, from time to time, the Authority collected the data pertaining to international incoming and outgoing voice traffic through carrier route. The analysis of this data indicates that the rate of decline of international incoming voice traffic through carrier route has reduced after the revision of ITC rate in 2018. As far as outgoing ILD voice traffic from India is concerned, it is much less in comparison to incoming ILD voice traffic. The outgoing ILD voice traffic has shown only marginal reduction. Further, in-line with the global trend, and with the rapid increase of data-enabled subscribers in India, the use of OTT communication applications for voice calling has increased. As most of the OTT communication applications do not charge for voice calls, the increase in OTT voice traffic might also be affecting the grey-market operations.
15. In the last few years, it has also been observed that the telecommunications market structure in India, as well as globally, has transformed from a voice to a data-centric market. The trend towards convergence of services like triple-play offerings (video, voice and data) has brought about a major shift in the pricing strategies of service providers, resulting in the growing prevalence of bundled tariffs. During this period, in India, it has also been noted that most of the mobile tariff offers have moved to bundled plans i.e. they include voice call minutes, SMS and data. Similarly, in the case of international roaming, tariff packages in the form of bundles comprising of certain pre-fixed quantity of incoming and outgoing voice calls, data, and messages are becoming popular. In view of these developments in the tariff offerings, it appears that at the retail level, the relevance of per unit rates of individual product i.e. voice, data, and messages is reducing.
16. The above-mentioned developments raise the question that whether the present regulatory regime for ITC prescribing a uniform rate on per minute basis is still relevant or there is a requirement of some changes in this regime. Should Indian ILDOs be provided with the flexibility for negotiation with international

carriers? What could be the impact of such changes on the carrier-route traffic, and tariff of telecommunication services for Indian consumers? To discuss all these points, and any other relevant issue with the stakeholders, the Authority considered it significant to review the existing regulatory regime for ITC.

17. With this background, the Authority issued a consultation paper (CP) on “Review of Interconnection Usage Charges” dated 08.11.2019 to seek the views of stakeholders. Stakeholders were asked to submit their written comments by 09.12.2019 and counter-comments by 23.12.2019.
18. Comments and counter-comments received from TSPs, industry associations and other stakeholders, including companies, organizations, firms, and individuals were placed on TRAI’s website (www.trai.gov.in). An open House Discussion was held on 03.02.2020 at New Delhi to discuss the issues with all stakeholders. All the comments and counter comments received till date on this issue have been considered by the Authority before arriving at a conclusion. An analysis of the issues relating to ITC, based on the comments of stakeholders received in the consultation process and further deliberations, is presented below.

E. Analysis of the comments on the issues raised in the CP

19. In the CP dated 08.11.2019, the Authority had sought the views of stakeholders on the following issues related to IUC:
 - i. (Q1): Keeping in view the changes happening in the international telephony market structure, is there a need for change in the existing regulatory regime for International Termination Charge (ITC) i.e. change the existing regulatory regime from fixing the uniform rate of ITC to an alternate approach? Kindly justify your comments with supporting arguments.
 - ii. If your response to Q1 is affirmative, then what should be the alternate approach? Kindly elucidate the alternate approach and benefits of the same vis-à-vis the present approach.
 - iii. If your response to Q1 is negative, then in the changing international telephony market structure, what other regulatory measures are required to be taken by the regulator for protecting the interests of Indian consumers and service providers? Kindly justify your comments with supporting arguments.
 - iv. Your comments on any other issue related to the international termination charges may also be given.
20. During the consultation process, majority of the stakeholders were in favour of an increase in the ITC rate. As per their perspective, it would help Indian access service providers in offering more affordable ISD tariffs to their customers, generate more forex to the country and more revenue to the exchequer. However, there is a difference of opinion among these stakeholders as far as the regulatory regime for ITC is concerned. Some of them favoured the continuation of the existing regulatory regime of fixed uniform rate of ITC with an increase in termination charges whereas others favoured an alternate regulatory regime, such as forbearance with an upper ceiling or forbearance within a prescribed range.

21. While most of the stakeholders contended that ITC rate should be increased from its present level of Re. 0.30 per minute; a few of them have argued that ITC should be brought down to the level of Domestic Termination Charge (DTC). One of the consumer organisations has even advocated for total elimination of ITC. It is worth mentioning that at present the DTC is as below:
- (a) Re. 0.06 per minute for wireless to wireless calls; and
 - (b) Zero for wireline to wireless, wireless to wireline and wireline to wireline calls.

Summary of the suggestions given by the stakeholders during the consultation process and their analysis is presented below.

