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TELECOM REGULATORY AUTHORITY OF INDIA

THE TELECOMMUNICATION TARIFF (FIFTY FIFTH AMENDMENT) ORDER, 2013

No.3 of 2013

NOTIFICATION

New Delhi, the 17th June, 2013

No. 301-10/2012-F&EA — In exercise of the powers conferred upon it under sub-section (2) of section 11, read with sub-clause (i) of clause (b) of sub-section (1) of the said section, of the Telecom Regulatory Authority of India Act, 1997(24 of 1997), the Telecom Regulatory Authority of India hereby makes the following Order further to amend the Telecommunication Tariff Order, 1999, namely:

1. (1) This Order may be called the Telecommunication Tariff (Fifty Fifth Amendment) Order, 2013.

(2) This Order shall come into force on the 1st day of July, 2013.

2. In clause 2 of the Telecommunication Tariff Order, 1999 (hereinafter referred to as the principal tariff order), ---

(a) after sub-clause (d), the following sub-clause shall be inserted, namely:

“da. “Combo Voucher” means a paper voucher or electronic voucher which on activation alters one or more items, for a period not exceeding ninety days, in the tariff plan of the consumer and adds monetary value to the prepaid account of the subscriber.”;

(b) the existing sub-clause (dd) shall be numbered as sub-clause (db);

(c) after sub-clause (l), the following sub-clauses shall be inserted, namely:

“la. “Roaming Tariff Plan” or “RTP” means a tariff plan in which the charges for outgoing voice calls and outgoing SMS, both local as well as long distance (inter-circle), shall not change with the location of the subscriber within the country.

lb. "Roaming Tariff Plan-FR" or "RTP-FR" means an RTP in which there is no charge for incoming voice calls while on national roaming, on payment of fixed charge, if any, as may be determined by the service provider.";

(d) after sub-clause (m), the following sub-clause shall be inserted, namely:

"ma. "Special Tariff Voucher" means a paper or electronic voucher, which on activation alters one or more items of applicable tariff in the consumer tariff plan for a period not exceeding ninety days in terms of limited or unlimited usage of voice calls, SMS or data but does not provide any monetary value."

3. In clause 6 of the principal tariff order, after sub-clause (ix), the following sub-clause shall be inserted namely:

"(x) Every service provider shall offer a Roaming Tariff Plan and a Roaming Tariff Plan-FR to its pre-paid and post-paid subscribers.";

4. In the Schedule II to the principal tariff order under item (14), for sub-item (14.a) and entries thereto, the following sub-items and entries relating thereto shall be substituted, namely:

Schedule-II
Cellular Mobile Telecom Services (CMTS)

ITEM	TARIFF
“(14.a) National Roaming	
(14.a.i) Fixed charge for National Roaming	Nil provided that Special Tariff Voucher and Combo Voucher shall be permitted and in case of RTP-FR, the fixed charge shall be under forbearance.
(14.a.ii) Charge for outgoing local voice call while on national roaming	Ceiling of Re. 1.00 per minute
(14.a.iii) Charge for outgoing long distance (inter-circle) voice call while on national roaming	Ceiling of Rs. 1.50 per minute
(14.a.iv) Charge for incoming voice call while on national roaming	Ceiling of Re. 0.75 per minute
(14.a.v) Charge for outgoing local Short Message Services (SMS) while on national roaming	Ceiling of Re. 1.00 per SMS
(14.a.vi) Charge for outgoing long distance (inter-circle) Short Message Services (SMS) while on national roaming	Ceiling of Rs. 1.50 per SMS
(14.a.vii) Charge for incoming Short Message Services (SMS) while on national roaming	Nil
(14.a.viii) Surcharge while national roaming	Nil
(14.ab) International roaming	Forbearance
(14.ac) Any other item related to roaming but not falling under sub-item (14.a) and (14.ab) above	Forbearance.”.

(Manish Sinha)
Advisor (F&EA)

Note.1. – The Telecommunication Tariff Order, 1999 was published in the Gazette of India, Extraordinary, Part III, Section 4 under notification No.99/3 dated 9th March, 1999, and subsequently amended as given below:

