

Consultation Paper 4/2020



**Telecom Regulatory Authority of India**



Consultation Paper

on

Methodology of applying Spectrum Usage Charges (SUC)  
under the weighted average method of SUC assessment, in  
cases of Spectrum Sharing

New Delhi, India

22<sup>nd</sup> April 2020

Mahanagar Doorsanchar Bhawan  
Jawahar Lal Nehru Marg,  
New Delhi- 110002

**Written comments on the Consultation Paper are invited from the stakeholders by 20<sup>th</sup> May 2020 and counter-comments by 3<sup>rd</sup> June 2020. Comments and counter-comments will be posted on TRAI's website: [www.trai.gov.in](http://www.trai.gov.in). The comments and counter-comments may be sent, preferably in electronic form, to Shri Syed Tausif Abbas, Advisor (Networks, Spectrum and Licensing), TRAI, at [advmn@traigov.in](mailto:advmn@traigov.in). For any clarification/information, he may be contacted by telephone: +91-11-23210481.**

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## **CHAPTER 1 INTRODUCTION**

- 1.1 The Department of Telecommunications (DoT) through its letter No. 1000\01\2020-WR dated 15<sup>th</sup> January 2020 (**Annexure 1**), inter alia, informed that the existing guidelines for Sharing of Access Spectrum by Access Service Providers issued by DoT on 24<sup>th</sup> September 2015 provides that the Spectrum Usage Charge (SUC) rate of each of the licensees post sharing increases by 0.5% of Adjusted Gross Revenue (AGR). DoT also informed that it has received representations requesting that the incremental SUC rate of 0.5% post sharing should be applied only to the particular spectrum band which has been allowed to be shared between two licensees, and not on the entire spectrum held by the licensees, since sharing is permitted in a particular band. In this background, DoT has requested TRAI to furnish its recommendations on (i) whether the incremental 0.5% in SUC rate in cases of sharing of spectrum should be applied only on the specific band in which sharing is taking place; or to the overall Weighted Average Rate of SUC, which has been derived from all bands and (ii) any other recommendations deemed fit for the purpose, under section 11(1) of the TRAI Act, 1997, as amended by TRAI Amendment Act, 2000.
- 1.2 The Authority vide its letter dated 5<sup>th</sup> March 2020 sought additional information from DoT. Subsequently, DoT vide its email dated 18<sup>th</sup> March 2020 (**Annexure-2**) provided additional information.
- 1.3 In view of the above, this consultation paper provides the background information and seeks inputs of the stakeholders on the issues raised in the paper. Chapter 2 examines the relevant provision(s) of the existing guidelines on Sharing of Access spectrum by Access Service Providers and the representation forwarded by DoT. Chapter 3 lists the issues for consultation.

## **CHAPTER 2**

### **EXAMINATION OF THE RELEVANT PROVISIONS OF SPECTRUM-SHARING GUIDELINES**

#### **A. Background**

2.1 The basic objective of spectrum sharing is to enhance spectral efficiency by combining/pooling the spectrum holding of two licensees. If two licensees pool their spectrum holding, spectral efficiency increases non-linearly, i.e. data rate achievable with 10 MHz of spectrum block is much higher than two separate blocks of 5 MHz each. Spectrum is a scarce natural resource and with growing digitalization and uptake of Internet of Things (IoT), demand for spectrum has been increasing and will continue to rise. To cater to the ever increasing data demand, it is utmost important that the spectrum is used efficiently. Sharing of spectrum can also provide additional network capacities in places where there is network congestion due to spectrum crunch. Spectrum sharing works on the technology of carrier aggregation. Carrier aggregation could be of the following types:

- a) Intra-band contiguous blocks
- b) Intra-band non-contiguous blocks
- c) Inter-band

#### **B. Evolution of spectrum-sharing guidelines in India**

2.2 TRAI (also referred as “the Authority”) in its recommendations on ‘Spectrum Management and Licensing Framework’ dated 11<sup>th</sup> May 2010, had, inter alia, recommended guidelines for spectrum sharing. In reference to the Department of Telecommunications’ (DoT) back-reference dated 10<sup>th</sup> October 2011, on these recommendations, the

Authority re-examined its earlier recommendations and modified them on spectrum sharing in November 2011.

2.3 Based on the recommendations of the Authority, the DoT, through a Press Statement dated 15<sup>th</sup> February 2012, had issued the broad guidelines for sharing of 2G spectrum (800/900/1800 MHz bands). For spectrum obtained through auction, the guidelines provided that spectrum sharing would be permitted only if the auction conditions permits the same.

2.4 In the Notice Inviting Applications (NIA) for the auction of spectrum in February 2014, it was stated that “Operators whose entire spectrum holding in a particular band (900MHz/ 1800MHz and 800MHz) is/has been liberalized would be permitted to share spectrum without any additional one-time spectrum charge. Detailed guidelines regarding sharing of spectrum would be issued in due course.” NIA for the auction of spectrum held in November 2012 and March 2013 contained similar clauses.

2.5 In 2014, while the Authority was finalizing its guidelines on spectrum trading, CEOs of some of the Telecom Service Providers (TSPs) requested that, in order to ensure efficient use of spectrum, the Authority may also consider giving its recommendations on guidelines for spectrum sharing. Subsequently, the Authority constituted a Steering Committee of senior officers of TRAI and representatives from various TSPs for framing the working guidelines for spectrum sharing in the country. Based on the draft guidelines on spectrum sharing submitted by the Steering Committee, inputs given by the CEOs/CMDs of the TSPs, and its own analysis, TRAI finalized its recommendations on ‘Guidelines on Spectrum Sharing’ and submitted the same to DoT on 21<sup>st</sup> July 2014. Through its letter dated 27<sup>th</sup> April 2015, DoT referred back many of the recommendations to TRAI for reconsideration. After

going through the DoT's views on various recommendations, TRAI finalized its response and sent to DoT on 21<sup>st</sup> May 2015.

- 2.6 Subsequently, based on the TRAI recommendations, DoT issued the Guidelines for Sharing of Access Spectrum by Access Service Providers on 24<sup>th</sup> September 2015. These are the prevailing spectrum-sharing guidelines, which are applicable on the existing spectrum-sharing arrangements.

### **C. TRAI's recommendations on incremental SUC post sharing of spectrum**

- 2.7 TRAI in its recommendations dated 21<sup>st</sup> July 2014 had, inter alia, mentioned that all the access spectrum will be sharable provided that both the licensees are having spectrum in the same band. It was also mentioned that SUC rate of each of the licensee post sharing shall increase by 0.5% of AGR. It can be inferred that since every spectrum sharing proposal is a separate proposal, which is specific to a spectrum band and Licensed Service Area (LSA), the incremental SUC of 0.5% applies to that particular spectrum band in the specified LSA.
- 2.8 Further, considering the fact that it is not possible to monitor quantum of spectrum being shared at each site and segregate the AGR site-wise/area-wise, TRAI recommended that for the purpose of charging SUC, it shall be considered that the licensees are sharing entire spectrum holding in the particular band in entire LSA.