(I) Review of the existing regulatory regime:

22. According to a stakeholder, massive increase in data services adoption, prevalence of bundled tariff plans, rapidly increasing OTT penetration, unrelenting trend of decline of international incoming voice traffic through carrier route with an emerging trend of fall in outgoing traffic from India implies that timing is apt for a review of ITC. This stakeholder further added that the Authority's good intention behind the reduction in ITC in 2018 has been defied by various players in the international traffic value chain. According to this stakeholder, the substantial reduction of over 43% in ITC was never passed on by foreign service providers to end users and the call charges to India remained static or increased despite the reduction in the ITC rate.
23. Some of the stakeholders are not in favour of alternate regulatory regimes for ITC such as forbearance regime or reciprocal termination rates regime. They are of the opinion that with forbearance granted on ITC rate, a service provider might be tempted to keep high ITC rates leading to protracted negotiations with foreign carriers. Similarly, another alternative of reciprocal termination rates regime has the potential of leading to a price-hiking race, which can lead to traffic routing through countries having favourable termination rates. Hence, they are of the view that fixed ITC is the optimum approach. These stakeholders have recommended for increase in ITC rate stating that it would not impact Indian customers and on the other hand would result in an increased inflow of forex to the Indian operators yielding increased revenues to the exchequer.
24. One state-owned TSP has submitted that evaluation of IUC should be based on actual costs, and such costs should include HR costs also. While deciding any aspects of termination charges, TRAI should consider the network costs of PSUs. It added that since the incoming and outgoing ILD traffic minutes is consistently reducing due to various reasons, further reduction in ITC by way of direct reduction or by other ways like implementing forbearance principle will result in further losses to TSPs due to substantial non-recovery of network costs. This stakeholder has requested that the present regulatory provisions for ILD Termination Charges may be continued. However, if considered necessary, the rates for ILD termination charges may be fixed over a range introducing the traffic-volume slabs.
25. A TSP argued that with the international telephony structure shifting towards OTT, there may also be a need for shifting from fixed uniform approach to an alternate approach. According to this TSP, such

approach should be forbearance in ITC within a prescribed range. In the said TSP's view, such prescribed range, at minimum, should be Re. 0.75 to Rs.1.25.

26. One stakeholder of the same opinion has said that the competition in this segment is high and there are many factors which are not under the control of regulator including the challenges from OTT. In this scenario, the option of forbearance, with upper ceiling determined by TRAI, will give better negotiating power to the TSPs and to deal with the challenges from OTT. In its view, TSPs can also negotiate with other TSPs in our country or of other countries on either volume based or flat-rate charges. It has suggested for forbearance of ITC for incoming international long-distance call in India, as it is adopted in many countries and also in the case of outgoing international long-distance calls in India. The international carriage charges and international termination charges at the foreign end are also under forbearance.
27. Another stakeholder has said that the strategy to curb the grey market, and increasing traffic on the carrier route by reducing the ITC appears to have met with limited success. It has argued that for an international incoming call, either through a regulated rate or in case of a forbearance regime, the rate should be driven domestically and not by the foreign access providers (FAPs). In case of forbearance regime, to safeguard the risks of unpredictable behaviour by service providers and that of unprecedented changes in the ITC rate affecting other sectors of economy, it has advocated for forbearance approach with a ceiling rate for ITC.
28. It can be observed from the above-mentioned points that while most of the stakeholders suggested for review of the ITC, their opinions are divided in respect of regulatory regime to be followed for ITC. While some stakeholders suggested to continue with the existing regime of uniform ITC rate, many other stakeholders have suggested alternate approaches. Broadly, the stakeholders have commented about the following five approaches, viz:
 - (a) continue with the existing regulatory regime of fixed uniform ITC;
 - (b) keep ITC under complete forbearance;
 - (c) Keep reciprocal ITC rates i.e. the same rate of ITC at Indian and the foreign end;
 - (d) keep ITC under forbearance with an upper ceiling; and
 - (e) keep ITC under forbearance within a pre-specified range.
29. The Authority is conscious of the fact that any incoming call (including international incoming call) is a monopoly of the called party's access service provider (i.e. the access service provider whose customer receives the incoming call). In case ITC is left under complete forbearance, the called party's access service provider may try to obtain higher termination charge, as high as possible from the ILDOs. This charge in-turn would be passed on by ILDOs to FAPs. Beyond a certain limit, FAPs may pass on such increase in the rate of ITC to their subscribers by increasing the tariff for India-bound outgoing ILD calls. This could further accelerate shifting of ILD traffic from carrier route to OTT route. Therefore, increasing the rate of ITC indiscriminately may not be in the interest of any stakeholder. Accordingly, this approach is completely ruled out.