Amendment No.	Notification No. and Date
1 st	301-4/99-TRAI (Econ) dated 30.3.1999
2 nd	301-4/99-TRAI(Econ) dated 31.5.1999
3 rd	301-4/99-TRAI(Econ) dated 31.5.1999
4 th	301-4/99-TRAI(Econ) dated 28.7.1999
5 th	301-4/99-TRAI(Econ) dated 17.9.1999
6 th	301-4/99-TRAI(Econ) dated 30.9.1999
7 th	301-8/2000-TRAI(Econ) dated 30.3.2000
8 th	301-8/2000-TRAI(Econ) dated 31.7.2000
9 th	301-8/2000-TRAI(Econ) dated 28.8.2000
10 th	306-1/99-TRAI(Econ) dated 9.11.2000
11 th	310-1(5)/TRAI-2000 dated 25.1.2001
12 th	301-9/2000-TRAI(Econ) dated 25.1.2001
13 th	303-4/TRAI-2001 dated 1.5.2001
14 th	306-2/TRAI-2001 dated 24.5.2001
15 th	310-1(5)/TRAI-2000 dated 20.7.2001
16 th	310-5(17)/2001-TRAI(Econ) dated 14.8.2001
17 th	301/2/2002-TRAI(Econ) dated 22.1.2002
18 th	303/3/2002-TRAI(Econ) dated 30.1.2002
19 th	303/3/2002-TRAI(Econ) dated 28.2.2002
20 th	312-7/2001-TRAI(Econ) 14.3.2002
21 st	301-6/2002-TRAI(Econ) dated 13.6.2002
22 nd	312-5/2002-TRAI(Eco) dated 4.7.2002
23 rd	303/8/2002-TRAI(Econ) dated 6.9.2002
24 th	306-2/2003-Econ dated 24.1.2003
25 th	306-2/2003-Econ dated 12.3.2003
26 th	306-2/2003-Econ dated 27.3.2003
27 th	303/6/2003-TRAI(Econ) dated 25.4.2003
28 th	301-51/2003-Econ dated 5.11.2003
29 th	301-56/2003-Econ dated 3.12.2003
30 th	301-4/2004(Econ) dated 16.1.2004

31 st	301-2/2004-Eco dated 7.7.2004
32 nd	301-37/2004-Eco dated 7.10.2004
33 rd	301-31/2004-Eco dated 8.12.2004
34 th	310-3(1)/2003-Eco dated 11.3.2005
35 th	310-3(1)/2003-Eco dated 31.3.2005
36 th	312-7/2003-Eco dated 21.4.2005
37 th	312-7/2003-Eco dated 2.5.2005
38 th	312-7/2003-Eco dated 2.6.2005
39 th	310-3(1)/2003-Eco dated 8.9.2005
40 th	310-3(1)/2003-Eco dated 16.9.2005
41 st	310-3(1)/2003-Eco dated 29.11.2005
42 nd	301-34/2005-Eco dated 7.3.2006
43 rd	301-2/2006-Eco dated 21.3.2006
44 th	301-34/2006-Eco dated 24.1.2007
45 th	301-18/2007-Eco dated 5.6.2007
46 th	301-36/2007-Eco dated 24.1.2008
47 th	301-14/2008-Eco dated 17.3.2008
48 th	301-31/2007-Eco dated 1.9.2008
49 th	301-25/2009-ER dated 20.11.2009
50 th	301-24/2012-ER dated 19.4.2012
51 st	301-26/2011-ER dated 19.4.2012
52 nd	301-41/2012-F&EA dated 19.09.2012
53 rd	301-39/2012-F&EA dated 1.10.2012
54 th	301-59/2012-F&EA dated 05.11.2012

Note.2. – The Explanatory Memorandum explains the objects and reasons for the Telecommunication Tariff (Fifty Fifth Amendment) Order, 2013.

Explanatory Memorandum

A- Introduction & Background

1. Tariffs for national roaming service were being regulated in the form of ceiling tariffs prescribed by the Telecom Regulatory Authority of India (hereinafter referred to as the Authority) under clause 14(a) of Schedule II of Telecommunications Tariff Order (TTO), 1999 as amended by The Telecommunication Tariff (Forty Fourth Amendment) Order, 2007 (hereinafter referred to as the TTO (44th Amendment), 2007). The main features of the TTO (44th Amendment), 2007 were as below:

Table 1: Main Features of the TTO (44th Amendment), 2007

Item	Tariff
Monthly Access Charge	Nil
Outgoing local charge	Ceiling of Rs.1.40 per minute
Outgoing STD charge	Ceiling of Rs.2.40 per minute
Incoming calls	Ceiling of Rs.1.75 per minute
Incoming SMS charge	Nil
Other matters related to Roaming	Forbearance

2. Subsequent to issue of the TTO (44th Amendment), 2007 prescribing the tariff for national roaming service, the regimes governing some of the cost components which formed a part of the national roaming charges have undergone changes. Notably, the Access Deficit Charges (ADC) regime was phased out through the Telecommunication Interconnection Usage Charges (Ninth Amendment) Regulations, 2008 dated the 27.03. 2008. Further, the termination charges for local and national long distance voice calls were lowered from Re. 0.30 to Re. 0.20 per minute through the Telecommunication Interconnection Usage Charges (Tenth Amendment) Regulations, 2009. Also, while conducting costing exercises for determination of Interconnection Usage Charges (IUC), it was noticed that the costs of the network elements deployed by the service providers were declining steadily with the passage of time and advancement of technology. At the same time, the minutes of usage

(MOU) were rising steadily implying that the current incremental cost for roaming would be lower than the incremental cost for roaming prevailing in the year 2006-07. In sum, many of the cost components of charges for the national roaming service witnessed a reduction since 2007 when ceilings for call charges for national roaming services were last prescribed. In the light of the above, it was deemed necessary to undertake an exercise to review the tariff for national roaming service. An additional consideration for carrying out this review was to address the objective of 'Working towards One Nation - Free Roaming' stated in the National Telecom Policy (NTP)-2012.