### **D. Cause for reference**

- 2.9 In its reference dated 15<sup>th</sup> January 2020, DoT mentioned receiving representations that the incremental SUC rate of 0.5% should be applied only to the particular spectrum band, which has been allowed to be shared between the two licensees; and not on the entire spectrum

held by the licensees, since sharing is permitted in a particular band. DoT has also forwarded copies of the representations along with its reference. In the representations forwarded by DoT, the following submissions have been made:

- a) Some of the offices of Controller of Communications Accounts (CCAs) are incorrectly levying incremental 0.5% SUC rate on the entire spectrum holding of the licensee and not on a particular band for which spectrum sharing has been allowed.
- b) Incremental 0.5% SUC rate is applicable only on the particular band for which sharing has been permitted and not on the other spectrum holding.
- c) DoT vide para (2) of the spectrum-sharing guidelines dated 24<sup>th</sup> September 2015 has allowed sharing of spectrum between two service providers utilizing the spectrum in the same band. Further in para (3) of these guidelines it has been specified that spectrum sharing is not permitted when both the licensees are having spectrum in different bands.
- d) As per para (12) of the spectrum-sharing guidelines dated 24<sup>th</sup> September 2015 for the purpose of Spectrum Usage Charges (SUC) it shall be considered that licensees are sharing their entire spectrum holding in a particular band in the entire Licensed Service Area, and SUC rate shall be increased to 0.5% of AGR.
- e) The combined reading of clauses (2), (3) and (12) makes it absolutely clear that sharing of spectrum is permitted only in the same band. Therefore, increase of SUC rate of the particular spectrum band which has been allowed to be shared between two licensees shall only increase by 0.5% of AGR, and not the other spectrum bands held by the licensees.



f) In view of this, it is requested that a suitable clarification may urgently be issued to all CCAs instructing that the SUC rate for each of the licensee post sharing of spectrum shall increase by 0.5% of AGR for the particular band for which spectrum sharing has been allowed and not on the weighted average SUC rate for the entire spectrum holding of the licensees.

2.10 In view of the above, DoT has forwarded the representations and requested TRAI to furnish its recommendations on (i) whether the incremental 0.5% in SUC rate in cases of sharing of spectrum should be applied only on the specific band in which sharing is taking place; or to the overall Weighted Average Rate of SUC, which has been derived from all bands and (ii) any other recommendations deemed fit for the purpose.

2.11 Through its email dated 18<sup>th</sup> March 2020, DoT furnished the additional information sought by TRAI, which inter alia, includes a sample calculation sheet on the weighted average SUC rate applied post sharing; wherein DoT has provided two scenarios, one where SUC rate is incremented by 0.5% in a particular band while computing weighted average SUC rate and in second scenario, the overall weighted average SUC pre-sharing arrangement is incremented by 0.5%. Therefore, it can be inferred that, within DoT, there is ambiguity on how SUC rate should be incremented post sharing.

#### **E. Prevailing spectrum usage charges**

2.12 The prevailing rates of SUC vary with methodology of allotment of spectrum, i.e. allotted administratively or through auction process. The SUC rates vary for the same spectrum band allocated through different auctions. The details are given below:

- a) For spectrum assigned administratively for Global System for Mobile (GSM) service i.e. 900 MHz band and 1800 MHz band, following slab-wise SUC rates are applicable:

<b>Amount of GSM Spectrum</b>	<b>Spectrum charges as a % of AGR</b>
Up to 2 × 4.4 MHz	3%
Up to 2 × 6.2 MHz	4%
Up to 2 × 8.2 MHz	5%
Up to 2 × 10.2 MHz	6%
Up to 2 × 12.2 MHz	7%
Up to 2 × 15.2 MHz	8%

- b) For spectrum assigned administratively for Code Division Multiple Access (CDMA) service i.e. 800 MHz band, following slab-wise SUC rates are applicable:

<b>Amount of CDMA Spectrum</b>	<b>Spectrum charges as a % of AGR</b>
Up to 2 × 5.0 MHz	3%
Up to 2 × 6.25 MHz	4%
Up to 2 × 7.5 MHz	5%
Up to 2 × 10.0 MHz	6%
Up to 2 × 12.5 MHz	7%
Up to 2 × 15.0 MHz	8%

- c) For 2100 MHz spectrum assigned through auction conducted in 2010, the prescribed rates of SUC as per NIA are (i) the spectrum charge for the 3G spectrum shall be payable on total AGR of 2G and

3G services taken together; (ii) slab rate for stand-alone 3G operators shall be equal to the lowest slab rate, i.e. 3% of AGR.

- d) For 2300 MHz spectrum assigned through auction conducted in the year 2010, the NIA provided SUC rate of 1% of AGR from services using this spectrum as annual spectrum charge. The same SUC rate of 1% was also applicable on 2500 MHz band assigned administratively to the Public Sector Undertaking (PSU) operators at the market determined price of 2300 MHz band in 2010 auction.
- e) For spectrum assigned through auction conducted in 2012 and 2013 in 800 MHz, 900 MHz, and 1800 MHz bands, the spectrum won through the auction gets added to the existing spectrum holding under the respective bands for determining the slab for SUC as per (a) and (b) above.
- f) For spectrum assigned through auction conducted in 2014 and 2015 in 800 MHz, 900 MHz, 1800 MHz, and 2100 MHz bands, applicable SUC rate is 5%.
- g) For spectrum assigned through auction conducted in 2016 in 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, and 2500 MHz bands, SUC rate of 3% is applicable.

2.13 In view of the above applicable differential SUC rates, weighted average SUC (subject to a minimum of 3%) is applied to the overall AGR of the Licensee for computation of SUC payable.

2.14 Keeping in view the complexities involved in determining the SUC for various quantum of spectrum acquired through different methodologies, the Authority in its recommendations dated 9<sup>th</sup> September 2013 had recommended that SUC for all auctioned spectrum should be at a flat rate of 3% of AGR of wireless services. However, DoT has not accepted

TRAI's recommendation of a flat SUC rate of 3% of AGR and implemented the concept of weighted average vide letter dated 31<sup>st</sup> October 2014.

- 2.15 As already discussed, TRAI recommended to increase the SUC rate for the spectrum band being shared by 0.5% for both the licensees. When TRAI gave its recommendations in 2014, the concept of weighted average SUC was not prevalent, and was introduced on 31<sup>st</sup> October 2014 vide DoT Order No. P-14010/01/2014-NTG. Subsequently, DoT through its letter dated 27<sup>th</sup> April 2015 referred back many of the recommendations for reconsideration of the Authority, which included reconsideration of SUC to be applicable in case of sharing. TRAI, in its response, reiterated its earlier recommendation.
- 2.16 In the intervening period, two more spectrum auctions were conducted, one in 2015 and the other in 2016. SUC rate for spectrum assigned through auction held in 2015 was 5% and for spectrum auction held in 2016, it was 3%. Increasing number of differential rates for SUC increases the complexities in computing the overall weighted average SUC.
- 2.17 In 2018, the Authority had collected information on spectrum sharing arrangements between the TSPs. The information submitted by TSPs does not indicate encouraging participation of TSPs in spectrum sharing. It showed that spectrum sharing has not picked up much and mostly the sharing arrangements were made for certain clusters barring a few cases, where sharing was being done for the whole LSA.
- 2.18 As per the existing guidelines, on entering into a spectrum sharing arrangement, the SUC increases by 0.5% in the LSA where spectrum sharing is taking place. In this regard, it may be worth examining the

revenue trends and effect of SUC increment on TSP's outgo. Table 1 shows the AGR of the TSPs (access service providers).

**Table 1: AGR of the TSPs (access service providers)**

<b>Financial year</b>	<b>AGR (Rs. Crore)</b>
2013-14	124,174.98
2014-15	138,566.22
2015-16	154,639.63
2016-17	155,314.06
2017-18	116,466.38
2018-19	103,479.29

2.19 The premise on which TRAI had recommended increase in SUC rate by 0.5% was that the pooling of spectrum would increase the spectrum utilisation and additional capacity would generate more revenue. However, there are two issues that need consideration:

- (i) The SUC is ideally an administrative charge, payable to the Government towards the administrative cost for management of spectrum. As the TSPs are already paying SUC for the spectrum allotted to them as a percentage of AGR, the sharing of spectrum may not necessarily justify additional SUC burden on them.
- (ii) The revenue earned by a TSP depends on many factors such as competition, customer profile, affordability level, cost of inputs, tariff, etc. In the last couple of years, the number of access service providers have reduced from 7-13 to 4 in an LSA. The overall AGR has also seen a reduction. However, an

increment in SUC rate upon sharing of spectrum would essentially result in increase in TSP's outgo (through SUC levy) irrespective of whether there is an increase in revenue or not. It may be noted that if revenue of TSP(s) increases as a result of sharing of spectrum, the existing SUC rate will also result in increase in SUC payable, as the TSPs sharing spectrum are already paying SUC as a percentage of AGR on their respective spectrum holding. Further, if SUC rate is left unchanged post sharing of spectrum, the TSPs would be more willing to use spectrum sharing to improve their network in areas having congestion and to also fix coverage issues. Therefore, it may be necessary to revisit the application and treatment of SUC post sharing of spectrum.