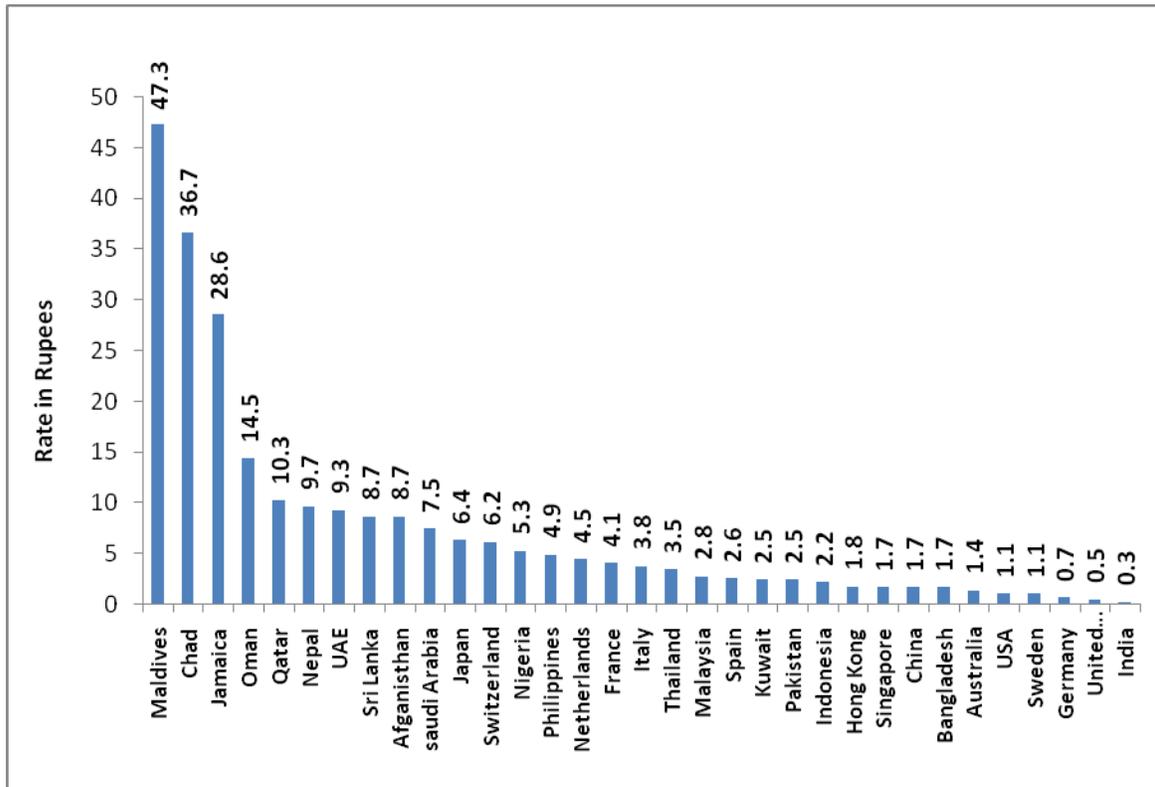
30. As far as the reciprocal ITC rate approach is concerned, the stakeholders have enumerated reasons against this approach. This regime has the potential of leading to a price-hiking race, which can further lead to traffic routing through countries having favourable termination rates. In such cases, the identity of originating call location is hidden which will lead to falsification of Calling Line Identification (CLI), which has larger security implications. Accordingly, the Authority is of the view that this approach might create more uncertainty and disruption in the ILD market. Thus, this approach is completely ruled out.
31. As far as the existing regulatory regime of fixed uniform ITC is concerned, while it ensures ease of operations, it restricts the required flexibility to service providers in the fast changing ILD market. Due to pre-fixed rate of ITC, the Indian operators are not able to negotiate termination rates, with their foreign counterparts for termination at foreign end, which is under forbearance. Further, fixed uniform ITC approach requires frequent interventions of the Authority as the underlying factors such as forex rates, traffic pattern, termination charge at foreign end etc. keep on changing in the open market. This regime was more suitable when most of the ILD traffic was routed through carrier route only. Now, with the advent of newer technologies, when OTT route has emerged as an alternate for ILD voice calls, the Authority is of the view that some flexibility to service providers in deciding the rate of ITC would be in the interest of the telecom sector. Service providers may use this flexibility to discover the optimal rate of ITC, which not only helps in increasing the traffic through carrier route, as it is in their interest, but also disincentivises grey-market operations.
32. Having ruled out the first three options discussed, for deciding the rate of ITC in para 28 above, the remaining options are forbearance with an upper ceiling and forbearance within pre-specified range. As mentioned earlier, since the incoming ILD traffic is much higher than outgoing ILD traffic, the ITC constitutes a significant source of revenue for Indian TSPs. Therefore, it is imperative that while deciding an alternate regulatory regime for ITC, regulatory certainty is also ensured. In an open market, where the size of the market participants varies considerably, the corresponding negotiation power also varies. This is also reflected in the comments of different stakeholders. At this point of time, opting for forbearance with an upper ceiling only approach may give rise to uncertainties about this important source of revenue, especially to smaller operators. If such operators are not able to negotiate better rates, then their existing revenue from this source may also get affected. Therefore, in view of the Authority, at this point of time, when we are transitioning from fixed uniform ITC regime, forbearance within pre-specified range would be a better option. To a large extent, this would also address the concerns of such stakeholders who are advocating for continuation of fixed uniform ITC regime as this is the nearest alternate approach, which also provides the required flexibility to service providers to face the emerging challenges in the market. Such flexibility provided to service providers may help them in designing innovative tariff models in the interest of their subscribers.
33. In the ILD voice telephony market, presently in India, we primarily have two types of ILDOs. First are the ones who operate only in the ILD space, and second are the ones who operate in the Access Service as well