3. As a prelude to the review exercise, on 26.10.2012, the wireless access service providers were asked to furnish information on usage, revenue and cost in respect of the national roaming service in a prescribed format to TRAI. Further, in order to seek inputs from stakeholders on the broad framework of tariff for the national roaming service, TRAI issued a 'Pre-consultation Paper on Review of Tariff for National Roaming' dated 20.12.2012.
4. Based on the comments of the stakeholders on the issues raised in the Pre-consultation paper, a comprehensive Consultation Paper (No.2/2013 dated 25.02.2013) was issued by the Authority on 'Review of Tariff for National Roaming' to seek the views of stakeholders on various aspects of tariff for the national roaming service. The stakeholders were to submit written comments by the 18th March, 2013. On the request of some stakeholders, the date for submission of written comments was extended till the 5th April, 2013. Written comments were received from Cellular Operators Association of India (COAI), ten telecom service providers (TSPs), three consumer organizations and two individuals. The comments and the counter-comments received from the stakeholders were placed on the TRAI's website– www.trai.gov.in. An Open House Discussion was held on 07.05.2013 in Delhi with the stakeholders. The issues raised in the Consultation Paper and the views of the stakeholders thereupon are examined in the succeeding paragraphs.

B- Analysis of the Key Issues Raised in the Consultation Paper

5. In the Consultation Paper on 'Review of Tariff for National Roaming', the Authority had sought the views of stakeholders on the following broad alternative approaches to regulate the tariff for national roaming service:
- (i) Tariff for national roaming service should be under forbearance.
 - (ii) The ceiling tariff for national roaming service should be reduced in line with the current costs
 - (iii) The tariff in national roaming service should be the same as that in home service area - Home Price Rule (HPR) for national roaming service
- Variant 1: The tariff for incoming calls while on national roaming should be made zero for the roamer and the costs should be recovered from the calling party.
- Variant 2, with only incoming calls free for the roamer: The tariff for incoming calls while on national roaming should be made zero and the costs should be recovered from the tariff of outgoing calls while on national roaming.
6. An analysis of these alternative approaches based on comments and inputs received from stakeholders is presented below.

Tariff for national roaming service should be under forbearance.

7. The majority of access service providers and one of their industry associations have favoured leaving the tariff for national roaming service under forbearance. They have argued that there is fair competition in the national roaming service in India; roaming tariffs are already well below the ceiling tariff prescribed by TRAI in 2007. They have also opined that the presence of 6-9 operators in each service area coupled with the availability of Mobile Number Portability (MNP) service provides enough impetus for competition in the marketplace. On the other hand, a few stakeholders, including one major service provider, have stated that they are not in favour of leaving the tariff for national roaming service under forbearance because there is still a substantial difference between home tariffs and roam tariffs.

8. As described in the Consultation Paper, the bouquet of telecom services offered to a subscriber can be classified in the following two broad categories:
- (i) Flagship services: viz. voice calls and SMSs in the home service area
 - (ii) Also-on-offer services: viz. national roaming service, international roaming service and other value added services

An individual mobile subscriber carefully examines the tariff offered by various service providers for flagship services before choosing a particular service provider. There is intense price competition between telecom service providers (TSPs) for flagship services. As a result, the market for flagship services is highly competitive. The same is not equally true for the 'also-on-offer services' which the subscriber receives as a part of the bouquet. For also-on-offer services such as the national roaming service, the subscriber is, in a sense, tied to the TSP from whom he has taken the flagship services. This feature of subscription for 'also-on-offer services' restricts the choice available to the subscriber and his ability to move from one service provider to the other. The empirical evidence also suggests that while the tariff for flagship services has responded actively to the changes in the number of players in the wireless market, the tariff for 'also-on-offer' services has remained relatively unaffected by such changes. Service providers generally keep the tariff for national roaming at a relatively higher level than the tariff in the home service area.