2.20 As already discussed, spectrum sharing has a potential to increase coverage (due to lower cost) and mitigate congestion issues in the network. For optimizing the cost of providing telecom services using latest technologies, the telecom service providers across the world are resorting to various kinds of sharing mechanism such as sharing of infrastructure, network and spectrum, etc. Regulators are also promoting spectrum sharing by putting in place enabling policies to facilitate spectrum sharing between operators.

2.21 In order to have policies that are future oriented and support innovation, we must consider the advantage and necessity of spectrum sharing in respect of the upcoming and newer technologies. World over, 5G technology is either launched or will be launched soon. To facilitate the TSPs to launch 5G technology, the first requirement is availability of spectrum. For success of 5G, infrastructure sharing is one of the key requirements and spectrum sharing is not an exception. Therefore, to

promote spectrum sharing, there is a need to examine the issues being faced by the TSPs in entering into spectrum-sharing arrangements.

### **Issues for Consultation**

- Q1. Do you agree that as per the existing Spectrum-Sharing Guidelines dated 24<sup>th</sup> September 2015, post sharing of spectrum, increment of 0.5% on SUC rate should apply on the spectrum holding in specific band in which sharing is taking place and not on the entire spectrum holding (all bands) of the TSPs. Please justify your answer.**
- Q2. Do you think that increment in SUC rate is a deterrent for TSPs in entering into spectrum-sharing arrangements? Further, do you also think that in order to facilitate the spectrum sharing, there should not be any increment in SUC rate post sharing of spectrum? Please justify your answer.**
- Q3. What other changes are required in the Spectrum-Sharing Guidelines to facilitate spectrum sharing? Please provide detailed explanation and justification for your suggestions.**
- Q4. If there are any other issues/suggestions relevant to the subject, stakeholders may submit the same with proper explanation and justification.**

### **CHAPTER 3 ISSUES FOR CONSULTATION**

- Q1. Do you agree that as per the existing Spectrum-Sharing Guidelines dated 24<sup>th</sup> September 2015, post sharing of spectrum, increment of 0.5% on SUC rate should apply on the spectrum holding in specific band in which sharing is taking place and not on the entire spectrum holding (all bands) of the TSPs. Please justify your answer.**
- Q2. Do you think that increment in SUC rate is a deterrent for TSPs in entering into spectrum-sharing arrangements? Further, do you also think that in order to facilitate the spectrum sharing, there should not be any increment in SUC rate post sharing of spectrum? Please justify your answer.**
- Q3. What other changes are required in the Spectrum-Sharing Guidelines to facilitate spectrum sharing? Please provide detailed explanation and justification for your suggestions.**
- Q4. If there are any other issues/suggestions relevant to the subject, stakeholders may submit the same with proper explanation and justification.**



**Annexure 1 (Chapter no. 1/Para no. 1.1)**

**DoT letter dated 15<sup>th</sup> January 2020**

Government of India  
Ministry of Communications  
Department of Telecommunications  
Wireless Planning & Finance Wing  
20, Ashoka Road, New Delhi - 110001

No. 1000\01\2020-WR Dated: 15.01.2020

To  
The Secretary,  
Telecom Regulatory Authority of India,  
Mahanagar Doorsanchar Bhawan,  
Jawaharlal Nehru Marg (Old Minto Road),  
New Delhi-110002

**Subject: Methodology of applying Spectrum Usage Charges (SUC) under the weighted average method of SUC assessment, in cases of Spectrum Sharing**

Sir,

Clause 13 of the Department's "Guidelines for Sharing of Access Spectrum by Access Service Providers" dated 24.09.2015 provides that: *"...considering the fact that spectrum sharing results in additional quantity of spectrum with both the licensees to serve higher number of consumers, the SUC rate of each of the licensees post sharing shall increase by 0.5% of AGR."* Accordingly, there is an incremental SUC rate of 0.5% applicable in cases of spectrum sharing.


2. In this regard representations have been received that the incremental SUC rate of 0.5% should be applied only to the particular spectrum band which has been allowed to be shared between two licensees, and not on the entire spectrum held by the licensees, since sharing is permitted in a particular band (Enclosed).

3. In view of above, TRAI is requested to provide:

(i) Recommendations, under section 11(1) of the TRAI Act 1997, as amended by TRAI Amendment Act, 2000, on whether the incremental 0.5% in SUC rate in cases of sharing of spectrum should be applied only on the specific band in which sharing is taking place; or to the overall Weighted Average Rate of SUC, which has been derived from all bands.

(ii) Any other recommendations deemed fit for the purpose.

Encl: As above



Rajeev Prakash  
DDG(WPF)



179

RJIL/DoT/2017-18/167  
1<sup>st</sup> May, 2017

To

Sh. Srikanth Panda,  
DDG (WPE),  
DoT, Room No. 705, Sansar Bhawan,  
20, Ashoka Road, New Delhi

Secretary (WPE)  
Deptt. of Telecom  
Central Ministry  
182 MAY 2017  
RECEIVED LETTER

Subject: Spectrum Usage Charges for Shared Spectrum.

Ref: RJIL letter No. RJIL/DoT/2016-17/878 dated 18.10.2016

Dear Sir,

Kindly refer to Reliance Jio Infocomm Ltd.'s (RJIL) letters dated 18.10.2016 (copy enclosed) wherein it was informed that some CCAs are incorrectly levying incremental 0.5% SUC rate on the entire spectrum holding of the licensee and not on the particular band for which spectrum sharing has been allowed and had requested to base a certification in this regard. While we are still awaiting the clarification, Office of CCA, MP service area has again calculated applicable SUC rate by applying 0.5% post sharing of spectrum on the RJIL's entire spectrum holding.

2. In the above context, it is submitted that incremental 0.5% SUC rate is applicable only on the particular band for which sharing has been permitted and not on the other spectrum holding. In this regard please consider the following submissions.

(i) DoT vide para (2) of the Spectrum Sharing guidelines dated 24.09.2015 has allowed sharing of spectrum between two Service Providers utilising the spectrum in the same band. Further in para (3) of these guidelines it has been specified that spectrum sharing is not permitted when both the licensees are having spectrum in different bands.

(ii) As per para (12) of the Spectrum Sharing guidelines dated 24.09.2015, for the purpose of Spectrum Usage Charges (SUC) it shall be considered that Licensees are sharing their entire spectrum holding in a particular band in the entire Licensed Service Area and SUC rate shall be increased to 0.5% of AGR.

(iii) The combined reading of clause (2), (3) and (12) makes it absolutely clear that sharing of spectrum is permitted only in the same band.

3. Therefore, increase of SUC rate of the particular spectrum band which has been allowed to be shared between two licensees shall only increase by 0.5% of AGR and not the other spectrum bands held by the licensees.




Reliance Jio Infocomm Limited: CIN:U72200DL2011PTC2264712  
Correspondence Address: D-7, Dharmajee Building, 5, Jantar Mantar Road, New Delhi - 110001, India. Tel: (011) 2340499  
Registered Office: 9<sup>th</sup> Floor, Maker Chambers IV, 222, Naraina Post, Mumbai - 400021, India. Tel: (022) 43420000  
201605003

4. In view of the above we again request that a suitable clarification may kindly be issued urgently to all CCAs instructing that the SUC rate for each of the licensees post sharing of spectrum shall increase by 0.5% of AGR for the particular band for which spectrum sharing has been allowed and not on the weighted average SUC rate for the entire spectrum holding of the Licensees.