as ILD space. In the revised regulatory regime for ITC i.e. forbearance within pre-specified range, it would be necessary for access service providers, also having ILD operations, to offer matching termination rates in transparent and non-discriminatory manner to stand-alone ILDOs. Any form of discrimination on this account would not be permitted and if deemed necessary, a suitable investigation as per the provisions of TRAI Act, 1997, with consequent penal action, may be initiated.

(II) Rate of ITC:

34. Some stakeholders argued that ITC rate in India at Re. 0.30 per min. is probably the lowest in the world. According to them even neighbouring SAARC countries like Bangladesh, Pakistan, Nepal and Sri Lanka have an average blended ITC rate of nearly Rs. 4 to Rs. 6.50 per min. While in Middle East the average blended ITC rate is much higher at Rs. 8 to Rs. 9 per min. As per these stakeholders, only few countries have comparable ITC rates, though still much higher than India. These stakeholders have supported their arguments with the following global trend of International termination charge rates:

Figure 1: Global International Termination rates



Source: A TSP provided through its comments

Thus, as per these stakeholders, on an average, Indian Operators pay Rs. 3.0 to Rs. 3.50 per min. to the foreign access providers (FAPs) for termination of calls originating from India and TRAI’s fixation of ITC for Indian access providers at Re. 0.30 per min. is less than 10% of the world’s average.

35. One of the TSPs argued that the Authority, while deciding on reducing the ITC rate from Re. 0.53 per min. to Re. 0.30 per min, had considered curbing of grey route as the most important regulatory priority so that

the Indian terminating traffic through carrier route increases. But, even after this reduction in IL D termination charge, the IL D incoming minutes through carrier route continues to decline at a greater rate.

36. Another TSP argued that in many countries, FAPs have commercially negotiated rates with international carriers. As per this TSP, the cost of outbound calls from India to Indian ILDOs is very high and majority of which is attributable to charging by FAPs for call termination on their networks. FAPs are earning many times more than Indian Access Operators for both origination and termination. Accordingly, as per this TSP, it is reasonable to increase the rate of ITC which will help in meeting the prime objectives as set out in the CP.
37. According to a stakeholder, over the two years period since last review, increase in ITC by telcos in Europe, Africa, Asia-Pacific, etc. has resulted in higher pay outs by Indian access service providers and in turn charging of higher rates in the form of ISD tariff from Indian customers. It further added that a lower termination charge does not ensure parity for Indian TSPs. Accordingly, as per this stakeholder, with the increase in the IL D costs to be paid to foreign operators and decline in IL D revenues from customers, the overall impact on the operators has been hugely negative.
38. Some stakeholders argued that ITC rate, lower than the world average, causes lower revenues for the Indian access providers in comparison to their foreign counterparts. In support of this argument, one TSP said that in FY 2016-2017, with ITC at Re. 0.53 per minute, the net forex gains to the country was to the tune of Rs. 3675 crores considering receivable from foreign operators on account of ITC and payable to the foreign operators for outgoing international calls. According to this TSP, in FY 2018-2019, the net forex gains to the country has reduced to Rs. 950 crores, causing an overall reduction in forex gains by approximately 75%. Hence, according to these stakeholders, reduction in ITC rate has resulted in a significant loss to the Government and the nation in terms of forex.
39. According to a service provider, since different countries charge different ISCs, the termination charge for an incoming international call to India should be ideally under forbearance while varying with region/country. But it might be a challenge to implement origin-based ITC as the calls are being transited through hubs by the various aggregators/foreign ILDOs. In view of the same, this service provider has recommended that the ITC should be raised to Re. 1 per minute on an immediate basis and be subsequently raised to Rs. 3 to Rs. 3.50 per minute, i.e. equivalent to the charges paid by the Indian access service providers for the termination of IL D calls in foreign countries.
40. Majority of the TSPs are of the opinion that grey-market concerns do not warrant reduction in ITC. One TSP has argued that with stringent subscriber verification, due analytics carried out by operators and regular reporting to LSA (License Service Area) units of DoT, the grey-market concerns are already being addressed. In their view, as far as the security issues related to grey market are concerned, cost is not a concern for those who want to exploit this channel. Hence, according to these stakeholders, by reducing the