9. Stakeholders have argued that national roaming tariffs are well below the ceilings prescribed and have reasoned, on this basis, that there is vigorous competition in the market. The Authority notes that while it is indeed true that the prevailing prices for national roaming are well below the ceilings prescribed, this feature is largely a consequence of the decline in costs and charges since the time when the ceilings were last set. This fact has been recognized as one of the main reasons for undertaking the review exercise for national roaming tariff.
10. Regulatory forbearance in the matter of fixing tariff for flagship services such as voice calls and SMSs in the home service area has been an important factor in the remarkable growth of Indian telecommunications over the last decade. However, an identical paradigm of regulatory forbearance for national roaming service may not necessarily yield similar results, as the markets are dissimilar and arguably the

market for roaming services is less competitive. With a view to protect the interests of the consumers the Authority has decided, for the time being, not to adopt a regime of full regulatory forbearance for national roaming service as has been done in the case of mobile home tariffs.

The ceiling tariff for national roaming service should be reduced in line with the current costs.

11. The tariff for national roaming service was being regulated in the form of a ceiling tariff prescribed through the TTO (44th Amendment), 2007. The following cost components were used to arrive at the ceiling tariff for various types of voice calls while on national roaming:
 - (i) Origination charge
 - (ii) Interconnection Usage Charges (IUC) viz. termination charge, carriage charge and access deficit charge (ADC)
 - (iii) Incremental cost for roaming

12. The Authority has estimated the incremental cost for roaming at present costs as Re. 0.10 per minute based on the information on usage and revenue in respect of national roaming service furnished by the wireless telecom service providers in the formats prescribed through TRAI's letter dated 26.10.2012. A summary of calculations of incremental cost estimates for national roaming service is placed as 'Annexure'.

Tariff Ceiling for Outgoing calls while on national roaming

13. In the exercise for calculation of ceiling tariffs for national roaming calls undertaken in 2006-07, the work done by the service provider in case of originating a call was assumed as equal to the work done for terminating a call. During the present consultation, stakeholders have argued that the origination charge is under regulatory forbearance and the cost of originating a call cannot be assumed to be equal to the cost of terminating a call as the cost of origination should contain the cost of acquisition of subscribers and other marketing costs which are not included in the cost of terminating a call.

14. In light of the fact that the origination charge is under forbearance, the Authority is of the view that, fixing a tariff ceiling for outgoing calls while on national roaming based on the assumptions adopted during the previous review of 2006-07 may lead to irrational results that run counter to the actual situation prevailing in the market. In the Consultation Paper no. 2/2013 dated 25.02.2013, the Authority had assessed the generally prevailing tariff for outgoing local calls and outgoing STD calls while on national roaming at Re. 1 per minute and Rs. 1.50 per minute respectively. The Authority also noted that the ceilings prescribed through TTO (44th Amendment), 2007 were Rs. 1.40 per minute for outgoing local call and Rs. 2.40 per minute for outgoing STD call. The Authority has, therefore, decided that the ceiling tariff for outgoing local calls and outgoing STD calls while on national roaming should be brought down and fixed at the levels of the prevailing tariffs for outgoing local call and outgoing STD call while on national roaming i.e. at Re. 1.00 per minute and Rs. 1.50 per minute respectively.

Ceiling for incoming calls while on national roaming

15. As distinct from an outgoing call, in case of an incoming call while on national roaming, origination charge and termination charge are not part of cost components recoverable from the roaming subscriber. As discussed in the Consultation Paper (2/2013), in case of an incoming call to a subscriber on national roaming, the service provider has to recover from the subscriber only two cost components viz. carriage charge and incremental cost for roaming, both of which are easily determined. Taking into account the fact that a cost based ceiling on incoming calls while roaming can be reasonably estimated and given the possible disruptive consequences that removal of charges on incoming roaming calls is likely to have on telecom markets (this is discussed in detail in the analysis that follows), the Authority has decided to fix a cost based ceiling tariff for incoming calls while on national roaming. As per the Telecommunication Interconnect Usage Charge Regulation, 2003, the carriage charge has a ceiling of Re. 0.65 per minute and incremental cost for roaming has been estimated as Re. 0.10 per minute; accordingly, the Authority has fixed a ceiling of Rs. 0.75 per minute for incoming call while on national roaming.

The tariff for national roaming service should be the same as that in home service area.

16. The third possible approach for regulating the tariff for national roaming is by prescribing a Home Price Rule (HPR) regime. The concept of HPR is closest to the policy scenario envisaged in the NTP 2012 and its declared intent to move towards a one-nation free-roaming situation across the country. As per the HPR regime proposed in the Consultation Paper, incoming calls while on national roaming would be free of charge whereas outgoing calls/ SMS while on national roaming would be charged at the same tariff as applicable for outgoing calls/ SMS made from the home service area. The feasibility of such a regime is examined below.
17. From the comments of the stakeholders, it clearly emerges that the majority of the access service providers are not in favor of HPR in the national roaming service. Stakeholders are strongly averse to a regime in which incoming calls while on national roaming would become free.