Thanking You,

For Reliance Jio Infocomm Limited

  
(Kapoo Singh Gillani)  
Authorized Signatory



Enclosure: As above

Copy to: Member (Finance) DoT, Sanchar Bhawan, 20, Ashoka Road, New Delhi



No. A1/DOT/2016-17/878  
18<sup>th</sup> October, 2016

To  
Sh. Srivanta Panda,  
DOG (W/P),  
Department of Telecommunications,  
Room No. 705, Sector Bhawan,  
20, Ashoka Road,  
New Delhi - 110001

Subject: Spectrum Usage Charge for Shared Spectrum

Ref: CCA/MPT/LF/Reliance Jo/SUC/2016-17/2025 dated 9/17.08.2016  
CCA/MPT/LF/Reliance Jo/SUC/2016-17/2045 dated 21.09.2016  
CCA/S111/2016/16/3 dated 1.10.2016

Dear Sir,

1. This is with respect to the letters dated 1.8.2016, 17.09.2016, and 21.09.2016 (copies enclosed) received from the Director of J. Control of Communications Accounts, MP and Gujarat service areas regarding applicable SUC rate post sharing of spectrum.
2. In the above said letters, it is erroneously stated that SUC rate post sharing of 800 MHz spectrum between Reliance Jo Infocomm Ltd (RIL) with Reliance Communications Ltd (RCOM) shall increase by 0.5% of AGR on the entire spectrum and not on the particular spectrum band for which sharing is done.
3. The relevant provisions for determination of SUC for shared spectrum is contained in NIA bearing ref. No.: 1000/16/2014-WF/Auction dated 26th January 2015 - Paragraph 3.7 ("2015 NIA") read with F-11004/28/2008-PP dated Feb 25th 2010 & F-14010/01/2014-NPS dated 21st October, 2014, and read with Spectrum Sharing Guidelines bearing ref No. L-14006/04/2015-NTG dated 24th September 2015 - Paragraph (15) ("Sharing Guidelines"). A collective reading of the aforesaid provisions is explained below:
  - a. Paragraph (2) of the Sharing Guidelines states that sharing is permitted between two service providers utilizing spectrum in the "same band".
  - b. Paragraph (13) of the Sharing Guidelines states that the SUC post-sharing shall increase by 0.5% of the AGR.
  - c. Inasmuch as the entire Sharing Guidelines are relevant only for the shared spectrum i.e. within the same band, the said increase will apply only for the

Reliance Jo Infocomm Limited: CIN L22200KA2011PLC234712  
Correspondence Address: J-2, Cleverland Building, 6, Jantar Mantar Road, New Delhi - 110001, India. Tel: 011-43523702; Fax: 011-43523704  
Registered Office: 1<sup>st</sup> Floor, Mahesh Chandra N. 222, Naraina Park, Mumbai - 400017, India. Tel: 022 - 27748000  
www.jio.com



800 MHz spectrum band held in the licensed service areas, where sharing is done. :-

4. Therefore, SUC rate of the particular band which has been allowed to be shared between two licensees shall only increase by 0.5% of AGR and not the entire spectrum held by licensee.

5. In view of the above it is requested that suitable clarification may kindly be issued to the offices of CAs instructing that the SUC rate for each of the licensee post sharing of spectrum shall increase by 0.5% of AGR for the particular band for which spectrum sharing has been allowed and not on the weighted average SUC rate for the entire spectrum holding of the licensee.

Thanking You,

For Reliance Jio Infocomm Limited

  
(Kapoor Singh Gulati)  
Authorized Signatory



Enclosure: As above.

Copy to: Sh. V.V. Singh, Wireless Advisor, Department of Telecommunications, Sector  
Bhawan, 21, Ashoka Road, New Delhi 110001.



**Annexure 2 (Chapter no. 1/Para no. 1.2)**

**DoT email dated 18th March 2020**

**From:** "Jitin Bansal" <[jitin.bansal@gov.in](mailto:jitin.bansal@gov.in)>  
**To:** "S T Abbas Advisor TRAI" <[advmn@traigov.in](mailto:advmn@traigov.in)>  
**Cc:** "RAJEEV PRAKASH" <[rajeev.prakash@nic.in](mailto:rajeev.prakash@nic.in)>  
**Sent:** Tuesday, March 17, 2020 6:04:05 PM  
**Subject:** DoT reference on Methodology of applying SUC under Weighted Average rate in cases of Spectrum Sharing

Sir,

Please refer to your letter dated 103-1/2020-NSL-II and our telephonic conversations on the DoT's reference on Methodology of applying Spectrum Usage Charges (SUC) under the weighted average method of SUC assessment, in cases of Spectrum Sharing. Accordingly, the required information is attached along with this mail:

1. The information on the spectrum sharing arrangements & quantum of spectrum shared,
2. The DoT order for calculation of Weighted average SUC rate, and
3. A sample calculation sheet on the weighted average rate applied post sharing.

Thanks & Regards  
Jitin Bansal  
Director (Wireless Revenue)  
Wireless Planning & Finance Wing  
Dept. of Telecom, Ministry of Communications  
Government of India  
Room-1116, Cabin-10, Sanchar Bhawan,  
20 Ashoka Road, New Delhi - 110001

Government of India  
Ministry of Communications  
Department of Telecommunications  
Wireless Planning & Coordination Wing  
6<sup>th</sup> floor, Sanchar Bhawan,  
20, Ashoka Road, New Delhi-110001.

No.: L-14006/01/2017-NTG

Date: 23.07.2018

To,

The Secretary  
Telecom Regulatory Authority of India  
Mahanagar Doorsanchar Bhawan  
Jawahar Lal Nehru Marg (Old Minto Road)  
New Delhi - 110002.

**Subject: TRAI recommendations on the Reserve Price for auction of right to use spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300-3400 MHz and 3400-3600 MHz bands.**

Sir,

I am directed to refer to your letter No. 103-1/2017-NSL-II dated 21.05.2018, and No. 15.01/2017-F&EA dated 04.07.2018, on the above-mentioned subject and to say that the following information, as sought by you, is enclosed herewith:

- i. Details of quantum of spectrum traded/shared by the TSPs LSA-wise, and, the amount received on account of spectrum trading/spectrum sharing, LSA-wise operator-wise by DoT and rates at which trading or sharing has taken place (Annexure-I & II).
  - ii. Latest data on availability of spectrum (band-wise, LSA-wise) available for forthcoming spectrum auction (Annexure-III).
2. It may further be informed that the exercise of harmonization of spectrum in 900 MHz band is going on in this Ministry. Additional spectrum in the range of 0.8 MHz to 4.6 MHz in 900 MHz band is likely to be made available for auction in certain LSAs after vacation of Defense operations from this band.
3. It may also be noted that Reliance Communications Limited has defaulted in payment of installments in the months of March and April-2018, due towards deferred payments in respect of spectrum auctions held in 2013 and 2015. Consequently, a Show Cause Notice was issued to the licensee for termination of spectrum assignments. Currently, the matter is under consideration in the department.



*h* *smc*




4. It may further be noted that the bankruptcy petition of Aircel group is under consideration in National Company Law Tribunal (NCLT). Spectrum holding of Aircel group is likely to be changed after the matter is finalized.

5. In consequence to the events mentioned in para 2, 3 and 4 above, additional spectrum available for auction will be communicated by the department subject to the outcome of these events.

This issues with the approval of the competent authority.

Encl: As above.