arbitrage, we cannot eliminate the grey-market operation specially setup with an intent to bypass the security requirements.

41. Some stakeholders are of the view that, in respect of ILD calls, substitution from carrier to OTT route is not reducing in the global context. While, there is continuous reduction in International voice traffic through Carrier route, continuous rise has been noticed in the International voice traffic through OTT route in the last few years. In support of this argument one TSP has provided a year-on-year comparison of estimated traffic carried through carrier vs. OTTs route in billions of minutes, which is reproduced in the Table 1.

Table 1: Total traffic carried through carrier Vs. OTTs route in billions of minutes

Year	Carrier traffic	OTT traffic	% increase in Carrier Traffic	% increase in OTT Traffic
2015	553.3	418.5		
2016	527.9	570.3	-4.6%	36.3%
2017	483.8	757.2	-8.4%	32.8%
2018*	449.9	952.4	-7.0%	25.8%

*2018 figures are projected figures

Source : TeleGeography 2019 Edition of ‘the State of the Network’

Hence, according to this report, there is a continuous decline in the incoming international voice traffic through carrier route. Another TSP, who is also of the same opinion, has inferred that while growth in OTT for international calling is a global phenomenon, it has not forced the operators in foreign countries to reduce their termination rates. As per this TSP, the solution to this problem lies in regulating OTT players and not in cannibalizing our own legitimate revenue.

42. Another TSP in favour of continuing with the current regulatory regime of fixed ITC has proposed that the ITC should be rationalized considering various changes in the telecom landscape and should be increased to the range of Re. 0.65 to Re. 0.75 per minute. As per this TSP, the foreign operators have not passed on the benefits of 23 paise per min. reduction in the rate of ITC to their subscribers and have only increased their profit margins.
43. Another service provider stated that the termination charges in several countries are 8 to 10 times higher than the ITC in India and the dollar exchange rate variation from 2015 to 2019 is Rs. 62 to Rs. 71 and the Indian ILDO's pay the International Settlement Charges (ISC) in USD to foreign carriers for settlement of accounts. This service provider is of the opinion that the incoming termination rate which is presently Re. 0.30 per min. in India may be fixed in terms of U.S. Cents as 1 Cent/min which will give relief regarding forex variation in deducing the incoming IUC. This TSP has also advised that ITC in the country may be kept uniform for all terminating networks.
44. According to a consulting firm with the same opinion, in many countries across the world, where there is a significant volume of ILD traffic, the termination charges are kept under forbearance and are fixed by TSPs