Free incoming calls while on national roaming

18. The fact that there are significant costs involved for TSPs in respect of incoming calls terminated on their network was already recognized in the Consultation Paper issued on 25.02.2013. In the simplest case, the removal of charges for incoming calls while roaming could result in non-recovery of charges for the work done by the TSPs in carrying the call from home service area to the visited service area. The Consultation Paper had, in fact, included an analysis of the financial impact of the HPR (including free incoming calls) with and without taking into account price elasticity of demand for national roaming. Now, based on the comments received from stakeholders, it is clear that removal of charges for incoming calls while on national roaming would create arbitrage opportunities that could lead to SIM¹ movement behaviour in the market which would have potential market distorting effects.

¹ SIM is an abbreviation of 'Subscriber Identity Module'.

19. The following example illustrates the inherent problem. Let us take the case of a migrant worker working in a particular licensed service area, who makes frequent STD calls to his family residing in another licensed service area. If incoming calls while on national roaming become free of charge, he would have the incentive to purchase a SIM card from the licensed service area where he works and give it to his family residing in another service area. In this eventuality, the calling party (i.e. the migrant worker) would save money by paying for a local call instead of an STD call and the called party (i.e. the family of the migrant worker) would not have to pay to receive the call as the incoming calls while on national roaming would have become free of charge. As a result, many subscribers would be incentivised to move SIMs across licensed service areas in order to gain from such an arbitrage opportunity and the TSPs would lose revenue because they would not be able to recover the carriage charge and incremental cost for roaming.
20. The access service providers have also argued that a regime in which an incoming call becomes free of charge while on national roaming would adversely impact the health of the national long distance operators (NLDOs). On removal of incoming call charges while on national roaming, TSPs would not be able to recover and pass on to NLDOs the carriage charges that cover the latter's costs of carrying the call from home service area to the visited service area. This will have an impact on the long-term sustainability of the NLDOs.
21. The Authority has carefully considered the comments of the stakeholders with regard to removal of the charges for incoming roaming calls. The Authority had earlier raised the issue of direct revenue losses to TSPs due to non-recovery of costs under such a regime. While such losses may possibly be mitigated by the price elasticity of demand for national roaming services, the Authority has come to the conclusion that the more serious implication of such a step is that it could provoke consumer behavior that could lead to perverse outcomes and have unintended distortionary effects in the market for telecom services. These effects would manifest themselves in any regime in which incoming roaming calls are made free of charge. The difficulties pointed out would, therefore, apply equally to Variant 2 under Approach (iii) described in para 4 above in which the tariff for incoming calls while

on national roaming is made zero and the costs recovered from the tariff for outgoing calls while on national roaming.

22. The loss of revenue due to non-recovery of costs in a national roaming regime in which incoming calls are free was recognized by the Authority in the Consultation Paper issued on 25.02.2013. The impact on revenue was calculated as ranging from Rs. 1800 crores to Rs. 2200 crores under various scenarios. In order to address the issue and mitigate the adverse impact on the service providers, a variant of the HPR while on national roaming (Variant 1 under Approach (iii) listed at para 4 above) was also proposed in the Consultation Paper in which incoming roaming calls would remain free to the called party but the carriage charge for such calls would be paid by the calling party. In this variant of HPR, when a call is made to a national out roamer, the calling party would be provided with an announcement informing it that (i) the called party is on national roaming, and (ii) the calling party would have to pay 'additional charges' in case it wished to speak to the called party (the roamer).
23. From the comments of the stakeholders, it emerges clearly that access service providers are not in favour of this option as it would require considerable investment in network and IT systems. It would also need establishment of complex inter-operator settlement mechanisms since the service provider collecting the tariff may not be the one that pays the carriage fee to the NLDO. Besides, this regime may result in reduction of TSPs' revenue because the arrangement of pre-announcement may reduce the volume of incoming calls to the national out-roamer as the calling party may not necessarily complete the call. Further, the proposed pre-announcement may also result in high call set-up time and, therefore, reduced quality of consumer experience.
24. The Authority recognizes the fact that such a regime would call for a significant investment in the network and IT systems. Since the home service provider may not be aware of the location of the called party, the system may give rise to a number of billing and settlement disputes. The Authority is also mindful of the fact that the present regime in which the work done in carrying the call from the home service area to the visited service area is paid for by the called party has been in vogue for a

long time and, therefore, any alteration would require significant customer education.

25. Summing up the analysis in the preceding paragraphs, the Authority has decided not to mandate the implementation of a system in which the calling party pays for a national roaming call in view of the high costs and operational complications involved. The Authority has also concluded that it may not be feasible to remove charges for the incoming call while on national roaming. However, in view of the expectations of consumers raised on account of the declared objective of NTP, 2012 to work towards free national roaming, the Authority is putting in place an option for roaming subscribers to avail of free incoming calls while on national roaming in lieu of payment of fixed charges. This mechanism would address the concerns raised by the stakeholders with regard to arbitrage opportunities resulting out of removal of charge for incoming call while on national roaming. The mechanism is discussed in detail in the subsequent paragraphs.