  
(Sukhpal Singh)

Joint Wireless Adviser to the Govt. of India

g/k



Details of Trading of Access Spectrum

Sl. No.	Seller	Buyer	LSA	Quantum of spectrum traded (FDD)	Rate	Amount
				(in MHz)		(in Crores of Rupees)
<b>800 MHz band</b>						
1	Reliance Communications Limited	Reliance Jio Infocomm Limited	Andhra Pradesh	7.5	1% of the Transaction amount of the trade or 1% of the market-determined price, whichever is higher, as per trading guidelines	6.88
2			Delhi	7.5		9.62
3			Gujarat	7.5		0.84
4			Karnataka	7.5		2.86
5			Kerala	7.5		2.30
6			Kolkata	10.0		2.23
7			Maharashtra	7.5		9.08
8			Punjab	7.5		0.97
9			Rajasthan	5.0		1.29
10			Tamilnadu	7.5		3.53
11			Uttar Pradesh (East)	2.5		0.51
12			Uttar Pradesh (West)	10.0		1.44
13			West Bengal	7.5		0.65
Sl. No.	Seller	Buyer	LSA	Quantum of spectrum traded (FDD)	Rate	Amount
				(in MHz)		(in Crores of Rupees)
<b>1800 MHz band</b>						
1	Videocon Telecommunications Limited	Bharti Airtel Limited	Bihar	10.0	1% of the Transaction amount of the trade or 1% of the market-determined price, whichever is higher, as per trading guidelines	4.48
2			Gujarat	10.0		17.29
3			Haryana	10.0		3.40
4			Madhya Pradesh	10.0		6.04
5			Uttar Pradesh (East)	10.0		8.34
6			Uttar Pradesh (West)	10.0		6.98

Sl. No.	Seller	Buyer	LSA	Quantum of spectrum traded (TDD)	Rate	Amount
				(in MHz)		(in Crores of Rupees)
2300 MHz band						
1	Aircel Limited / Dishnet Wireless Limited	Bharti Airtel Limited / Bharti Hexacom Limited	Andhra Pradesh	20.0	1% of the Transaction amount of the trade or 1% of the market-determined price, whichever is higher, as per trading guidelines	16.28
2			Assam	20.0		0.54
3			Bihar	20.0		1.51
4			Jammu and Kashmir	20.0		0.33
5			North East	20.0		0.33
6			Orissa	20.0		1.01
7			Tamilnadu	20.0		31.46
8			West Bengal	20.0		1.08
9	Tikona Digital Networks Limited	Bharti Hexacom Limited	Rajasthan	20.0		

Details of Sharing of Access Spectrum

Sl. No.	TSPs sharing the spectrum	LSA	Quantum of spectrum shared (FDD)		Amount  (in INR)
			(in MHz)		
			TSP 1	TSP 2	
<b>800 MHz band</b>					
1	Reliance Communications Limited (TSP 1)  and  Reliance Jio Infocomm Limited (TSP 2)	Andhra Pradesh	2.5	7.5	In each LSA, one-time processing fee of Rs. 50,000/- has been paid by each of the TSPs as per sharing guidelines.
2		Assam	10.0	10.0	
3		Bihar	10.0	10.0	
4		Delhi	2.5	7.5	
5		Haryana	10.0	10.0	
6		Himachal Pradesh	10.0	10.0	
7		Karnataka	2.5	7.5	
8		Kerala	2.5	7.5	
9		Kolkata	2.5	10.0	
10		Madhya Pradesh	10.0	10.0	
11		Maharashtra	2.5	7.5	
12		Mumbai	10.0	10.0	
13		North East	10.0	10.0	
14		Orissa	10.0	10.0	
15		Punjab	5.0	7.5	
16		Rajasthan	2.5	5.0	
17		Tamil Nadu	2.5	7.5	
18		Uttar Pradesh (East)	7.5	10.0	
19		Uttar Pradesh (West)	2.5	10.0	
20		West Bengal	2.5	7.5	

Sl. No.	TSPs sharing the spectrum	LSA	Quantum of spectrum shared (FDD)		Amount  (in INR)
			(in MHz)		
			TSP 1	TSP 2	
<b>1800 MHz band</b>					
1	Bharti Airtel Limited (TSP 1)  and  Tata Teleservices Limited / Tata Teleservices (Maharashtra) Limited (TSP 2)	Andhra Pradesh	20.0	10.0	In each LSA, one-time processing fee of Rs. 50,000/- has been paid by each of the TSPs as per sharing guidelines.
2		Maharashtra	10.0	10.0	
3		Mumbai	12.0	10.0	
<b>2100 MHz band</b>					
1	Bharti Airtel Limited (TSP 1)  and  Tata Teleservices Limited / Tata Teleservices (Maharashtra) Limited (TSP 2)	Gujarat	10.0	10.0	In each LSA, one-time processing fee of Rs. 50,000/- has been paid by each of the TSPs as per sharing guidelines.
2		Haryana	10.0	10.0	
3		Karnataka	10.0	10.0	
4		Kerala	10.0	10.0	
5		Madhya Pradesh	10.0	10.0	
6		Maharashtra	10.0	10.0	
7		Uttar Pradesh (West)	10.0	10.0	

## Spectrum available in various Bands

Sl. No.	Service Area	700 MHz	800 MHz	900 MHz	1800 MHz	2100 MHz	2300 MHz	2500 MHz	3300-3400 MHz	3400-3600 MHz
		(Band Plan : FDD)						(Band Plan : TDD)		
1	Andhra Pradesh	35.00	7.50		6.40	20.00	20.00	30.00	100.00	175.00
2	Assam	35.00			3.00	15.00	20.00		100.00	175.00
3	Bihar	35.00	2.50	4.60	0.40	10.00	20.00	10.00	100.00	175.00
4	Delhi	35.00	2.50		15.20	15.00	20.00	20.00	100.00	175.00
5	Gujarat	35.00	1.25	3.00	6.00	15.00	20.00	10.00	100.00	175.00
6	Haryana	35.00	1.25	0.20**	8.80	10.00	40.00		100.00	175.00
7	Himachal Pradesh	35.00	3.75		10.20	20.00	20.00	10.00	100.00	175.00
8	Jammu and Kashmir	35.00			14.00	10.00	40.00	10.00	100.00	175.00
9	Karnataka	35.00	2.50	0.20**	8.60	15.00	20.00	40.00	100.00	175.00
10	Kerala	35.00	2.50		5.80	10.00	20.00		100.00	175.00
11	Kolkata	35.00	2.50		6.20	15.00	20.00	20.00	100.00	175.00
12	Madhya Pradesh	35.00	2.50		4.40	15.00	20.00		100.00	175.00
13	Maharashtra	35.00	7.50		10.20	10.00	20.00	10.00	100.00	175.00
14	Mumbai	35.00	5.00		4.20	15.00	20.00	20.00	100.00	175.00
15	North East	35.00				15.00	20.00		100.00	175.00
16	Orissa	35.00	3.75		1.40	15.00	20.00		100.00	175.00
17	Punjab	35.00	2.50		8.80	10.00	40.00	10.00	100.00	175.00
18	Rajasthan	35.00	2.50		4.40		40.00		100.00	175.00
19	Tamilnadu	35.00	2.50	6.20	2.20	5.00	20.00	40.00	100.00	175.00
20	Uttar Pradesh (East)	35.00	2.50	0.60	4.40	5.00	40.00		100.00	175.00
21	Uttar Pradesh (West)	35.00	2.50	1.20	8.80	15.00	40.00		100.00	175.00
22	West Bengal	35.00	3.75*		0.80	15.00	20.00		100.00	175.00
	<b>Total</b>	<b>770.00</b>	<b>61.25</b>	<b>16.00</b>	<b>134.20</b>	<b>275.00</b>	<b>560.00</b>	<b>230.00</b>	<b>2200.00</b>	<b>3850.00</b>

\* In West Bengal LSA, 3 carriers are available in 800 MHz band. However, 2 carriers are available without guard band and only 1 carrier is available with guard band of 0.3 MHz which was put to auction in the year 2016 and was unsold.

\*\* In each of Haryana and Karnataka LSAs, only 0.2 MHz spectrum is available in 900 MHz band which was not put to auction in the year 2016.

Note: Spectrum availability in 700, 800, 900, 1800, 2100 MHz bands is shown as paired bandwidth i.e. 35.00 MHz availability means 35+35 MHz including both uplink and downlink spectrum.