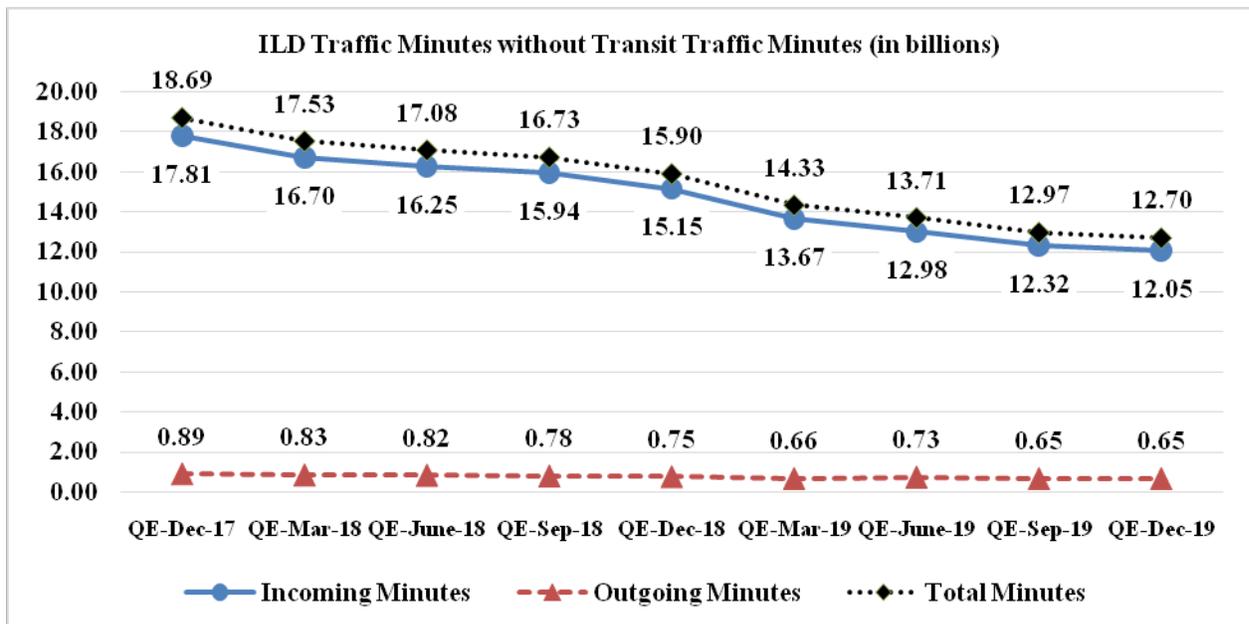
themselves as per negotiations. However, since the termination charges in India are fixed at a uniform rate, the FAPs have taken advantage of the situation with their comparatively higher rates and have practically become the price makers in their markets. According to this stakeholder, Indian ILDOs are earning lower revenue per minute from foreign operators, when cost per minute paid by the Indian ILDOs to the foreign operators is compared. In their opinion, the Indian markets should continue to keep a uniform rate, which could possibly reduce or eliminate re-routing of calls via low settlement rate countries and increase the termination charges. They have suggested an increase in ITC to INR 0.60 or INR 0.70 per minute at least based on the reasoning that internationally an approximate amount of \$0.5 is being paid.

45. As per the stand-alone ILDOs operating in the Indian market, they are facing the challenges of sustenance due to low-revenue margins, and have to bear the brunt of the exchange rate fluctuations as well as long payment cycles in the international market. As per them, the Government and the Regulator has been helping out the ASPs who are facing the low margins. Similar help is needed specially for the ILDOs who do not have access to a large captive access network. They have requested that apart from the issues of traffic imbalance, grey market operation and traffic shifting to OTT application, interest of standalone ILDOs needs to be taken into consideration while deciding any regime on ITC. One such operator has suggested that any differential charge above the DTC should be mandated to be distributed between ILDO and ASP in the ratio of 60:40. As per this operator, if such distribution of differential revenue is not mandated by TRAI it will lead to vertical squeeze in international traffic. In its view, this would mean that standalone ILDO would not be able to compete against the integrated service providers. This stakeholder also suggested that the authority should actively engage with regulators in major traffic exchange countries for making a low-reciprocal arrangement for ITC between such countries. This would help reduce the cost of outgoing ILDO calls for Indian subscribers and also help to shift the traffic back from OTT to PSTN.
46. Another standalone ILDO has argued that framework of IUC must be based on the principle of "Work Done". In its view, the current market situation is making it unviable for independent ILDOs to sustain. According to this ILDO, the market price for India termination being offered by some carriers is as low as 0.48 US cents (INR 0.345) which leaves a meagre margin of only 4.5 paisa for ILDOs because of the current ITC being INR 0.30. These settlement rates are unsustainable. In its view, the margins being made by ILDOs are not even sufficient to cover the cost of bandwidth being maintained by them for carriage of calls leave aside getting a reasonable return on their investments. Equipment and infrastructure involved at various stages in carriage of outgoing ILDO calls from India and incoming calls to India have been elaborated in detail by this stakeholder. According to this ILDO, they need to significantly invest in infrastructure assets to manage the routing, billing and settlement of calls and monitoring systems to comply with the regulatory directives issued by DoT and the Authority. They have recommended to keep current ITC charges at INR 0.30 payable to access and mobile operators and allocate another INR 0.24 for ILDO for their investment and efforts.