HPR for outgoing calls while on national roaming

26. On the issue of making the tariff of outgoing calls while on national roaming (hereinafter referred to as 'roam tariff') equal to the tariff for outgoing calls in the home service area (referred to as 'home tariff'), variety of views have been expressed by stakeholders. Some stakeholders have considered that home tariffs may not be sustainable in the visited licensed service area due to a wide variation in costs in such as spectrum costs, CAPEX, operational costs viz. energy, fuel, right of way (RoW), wages and salaries across licensed service areas, and prevalence of different tax structures. On the other hand, a few stakeholders have opined that such variations in costs are not significant enough to prevent the subscribers from enjoying the socio-economic benefits that would accrue from such a regime. Some stakeholders, mainly regional operators who do not have pan-India presence, have stated that a regime in which home tariffs are equal to roam tariffs will put them at a competitive disadvantage vis-a vis pan India operators, since they have to depend on such pan-India operators for roaming connectivity. A related issue raised by some access providers is about regulation of wholesale roaming charges payable by the home network provider to the visited network provider.

27. The Authority has carefully examined the possibility of keeping roam tariff equal to home tariff as such a regime can potentially remove the premium charged by the access service providers on outgoing calls while on national roaming. The Authority recognizes the fact that keeping roam tariff equal to home tariff not only simplifies the tariff structure but also removes the fear of 'bill shock' while on national roaming from the minds of the subscribers. On the other hand, this regime compels the access service providers to match their roam tariff with the home tariff and has two potential consequences:
- (i) A tariff regime mandating 'roam tariff equal to home tariff' may result in cross subsidization of roaming subscribers at the expense of non-roaming subscribers. It is worth mentioning here that only about 13% subscribers use national roaming service. Implementation of 'roam tariff equal to home tariff' across-the-board may result in some costs incurred for the national roaming service, remaining unrecovered. TSPs may resort to increase in home tariffs to recover these unrecovered costs, if any.
 - (ii) This regime could impact the access service providers who do not have pan-India presence. Such service providers depend upon incumbent TSPs for providing national roaming service to their subscribers and, therefore, they have to face market determined wholesale roaming charges in the service areas where they do not have a presence. In a regime mandating 'roam tariff equal to home tariff', their flexibility in fixing home tariff may be impacted.
28. The Authority has considered the comments and statements of the regional operators relating to wholesale charges. The Authority observes that there have been no alarming deviations reported from the wholesale roaming market so far. Besides, wholesale roaming charges were not a part of the consultation process. The Authority has therefore decided not to go into the matter at this stage.
29. The Authority notes that for outgoing calls while on national roaming, the main concern in a regime in which the roam tariff for outgoing voice calls (local as well as STD calls) are set equal to the home tariff for outgoing voice calls, is that TSPs could

potentially increase the home tariff to compensate for diminished margins earned on outgoing roaming calls, resulting in the home tariff subsidizing the roam tariff. This concern can be addressed by allowing the principle of self-selection to operate so that roamers can pick out for themselves the tariff plan that best suits their needs. The cross subsidy in such a scheme would be confined to the roaming population instead of spilling over to general subscribers. Under such a system, the concerns expressed by regional operators about loss of flexibility in home tariff fixation would also be allayed. The Authority has therefore decided to mandate the service providers to provide roam tariff for outgoing voice calls equal to home tariff for outgoing voice calls (local as well as STD calls)' in one tariff plan which shall be called 'Roaming Tariff Plan' or 'RTP', each for post-paid and pre-paid services in every service area. The ceiling tariff prescribed for outgoing voice calls (local as well as STD calls) and incoming voice calls for national roaming will apply to the tariffs for the RTP as well.

30. As indicated earlier, as a special measure to provide the facility of free incoming calls, the Authority has also decided to mandate another tariff plan 'Roaming Tariff Plan-FR' or 'RTP-FR' each for post-paid and pre-paid services in every service area which would not only provide roam tariff for outgoing voice calls equal to home tariff for outgoing voice calls (local as well as STD calls) but also free incoming calls while on national roaming in lieu of fixed charges. In the case of RTP-FR, the ceiling tariff prescribed for outgoing voice calls (local as well as STD calls) while on national roaming will apply.