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Ministry of Communications & IT  
Department of Telecommunications  
WPC Wing, 6<sup>th</sup> floor, Sanchar Bhawan, New Delhi

Dated the 12<sup>th</sup> August, 2016

ORDER

**Subject: - Spectrum Usage Charges (SUC) for the Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands held by the Telecom Service Providers (TSPs).**


In exercise of the powers conferred under section 4 of the Indian Telegraph Act, 1885 (Act No. 13 of 1885) and in supersession of earlier order No. P-14010/01/2014-NTG dated 5.2.2015, the Central Government hereby prescribes the following rates of "Spectrum Usage Charges" for spectrum held by the Telecom Service Providers having License/ Authorisation to provide "Access Services" in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz spectrum bands:

- (i). For spectrum acquired through auction in pursuance to Notice Inviting Application No. 1000/06/2016-WF (Auction) dated 8<sup>th</sup> August 2016 in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands, herein after referred as "Access Spectrum Bands", SUC shall be charged at 3% of the Adjusted Gross Revenue (AGR) excluding the revenue from wire line services.
- (ii). The weighted average of SUC rates across all spectrum assigned to an operator (whether assigned administratively or through auction or through trading) in all Access Spectrum Bands including Broad band Wireless Access spectrum in 2300 MHz/2500 MHz band acquired in 2010 auction shall be applied for charging SUC subject to a minimum of 3% of AGR excluding revenues from wireline services. The weighted average is to be derived by sum of product of spectrum holdings and applicable SUC rate divided by total spectrum holding. The Weighted Average Rate should be determined operatorwise for each service area. The method of calculation of Weighted Average is at Annexure-I.
- (iii). The amount of SUC payable by the operators during 2015-16 at weighted average derived after taking into consideration the spectrum acquired through auction in pursuance of Notice Inviting Application No. 1000/06/2016-WF (Auction) dated 8<sup>th</sup> August 2016 and excluding the spectrum in 2300 MHz/2500 MHz band acquired/allocated prior to 2015-16, be treated as the floor amount of the SUC to be paid by the operators. Further, in case there is a reduction in AGR of the service provider, the floor amount of SUC shall be reduced proportionately. The floor amount of SUC payable shall be calculated as detailed in **Annexure II**.



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- (iv). For the purpose of calculation of spectrum usage charge, there shall be a minimum/presumptive AGR which shall be not less than 5% of the bid amount. The calculation of spectrum usage charges shall be on the basis of minimum/presumptive AGR or the actual AGR whichever is higher.
- (v). The weighted average rate shall be kept to two decimal points by rounding off the second decimal figure to the next higher digit. The rounding off shall be made to next higher digit at two decimal points even if the third decimal point is less than 5.
- (vi). The details of slab rates of SUC as applicable for various spectrum holdings and rates of SUC as applicable for spectrum acquired through auction conducted in various bands in 2010, 2012, 2013, 2014 and 2015 are enclosed as **Annexure III**.
3. This order shall come into force with immediate effect.
4. The above rates of SUC are subject to review by the Government from time to time.
5. This issues with the concurrence of DoT Finance vide Dy/FTS 4026/M(F)/16 dated 10.08.2016.

  
(P S M Tripathi)

Deputy Wireless Adviser to the Government of India

Copy to:

1. Secretary, TRAI, New Delhi.
2. Chief Vigilance Officer, DoT.
3. DG P&T, Audit, Delhi.
4. DDG (WPF), DoT
5. DDG (AS), DoT.
6. Director Wireless Monitoring Organization, New Delhi.
7. Director Internal Audit, DoT.
8. All Access Service Providers.
9. Director (IT) for uploading on DOT web site.

(डी. एस. एम. त्रिपाठी)  
(P. S. M. TRIPATHI)  
उप वित्त सलाहकार  
Dy. Wireless Adviser  
दूरसंचार विभाग, भारत सरकार  
Dept. of Telecom, Govt. of India  
नई दिल्ली/New Delhi

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Annexure-I

Method of Calculation of Weighted Average Rate for SUC for each LSA

(a)	Administratively allotted spectrum in 800 MHz band	A MHz
(b)	Rate of SUC for (a) above (this shall be as prescribed by DOT order dated 25.2.2010)	B%
(c)	Administratively allotted spectrum in 900/1800 MHz band	C MHz
(d)	Rate of SUC for (c) above (this shall be as prescribed by DOT order dated 25.2.2010)	D%
(e)	Spectrum allotted in 2100 MHz in 2010	E MHz
(f)	Rate of SUC for (e) above (this shall be as prescribed in NIA of 2010 for licensees whose license has not expired. For licensees, whose license has expired, the rate of SUC shall be 5% of AGR subject to final outcome of the court case on this issue).	F%
(g)	Spectrum allotted in 2300/2500 MHz in 2010	G MHz
(h)	Rate of SUC for (g) above (this shall be as prescribed in NIA of 2010. This rate is 1% of AGR from 2300/2500 MHz).	H%
(i)	Spectrum allotted in 1800 MHz in 2012	I MHz
(j)	Rate of SUC for (i) above (this shall be as prescribed in NIA of 2012)	J%
(k)	Spectrum allotted in 800 MHz in 2013	K MHz
(l)	Rate of SUC for (k) above (this shall be as prescribed in NIA of 2013)	L%
(m)	Spectrum allotted in 800 MHz/900 MHz/1800 MHz/2100 MHz in 2014/2015	M MHz
(n)	Rate of SUC for (m) above (this shall be as prescribed in NIA of 2014/2015. This is 5% of AGR)	N%
(o)	Spectrum allotted in 700 MHz/800 MHz/900 MHz/1800 MHz/2100 MHz/2300 MHz/2500 MHz in 2016	O MHz
(p)	Rate of SUC for (o) above (this shall be as prescribed in NIA of 2016. This is proposed to be 3% of AGR)	P%

Weighted Average rate of SUC:

$$\frac{[(A \times B)/100 + (C \times D)/100 + (E \times F)/100 + (G \times H)/100 + (I \times J)/100 + (K \times L)/100 + (M \times N)/100 + (O \times P)/100]}{(A+C+E+G+I+K+M+O)}$$





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Note:

For the above calculation of Weighted Average Rate of SUC, spectrum holding shall be calculated as detailed below:

- (a) In Frequency Division Duplex (FDD) bands (i.e. 700 MHz, 800 MHz, 900 MHz, 1800 MHz and 2100 MHz): Allotted Spectrum is equal to sum of quantum of uplink and downlink frequency allotted in the band.
- (b) In Time Division Duplex (TDD) bands (i.e. 2300 MHz and 2500 MHz): Allotted Spectrum is equal to the quantum of frequency allotted in the band.



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Annexure-II

Calculation of Floor Amount of SUC

(a)	AGR (excluding the revenue from wire line services) in 2015-16 (in Rs)	Rs. A
(b)	Weighted Average of rate of SUC for 2016-17 after taking into consideration the spectrum acquired in the coming auction but excluding spectrum held in 2300 MHz/2500 MHz prior to 2016 Auction	B%
(c)	AGR (excluding the revenue from wire line services) in 2016-17 (in Rs.) or subsequent years	Rs. C
(d)	Floor amount of SUC (only in case C is less than A)	$(C/A) \times [(A \times B) / 100]$
(e)	Floor amount of SUC in case C is equal to or greater than A	$(A \times B) / 100$



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Annexure-III

(1) Rate of SUC for Administratively Allotted Spectrum Holding:

Order No. P-11014/18/2008-PP dated 25.2.2010

Amount of GSM spectrum	Amount of CDMA spectrum	Spectrum charges as a % of AGR
Upto 2 x 4.4 MHz	Upto 2 x 5.0 MHz	3
Upto 2 x 6.2 MHz	Upto 2 x 6.25 MHz	4
Upto 2 x 8.2 MHz	Upto 2 x 7.5 MHz	5
Upto 2 x 10.2 MHz	Upto 2 x 10.0 MHz	6
Upto 2 x 12.2 MHz	Upto 2 x 12.5 MHz	7
Upto 2 x 15.2 MHz	Upto 2 x 15.0 MHz	8