47. One stakeholder advocating reduction in ITC has stated that the work done for terminating the calls by ASP is same for domestic and international calls. In its view, ITC should be brought equal to Domestic Termination Charge (DTC) in two stages. It has suggested that in the first stage ITC may be reduced to 15 paisa per minute and in second stage it may be made equal to DTC. In its view it will help to discourage OTT calling, thereby arrest security concern and ultimately encourage competition among the operators
48. It can be induced from the above that while most of the stakeholders have suggested for an increase in the rate of ITC, their opinions are divided in respect of revised rate. While a stakeholder has suggested to increase the rate of ITC up to Rs. 3.5 per minute, most of them have suggested to increase the rate of ITC up to Re. 0.75 per minute. Another stakeholder has suggested the range of Rs. 0.75 to 1.25 per minute for ITC rate. Few of them, while requesting an increase in the rate of ITC, have also suggested that the increased amount be earmarked to ILDOs and not to the Access Service Providers. One stakeholder has suggested for reducing the rate of ITC to the level of DTC.
49. Before we examine the proposal to reduce the rate of ITC to the level of DTC, it would be worth to mention here that for the period beginning from 01.02.2004 up to 31.03.2009, the Authority prescribed ITC at par with DTC. However, from 01.04.2009 onwards, ITC was fixed at a level higher than the DTC as mentioned below:
- (a) ITC at Re. 0.40 per minute with effect from 01.04.2009 to 28.02.2015 vis-à-vis DTC at Re. 0.20 per minute.
 - (b) ITC at Re. 0.53 per minute with effect from 01.03.2015 to 31.01.2018 vis-à-vis DTC at Re. 0.14/0.06 per minute.
 - (c) ITC at Re. 0.30 per minute with effect from 01.02.2018 till date vis-à-vis DTC at Re. 0.06 per minute.
50. While prescribing differential rates for ITC and DTC, for the first time, through the Telecommunication Interconnection Usage Charges (Tenth Amendment) Regulations, 2009, the Authority noted that cost-orientation of charges should not be the sole criteria for fixing ITC, the international termination charges prevalent internationally should also be taken into account. It should also be seen as to what is more advantageous to Indian operators and Indian consumers. Thereafter, when the Authority again prescribed differential rates for ITC and DTC through the Telecommunication Interconnection Usage Charges (Eleventh Amendment) Regulations, 2015, it had noted that the ITC should be fixed at a level which meets three objectives viz. (a) encourage TSPs to reduce tariffs on outgoing international calls and prevent any pass-through to domestic tariffs of revenue losses arising from the calling card Regulation; (b) prevent the diversion of traffic towards OTT players such as Skype, Viber; and do not create arbitrage opportunity for grey market, (c) neutralize the effect of the foreign exchange rate variations. In 2018 also, all these factors were kept in mind by the Authority while revising the rate of ITC to Re. 0.30 per minute.

51. The Authority is of the opinion that these factors continue their relevance even now. Therefore, to argue that the rate of ITC should be fixed on the work done principle alone is not tenable. Further, as per available data, when the reduction in the rate of ITC from Re. 0.53 to Re. 0.30 in 2018 has not reduced the incoming ILD traffic through OTT route, how bringing down the ITC to the level of DTC would address OTT and thereby security concerns is not clear. The stakeholder suggesting this measure has failed in giving any persuasive reason with supporting data. In fact, growth in OTT traffic for international calling is a global phenomenon and most of the other countries have not reduced their international termination charges to the level of their DTC.
52. The Authority has collected data pertaining to incoming and outgoing ILD traffic from ILD operators, from time to time. Based on which, a quarter-on-quarter ILD traffic minutes is presented in Figure 2.

Figure 2 : ILD Traffic Minutes (in billions)



From Figure 2, it can easily be concluded that while the incoming and outgoing ILD traffic from India has reduced at different pace during the last two years, the imbalance between the incoming and outgoing ILD minutes is still substantial and stands at 18:1 i.e., the incoming ILD minutes in India is 18 times higher than the outgoing ILD minutes from India. Further, as elaborated earlier, Indian operators' per minute cost towards termination charges for outgoing ILD calls is much higher in comparison to the revenue earned by them from termination charge paid by foreign operators on per minute basis. ILDOs pass on the burden of higher termination rate of any country to the Indian Access providers, thereby limiting their ability to provide cheaper ISD rates to Indian customers. An increase in the rate of ITC would help reducing the pricing arbitrage which presently exists in favour of foreign operators. However, while considering any increase in the rate of ITC, the Authority is conscious of the constant threat from grey and OTT markets. Therefore, any increase in the rate of ITC must be calibrated between these two opposing factors.