Prescription of tariff for outgoing SMS while on national roaming

31. Views of stakeholders had also been sought on tariff for outgoing SMS while on national roaming. In the earlier regime, this tariff was under regulatory forbearance. The specific question asked was whether it would be appropriate to prescribe that the tariff for an outgoing SMS while on national roaming should not be more than that for an outgoing SMS from home service area.
32. Many access service providers have argued that since the visited network is not realizing any fixed charges from the roaming subscriber, the usage charges would necessarily be higher than those in the home network in order to recover the

additional cost e.g. signaling charges. On the other hand some stakeholders have stated that there is hardly any additional cost which can justify additional charges for an outgoing SMS while on national roaming and, therefore, the tariff for outgoing SMS while on national roaming should not be more than the tariff for outgoing SMS in home service area.

33. The Authority has analyzed the issue and has arrived at the conclusion that the work done for an outgoing SMS from the visited service area is, at best, only marginally higher than the work done in case of an outgoing SMS from the home service area. In the Consultation Paper no. 2/2013 dated 25.02.2013, the Authority had assessed the generally prevailing tariff for outgoing local SMS and outgoing STD SMS in home service area as Re. 1.00 per SMS and Rs. 1.50 per SMS respectively. The Authority has, therefore, decided to prescribe ceiling tariffs while on national roaming, of Re. 1.00 per SMS and Rs. 1.50 per SMS for outgoing local SMS and outgoing STD SMS respectively. Incoming SMS while on national roaming will, however, continue to remain free of charge.
34. The Authority has further decided to mandate the service providers, as in the case of outgoing voice calls, to provide tariff for outgoing SMS while on national roaming equal to tariff for outgoing SMS (local as well as STD) in home service area in the tariff plans 'RTP' and 'RTP-FR', for both post-paid and pre-paid services in every service area. The ceiling tariff prescribed for outgoing SMS (local as well as STD) for national roaming will apply to the tariffs for the 'RTP' and 'RTP-FR' as well. In all cases, incoming SMS will be free of charge.

Description of the scheme of tariff plan 'RTP' and 'RTP-FR'

35. As indicated earlier, the Authority has mandated the service providers to offer a tariff plan 'RTP' and a tariff plan 'RTP-FR', for both pre-paid and post-paid services in each service area. These tariff plans shall be within the ceiling of twenty five tariff plans prescribed through the Telecommunication Tariff (Forty Second Amendment) Order, 2006 dated 07.03.2006. How these tariff plans would operate, is described below:

36. In the tariff plan 'RTP', the charges for outgoing (local and STD) voice calls and outgoing (local and STD) SMS shall be uniform for home service area and national roaming and shall be within the ceiling tariff prescribed for outgoing (local and STD) voice calls/ SMS and incoming voice calls for national roaming.
37. In the tariff plan 'RTP-FR', the charges for outgoing (local and STD) voice calls and outgoing (local and STD) SMS shall be uniform for home service area and national roaming and shall be within the ceiling tariff prescribed for outgoing (local and STD) voice calls/ SMS. In addition, incoming calls while on national roaming shall be free of charge in lieu of fixed charges.
38. The schemes described above for the tariff plans 'RTP' and 'RTP-FR' shall apply for all varieties of outgoing (local and STD) voice calls and outgoing (local and STD) SMS. Besides, any discounted or promotional tariffs in these tariff plans shall be applied on both home and roam tariffs. In order to simplify the presentation of the tariff plan and to aid consumer understanding, the charges for outgoing (local and STD) voice calls and outgoing (local and STD) SMS shall not be distinguished on the basis of whether these are for the home service area or for national roaming.
39. The operation of the tariff plans 'RTP' and 'RTP-FR' is illustrated with the help of the following example:
 A service provider (TSP₁) offers access service in two service areas (X and Y). TSP₁ offers access service to the subscribers on CDMA only in the service area 'X' and on both GSM and CDMA in the service area 'Y'. The TSP₁ offers both post-paid and pre-paid tariff plans in the service area 'X' and 'Y'.

Service Area	GSM		CDMA	
	Post-paid	Pre-paid	Post-paid	Pre-paid
X			✓	✓
Y	✓	✓	✓	✓

40. TSP₁ would have to offer two separate tariff plans 'RTP' and 'RTP-FR' in each category. For example, in the service area 'X', it would offer an 'RTP' and an 'RTP-

FR' for CDMA (Pre-paid) category and a separate 'RTP' and an 'RTP-FR' for CDMA (Post-paid) category.

Prescription of tariff for video calls while on national roaming

41. In the Consultation Paper, stakeholder's views had also been sought on whether there is any need to prescribe tariff for video calls while on national roaming. A majority of the stakeholders have opined that video calls are at a very early stage of growth and therefore any prescription of tariff for video calls at this stage would undermine the huge investments made for provision of the service; however, market forces would ensure that these services are priced optimally to drive traffic and usage.
42. The Authority recognizes the fact that video calls are at a nascent stage of growth and, therefore, the Authority has decided, for the time being, to leave the tariff for video calls while on national roaming under forbearance.