Note: This is subject to outcome of decision of Hon'ble Supreme Court in Civil Appeal No. 9110-9111 of 2010 &ors

(2) Rate of SUC for Spectrum Acquired in 2010 Spectrum Auction:

Notice Inviting Application for Auction of 3G and BWA Spectrum vide No. P-11014/13/2008-PP dated 25.2.2010

Auction type	Current spectrum allocation/ license category			
	UAS/ CMTS with GSM only	UAS with CDMA only	UAS with dual tech (GSM +CDMA)	ISP
3G Auction (frequency in 2.1GHz band)	Revenues from these services to be added to applicable AGR and spectrum charges as per Schedule A to apply	Revenues from these services to be added to applicable AGR and spectrum charges as per Schedule B to apply	Revenues from these services to be added to applicable AGR and spectrum charges as per Schedule A & Schedule B to apply	NA
BWA Auction (frequency in 2.3GHz band)	1% of applicable AGR from BWA services (with such revenue to be reported separately)	1% of applicable AGR from BWA services (with such revenue to be reported separately)	1% of applicable AGR from BWA services (with such revenue to be reported separately)	1% of applicable AGR from BWA services (with such revenue to be reported separately)



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The following shall be considered while computing the annual spectrum charges:

- Applicable AGR shall be computed in accordance with the provisions of the relevant service licence;
- 3G/ BWA Spectrum to be assigned in the two Auctions shall not be counted for calculating the slab of the total spectrum holding by a licensee for levy of spectrum usage charges;
- The spectrum charge for the 3G Spectrum shall be payable on total AGR of 2G and 3G services taken together;
- Revenues from services using the BWA Spectrum shall not be included in the AGR of the licensee, for the limited purpose of determining spectrum charges on spectrum other than BWA Spectrum;
- Annual spectrum charges shall be applicable from the date of award of right to use allotted spectrum commercially. However, there shall be a moratorium of one year from this date on the payment of spectrum charges for the standalone 3G as well as stand-alone 3G + BWA operators (i.e. winners of 3G/BWA Spectrum who do not hold 2G spectrum). The moratorium of one year shall not be applicable to operators holding 2G + 3G Spectrum;
- Slab rate for standalone 3G operators shall be equal to the lowest slab rate in Schedule A i.e. 3% of AGR;
- For BWA Spectrum, no annual spectrum charge shall be payable in the first year from the date of award of right to use allotted spectrum commercially.

**(3) Rate of SUC for Spectrum Acquired in November 2012 Spectrum Auction:**

Notice Inviting Application for Auction of Spectrum in 1800MHz and 800MHz Bands vide No. 3-16/2012-Fin./ Auction dated 28.9.2012

<b>Schedule A: Charges for GSM operators (Applicable for 1800MHz band)</b>	
<b>Spectrum Slab</b>	<b>% of AGR</b>
Upto 2 x 4.4 MHz	3
Upto 2 x 6.2 MHz	4
Upto 2 x 8.2 MHz	5
Upto 2 x 10.2 MHz	6
Upto 2 x 12.2 MHz	7
Upto 2 x 15.2 MHz	8
<b>Schedule B: Charges for CDMA operators (Applicable for 800MHz band)</b>	
Upto 2 x 5.0 MHz	3
Upto 2 x 6.25 MHz	4
Upto 2 x 7.5 MHz	5
Upto 2 x 10.0 MHz	6
Upto 2 x 12.5 MHz	7
Upto 2 x 15.0 MHz	8

*P. Singh*

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**(4) Rate of SUC for Spectrum Acquired in March 2013 Spectrum Auction:**

Notice Inviting Application for Auction of Spectrum in 1800MHz, 900MHz and 800MHz Bands vide No. 1010/4/2012-WF (Auction) dated 30.1.2013

<b>Schedule A: Charges for GSM operators (Applicable for 1800MHz band)</b>	
<b>Spectrum Slab</b>	<b>% of AGR</b>
Upto 2 x 4.4 MHz	3
Upto 2 x 6.2 MHz	4
Upto 2 x 8.2 MHz	5
Upto 2 x 10.2 MHz	6
Upto 2 x 12.2 MHz	7
Upto 2 x 15.2 MHz	8
<b>Schedule B: Charges for CDMA operators (Applicable for 800MHz band)</b>	
Upto 2 x 5.0 MHz	3
Upto 2 x 6.25 MHz	4
Upto 2 x 7.5 MHz	5
Upto 2 x 10.0 MHz	6
Upto 2 x 12.5 MHz	7
Upto 2 x 15.0 MHz	8

The following shall be considered while computing the annual spectrum charges:

- Applicable (Adjusted Gross Revenue) AGR shall be computed in accordance with the provisions of the relevant service licence; for the purpose of levying spectrum usage charges based on revenue share, revenue from wire line subscribers shall not be taken into account;
- Annual spectrum charges shall be applicable from the date of award of right to use allotted spectrum.
- For the purpose of calculation of spectrum usage charge, there shall be a minimum AGR which shall be not less than 5% of the bid amount. The calculation of spectrum usage charges shall be on the basis of minimum AGR or the actual AGR whichever is higher.
- Spectrum being allocated via this auction will be added for determining the slab for Spectrum Usage Charges.
- Spectrum in 1800 MHz and 900 MHz will be added for determining the slab for Spectrum Usage Charges.



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**(5) Rate of SUC for Spectrum Acquired in February 2014 Spectrum Auction:**

Order No. P-14010/01/2014-NTG dated the 31. 10. 2014

- (1). For spectrum acquired through auction during February, 2014 in the bands 1800 MHz and 900 MHz, SUC shall be charged at 5% of the AGR.
- (2). In cases of combination of existing spectrum in 900 MHz and 1800 MHz bands and spectrum acquired through the auction, the weighted average shall be calculated as equal to (a) sum of spectrum held prior to auction held during February 2014 multiplied by applicable slab rate as per order dated 25.02.2010 and (b) spectrum acquired through auction held during February 2014 multiplied by five and then the sum of (a) and (b) divided by total spectrum holding.
- (3). The licensees, who have not acquired spectrum through auction held during February 2014, shall continue to pay SUC at the applicable slab rate as per the order dated 25.02.2010.
- (4). For the purpose of calculation of spectrum usage charge, there shall be a minimum AGR which shall be not less than 5% of the bid amount. The calculation of spectrum usage charges shall be on the basis of minimum AGR or the actual AGR whichever is higher.
- (5). The weighted average rate shall be kept to two decimal points by rounding off the second decimal figure to the next higher digit. The rounding off shall be made to next higher digit at two decimal points even if the third decimal point is less than 5.
- (6). In respect of BWA spectrum acquired through auction in 2010, the SUC shall continue to be charged, as per present practice (i.e. para 3.5 of the Notice Inviting Applications (NIA) dated 25.02.2010 for Auction of 3G and BWA spectrum), licensees using BWA spectrum need to pay 1% of AGR from services using this spectrum as annual spectrum charge irrespective of the licence held by them. Such revenue would be required to be reported separately and the operator be required to report the use of BWA spectrum and the revenue earned there from separately. The operator will have to put in place a system for independently monitoring and verifying the revenue earned from BWA frequencies to prevent revenue misrepresentation.