53. A very high upper ceiling may encourage grey market operators, and if the FAPs pass on such increase in ITC to their customers then that may further accelerate the diversion of ILD voice traffic from carrier to OTT route. This would neither be in the interest of service providers in particular nor in the interest of the country as a whole. In addition to this, a service provider might be tempted to keep high ITC rates leading to protracted negotiations with foreign carriers sometimes resulting into uncertainty and disputes in the market. Further, a suggestion to fix the rate of ITC in terms of USD, in place of Indian Rupee, is not tenable as it is a settlement within India between Indian Access Service Providers and ILDOs. Hence, a ceiling must be set at some optimum value, so that these concerns may be addressed. In view of the foregoing discussions, the Authority is of the opinion that the upper ceiling should be fixed at a level which meets the already identified three objectives viz:
- (a) encourage TSPs to reduce tariffs on outgoing international calls,
 - (b) prevent the diversion of traffic towards OTT players and do not create arbitrage opportunity for grey market, and
 - (c) neutralize the effect of the foreign exchange rate variation.
54. While most of the stakeholders have suggested to increase the rate of ITC up to Re. 0.75 per minute, few have suggested to increase up to Rs. 3.50 per minute. As discussed earlier, increasing the rate of ITC indiscriminately may not be in the interest of any stakeholder. As, concluded in para 32, the Authority intends to fix the rate of ITC within a pre-specified range. The question now is that what should be the range for ITC. A reasonable approach could be that the proposed range is fixed between the current rate of ITC and the rate prevalent before last revision. It is pertinent to note here that the rate (Re. 0.53 per minute) prevalent before last revision evolved over a period through successive revisions. As mentioned earlier, initially in the year 2003, the rates of ITC and DTC were fixed at same value i.e. Re. 0.30 per minute. Subsequently, in 2009, for the first time, the rates of ITC and DTC were fixed at different values and while the rate of DTC was decreased to Re. 0.20 per minute, the rate of ITC was increased to Re. 0.40 per minute. This rate of Re. 0.40 per minute was further revised to Re. 0.53 per minute in the year 2015 after applying the forex rate variations. Accordingly, the rate prevalent before last revision was continuing since 2009 with forex rate adjustments. The lower ceiling at current rate of ITC would protect existing revenue of the service providers. Further, these rates are already tested and may not bring any disruption in the market. This would not only ensure regulatory certainty but also provide the required flexibility to service providers. Also, these rates must be adjusted for forex rate variations. Before last revision, when the rate of ITC was fixed at 53 paise per minute, the exchange rate for USD was Rs. 62 per dollar. That rate is now hovering around Rs. 75 to Rs. 76 per US dollar. Therefore, the forex rate variation adjusted equivalent of 53 paise would be approximately 65 paise. Similarly, the forex rate variation adjusted equivalent of 30 paise would be approximately 35 paise. So, the range of 35 to 65 paise per minute for the rate of ITC would be most appropriate.

55. A few standalone ILDOs have suggested that if the Authority decides to keep an asymmetric termination charge for domestic and international calls, the additional amount charged over and above the domestic termination charge should be divided in a 60:40 ratio between the ILDO and the access service provider. While demanding this, they have simultaneously argued that this is necessary for their sustenance as the carriage charges in the market have reduced to abysmally low level of 4.5 paise only. It is pertinent to note here that the primary source of revenue for ILDOs is carriage charges in the international leg, which is under forbearance. This is equally applicable to standalone as well as the integrated ILDOs. Accordingly, the ILDOs are free to decide the carriage rate for ILD calls which ensures reasonable return on their investments. To ensure the level playing field between standalone and integrated ILDOs, the Authority is mandating that an access service provider, be it Basic Service Operator (BSO), Cellular Mobile Service Providers (CMSP), Unified Access Service Provider (UASP) or Unified License (UL) licensee, shall offer the non-discriminatory rate of ITC to everyone i.e. to its own associated ILDO as well as to standalone ILDOs. Any kind of direct or indirect violation of this provision may attract the penal action against violators as per the provisions of TRAI Act, 1997.
56. Since the ILDOs are free to decide the carriage rate, as per the competition in the market, which can recover their cost of operations and ensure reasonable amount of profit, any regulatory intervention at this point of time, by way of sharing termination charges with ILDOs or fixing separate per minute charges for ILDOs, would amount to putting a floor price for carriage charges. This may affect the competition in the marketplace. Accordingly, in view of the Authority, this demand of the standalone ILDOs is not tenable. The Authority is of the view that there is no need for prescribing any revenue share between Indian ILDO and access service provider in the ITC.
57. Keeping in view all these facts, the authority has decided that the rate of ITC shall be kept under forbearance within a prescribed range of Re. 0.35 per minute to Re. 0.65 per minute.
58. As this new regulatory regime for the rate of ITC is being prescribed for the first time in the country, the Authority would closely monitor its implementation, including the trends and patterns of ILD voice traffic in the country. The Authority, if it deems necessary, may review this regime as well as the rate of ITC in due course of time.