Allowing Special Tariff Vouchers (STVs) and Combo Vouchers (CVs) with roaming benefits

43. As per the TTO (44th Amendment) 2007, TSPs were not allowed to charge any monthly access charge for national roaming services. As a corollary, they could not offer Special Tariff Vouchers (STVs) with roaming benefits, as STVs provide tariff benefits in lieu of fixed charges. In the Consultation Paper, stakeholders' views were solicited on whether there should be a re-think on this issue and whether STVs with roaming benefits should be allowed.
44. The majority of the stakeholders have favored allowing STVs and Combo Vouchers (CVs) with national roaming benefits. They have argued that such vouchers would not only boost market offerings to subscribers but also provide greater flexibility to the service providers. They have contended that STVs and CVs would play a big role in bringing down the tariff for national roaming service.

45. The Authority recognizes the fact that the STVs and CVs for home tariff have provided both flexibility and convenience to subscribers. The Authority has also analyzed the functionality of STVs and CVs for national roaming service and has come to the conclusion that such vouchers would blend well with the regime now being put in place for roaming calls and SMS and would enhance the capability of the system to respond to the short term needs of subscribers. The Authority has, therefore, decided to allow TSPs to offer STVs and CVs for national roaming service. There shall be no restriction on the service providers in offering STVs and CVs with combination of tariff benefits for both home service area and national roaming.

Review

46. The tariff regime, prescribed in this amendment to the TTO will be subject to review by the Authority after a year. The Authority will closely monitor the implementation of the regime and, in particular, its impact on competition and consumer interests and may intervene, if necessary, in the interim period.

**Summary of Calculations of Incremental Cost Estimates
for National Roaming Service**

1. The Authority, through its letter no. 301-10/2012-ER dated 26.10.2012, sought information on usage and revenue for the quarter ending March 2012 and cost for the F.Y. 2011-12 in respect of national roaming service in prescribed formats from all the wireless telecom service providers. Most of the service providers furnished information in the prescribed format. However, the data provided by two service providers was not amenable for analysis due to inconsistencies and absence of basis for apportionment and thus had to be excluded from the analysis. In order to estimate the incremental cost for roaming, recovery of both capital expenditure and operational expenditure in respect of national roaming service were taken into account as described below:

2. For estimating recovery of capital expenditure, depreciation on assets and return on capital employed (ROCE) were aggregated. The information on capital cost to support national roaming service was sought from the service providers in the following four sub-heads:
 - (i) Additional equipment/application in billing system to support roaming service
 - (ii) Connectivity resources e.g. routers, modems etc.
 - (iii) Additional application in the MSC
 - (iv) Other costs attributable to national roaming service

Based on the information received from the service providers, an average life of 5 years for the capital cost components at (i) & (ii) above and an average life of 10 years for the capital cost components at (iii) and (iv) above was considered in the analysis. Accordingly, annual depreciation on the basis of straight line method was taken as 20% for cost components at (i) & (ii) above and 10% for cost components at (iii) & (iv) above. Further, an ROCE of 15% was considered in the exercise which has also been used in the recent costing exercises undertaken by the Authority.

3. The estimated recovery of average annual capital expenditure as above was added to the annual operating expenditure in respect of national roaming service based on the information furnished by the service providers. To this aggregate cost, license fee and spectrum charges at 12% (8% for license fee and 4% for spectrum charges) were also added to arrive at the total annualized cost for national roaming.
4. The total annualized cost so arrived was divided by the total minute of usage of national inroamers (annualized based on the information provided by the service providers) in order to estimate per minute incremental cost for national roaming. The following table presents the estimated incremental cost for national roaming for the various service providers:

Estimated Incremental Cost for National Roaming (Rs. per Minute)

Service Provider	Incremental Cost for Roaming (Rs. per Minute)
GSM Service Providers	
Service Provider-1	0.02
Service Provider-2	0.03
Service Provider-3	0.04
Service Provider-4	0.05
Service Provider-5	0.06
Service Provider-6	0.09
Service Provider-7	0.09
Service Provider-8	0.09
Service Provider-9	0.26
Service Provider-10	9.55
CDMA Service Providers	
Service Provider-1	0.01
Service Provider-2	0.02
Service Provider-3	0.09

5. As can be seen from the above table, the lowest of the cost estimates is Re.0.01 per minute (for CDMA) and Re. 0.02 per minute (for GSM) and the highest of the cost estimates is placed at Rs.9.55 per minute. Evidently, 0.26 per minute and Rs. 9.55 per minute are outliers. Thus the range of cost estimates falls between Re. 0.01 to

Re. 0.09 per minute. Accordingly, the Authority has considered the incremental cost for roaming as Re. 0.10 per minute in the present review exercise.