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**(6) Rate of SUC for Spectrum Acquired in March 2015 Spectrum Auction:**

Order No. P-14010/01/2014-NTG dated the 5.2.2015

- (1). For spectrum acquired through auction during March 2015 in 800 MHz, 900 MHz, 1800 MHz and 2100 MHz bands, SUC shall be charged at 5% of the AGR.
- (2). In cases of combination of existing spectrum in 800 MHz, 900 MHz, 1800 MHz and 2100 MHz bands and spectrum acquired through the auction, the weighted average shall be calculated as equal to (a) sum of spectrum held prior to auction held during March 2015 multiplied by applicable rate as per orders dated 25.02.2010, 31.10.2014 and SUC rates as per Notice Inviting Application (NIA) dated 25.02.2010 and (b) spectrum acquired through auction held during March 2015 multiplied by five and then the sum of (a) and (b) divided by total spectrum holding.
- (3). The licensees, who have not acquired spectrum through auction held during February 2014/March 2015, shall continue to pay SUC at the applicable slab rate as per the order dated 25.02.2010.
- (4). For the purpose of calculation of spectrum usage charge, there shall be a minimum AGR which shall be not less than 5% of the bid amount. The calculation of spectrum usage charges shall be on the basis of minimum AGR or the actual AGR whichever is higher.
- (5). The weighted average rate shall be kept to two decimal points by rounding off the second decimal figure to the next higher digit. The rounding off shall be made to next higher digit at two decimal points even if the third decimal point is less than 5.
- (6). In respect of BWA spectrum acquired through auction in 2010, the SUC shall continue to be charged, as per present practice (i.e. para 3.5 of the Notice Inviting Applications (NIA) dated 25.02.2010 for Auction of 3G and BWA spectrum), licensees using BWA spectrum need to pay 1% of AGR from services using this spectrum as annual spectrum charge irrespective of the licence held by them. Such revenue would be required to be reported separately and the operator be required to report the use of BWA spectrum and the revenue earned there from separately. The operator will have to put in place a system for independently monitoring and verifying the revenue earned from BWA frequencies to prevent revenue misrepresentation.



Government of India  
Ministry of Communications  
Department of Telecommunications  
**Wireless Planning & Co-ordination Wing**

6<sup>th</sup> Floor, Sanchar Bhawan,  
20, Ashoka Road, New Delhi - 110 001.

No.: L-14004/07/2018-NTG

Date: 29.11.2018

To,

Bharti Airtel Limited,  
Bharti Crescent,  
1, Nelson Mandela Road,  
Vasant Kunj, Phase II,  
New Delhi - 110070.

Tata Teleservices Limited/  
Tata Teleservices (Maharashtra) Limited,  
2-A, old Ishwar Nagar,  
Main Mathura Road,  
New Delhi - 110 065.

**Subject: Sharing of Spectrum in 1800 MHz band in Andhra Pradesh and Maharashtra LSAs.**

**Reference: Guidelines for sharing of Access Spectrum by Access Service Providers dated 24.09.2015.**

Sir,

I am directed to refer to your joint intimation letters, dated 14.08.2018, i.r.o. sharing of spectrum in 1800 MHz band in Andhra Pradesh and Maharashtra LSAs, and to state that these requests for sharing of spectrum have been taken on record w.e.f. **30.09.2018**.

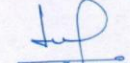
2. The expiry of the period of sharing will be the date of expiry of the service licenses, expiry of right to use the spectrum, or, expiry of the proposed period of sharing, whichever is earlier. The details of the frequency carriers, quantum of spectrum and the expiry of period of sharing are as per **Annexure**.
3. As mentioned in the sharing guidelines dated 24.09.2015, Spectrum Usage Charges (SUC) rate of the each of the licensees post sharing shall increase by 0.5% of Adjusted Gross Revenue (AGR). In case of sharing of spectrum for part of a month, full one month period shall be counted for the purpose of levying SUC. Revised SUC for the above-mentioned two LSAs - Maharashtra and Mumbai - will be effective from the effective date of sharing.
4. The terms and conditions of the sharing will be governed by the Guidelines, dated 24.09.2015 on sharing of Access Spectrum by Access Service Providers.



5. It is also clarified that combining un-liberalized/administratively assigned spectrum along with the shared liberalized spectrum is not permitted and accordingly the licensees shall ensure that the administratively assigned spectrum is not shared.

Encl.: As above.

Yours faithfully



(Neeraj Juyal)

Assistant Wireless Adviser

Stamp: Assistant Wireless Adviser, Dept. of India

Copy to:

1. Director (WM), WMO, Pushpa Bhawan, New Delhi-110062, to ensure that the usage is in line with the approved sharing arrangements.
2. DDG (WPF), Sanchar Bhawan, New Delhi-110001 for information and necessary action please.
3. DDG (AS), Sanchar Bhawan, New Delhi-110001 for information and necessary action please.


**Annexure**

No.: L-14004/07/2018-NTG

Date: 29.11.2018

**Details of the Frequency carriers, Quantum of spectrum and the Expiry of period of Sharing of Access Spectrum between Bharti and Tata**

LSA	Details of Shared Spectrum				Expiry of the period of sharing
	Bharti		Tata		
	Frequency(ies)	Quantum	Frequency(ies)	Quantum	
<b>1800 MHz band</b>					
Andhra Pradesh	1715.9 - 1732.3 / 1810.9 - 1827.3 MHz	16.4 MHz	1732.3 - 1737.3 / 1827.3 - 1832.3 MHz	5.0 MHz	13.03.2023
Maharashtra	1727.5 - 1737.5 / 1822.5 - 1832.5 MHz	10.0 MHz	1737.5 - 1742.5 / 1832.5 - 1737.5 MHz	5.0 MHz	27.09.2021

  
29.11.2018  
(NEERAJ JUVAL)  
सहायक संचालक (आवृत्तियाँ)  
आवृत्तियों के लिए संचालक  
संचालक बोर्ड, भारत सरकार  
Dept. of Telecom, Govt. of India

# Sample calculation of weighted average SUC rate applied post sharing

## Assumptions:

1. TSP 1 & TSP 2 both hold auction acquired/ liberalized spectrum in the 800 MHz band in Delhi LSA.
2. TSP 1 & TSP 2 enter into a spectrum sharing agreement, post-approval by DoT, in the 800 MHz band in Delhi LSA.
3. The present holdings and applicable SUC rates in Delhi LSA for the two TSPs, before spectrum sharing, are as follows:

### TSP 1

SNo.	Band	Quantum of Spectrum Held (in MHz)	Rate
1	800 (Shared)	4	3 %
2	900	5	4 %
3	1800	6	5 %

Weighted Average SUC Rate (WAR) **before Spectrum Sharing:**

$$\text{WAR} = \frac{4 * 3\% + 5 * 4\% + 6 * 5\%}{(4 + 5 + 6)} = 4.1333 \%$$

### TSP 2

SNo	Band	Quantum of Spectrum Held (in MHz)	Rate
1	800 (Shared)	5	5 %
2	1800	3	4 %
3	2100	3	3 %

Weighted Average SUC Rate (WAR) **before Spectrum Sharing:**

$$\text{WAR} = \frac{5 * 5\% + 3 * 4\% + 3 * 3\%}{(5 + 3 + 3)} = 4.1818 \%$$

## Calculation of Weighted Average SUC Rate Post Spectrum Sharing:

**Scenario 1 - 0.5% additional SUC rate is applied only on the particular band shared, i.e. 800 MHz**

TSP 1

$$\text{WAR post spectrum sharing} = \frac{4*3.5\% + 5*4\% + 6*5\%}{(4 + 5 + 6)} = \mathbf{4.2666\%}$$

TSP 2

$$\text{WAR post spectrum sharing} = \frac{5*5.5\% + 3*4\% + 3*3\%}{(5 + 3 + 3)} = \mathbf{4.4090\%}$$

**Scenario 2 - 0.5% additional SUC rate is applied on the overall weighted average rate (WAR)**

TSP 1

$$\text{WAR post spectrum sharing} = \frac{4*3\% + 5*4\% + 6*5\%}{(4 + 5 + 6)} + 0.5\% = \mathbf{4.6333\%}$$

TSP 2

$$\text{WAR post spectrum sharing} = \frac{5*5\% + 3*4\% + 3*3\%}{(5 + 3 + 3)} + 0.5\% = \mathbf{4.6818\%}$$