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Dated: 21st August, 2013



To,

Shri Arvind kumar
Advisor (NSL)
Telecom Regulatory Authority of India,
Mahanagar Door Sanchar Bhawan,
J.L. Nehru Marg, (Old Minto Road),
New Delhi - 110 002

Sub: Consultation Paper on Valuation and Reserve Price of Spectrum

Ref: TRAI Consultation Paper No. 6/2013 dated 23.07.2013

Dear Sir,

This is with reference to your above mentioned Consultation Paper. In this regard, please find enclosed our counter comments for your kind consideration.

Thanking you.
Yours Sincerely
For **Bharti Airtel Limited**

A handwritten signature in blue ink, appearing to read 'Ravi P. Gandhi', written over a horizontal line.

Ravi P. Gandhi
Chief Regulatory Officer (Policy)

Encl : As Above

Bharti Airtel's Counter Response to TRAI's Consultation paper on "Valuation and Reserve Price of Spectrum"

A. Deliberation on the refarming of 900MHz band is critical and integral part of the present consultation exercise:

Given the far reaching implications of refarming on consumers, industry and nation, it is absolutely critical to deliberate upon some of the following aspects related to the proposed refarming:

- a. **Impact on Consumer:** Refarming of spectrum in 900 MHz band will lead to disruption of services, coverage gaps, inferior QoS and increase in tariffs thereby having a massive negative impact on the consumer.
- b. **Impact on the financial health of the industry:** Operators using 900MHz spectrum will need to replace 286,590 base stations and install an additional 171,954 base stations to provide equivalent coverage using 1800MHz spectrum. This will include incremental capex of Rs.54,739 Crs. and incremental annual opex of Rs.11,762 Crs. Besides, there will be a needless write-off of over Rs.22,310 Crs. as existing TSPs on 900MHz network will switch off their base stations and migrate to 1800MHz network. The deteriorating financial condition of the industry cannot afford to take on any additional burden.
- c. **Impact on national objectives:** Any redistribution of 900MHz spectrum would require TSPs to shift their focus to reconfiguration of their existing networks, primarily catering to voice services. This will delay investments in driving broadband growth and will not be in line with the NTP 2012 objectives. The proposed re-distribution exercise will also result in increasing the number of BTSs, thereby increasing diesel consumption and the greenhouse gas emissions.

We have provided details of the above in our response to the consultation paper.

The TRAI Act empowers the Authority to give its recommendations *suo-moto* on such matters. Hence the contention of some operators that no reference has been received from the DoT on the matter of refarming is completely baseless, out of context and unwarranted.

B. Contradictory stand of CDMA operators:

1. **Continuity of service:** While supporting the refarming of 900MHz band, certain operators have been insensitive to the continuity of GSM services to more than 500 million consumers. It is surprising that harmonization of vacant 800MHz spectrum, to E-GSM is being opposed due to reasons of continuity of services to 70 million CDMA customers, even though no spectrum is being taken away. We fail to understand why such insensitivity is being shown towards 500 million GSM consumers .

2. **Protection of existing investments:** The CDMA operators are not concerned about the loss of existing investments running into thousands of crores that will have to be borne by GSM operators, if 900MHz is forcefully taken away from them. They are also opposing the harmonization of E-GSM to save the cost of reconfiguration, which is miniscule as compared to the value creation by converting E-GSM band to 900 MHz.
3. **Reservation of spectrum:** One of the operators has suggested that no spectrum in 1800MHz band should be reserved in exchange of 900MHz at the time of extension of licence. However, the same operator wants reservation of spectrum in 2100MHz for 3G services.

C. The concerns raised by CDMA operators on E-GSM harmonization are unwarranted and exaggerated:

Currently, 195.69MHz of spectrum in 800MHz band is lying vacant across the circles. This is despite the fact that spectrum in 800MHz band is much more efficient than 900MHz / 1800MHz band. Moreover, the customer base of CDMA operators is declining fast and as a result, they are holding spectrum in excess of their eligibility (as per subscriber linked criterion). Thus, a lot of precious and scarce spectrum is lying underutilized and vacant due to diminishing interest in CDMA based mobile services.

In contrast, the demand and interest for spectrum in 900MHz band is considerably high. Thus, it would be in the interest of the nation and sector that this underutilized and vacant spectrum with diminishing interest is put to its more efficient usage – both technically and economically. Considering this, it is appropriate to harmonize 10MHz of 800MHz as E-GSM and auction it as 900MHz. This will not only ensure the more efficient usage of spectrum, but will also bring more revenues to the exchequer.

However, it is ironical that unrealistic reasons are being cited by the CDMA operators for keeping the E-GSM spectrum underutilized as indicated below:

1. **Impact on the continuity of services:** The CDMA operators claim that the harmonization of E-GSM band will impact the continuity of CDMA services to their consumers. According to us, these claims are unwarranted as:-
 - a. The CDMA operators will continue to hold their assigned spectrum in 800MHz band.
 - b. The conversion of vacant 800 MHz band to E-GSM only requires harmonization of assigned spectrum, i.e. shifting of presently assigned frequencies to the other in the same band. It is a routine activity carried by WPC time and again. In fact, Airtel along with other operators was asked to change its assigned frequencies in 1800 MHz band to another in the same band just to ensure the availability of contiguous spectrum for successful bidders during November 2012 auction.

2. **Impact on the existing investments:** The CDMA operators claim that the harmonization will adversely affect their existing investments. According to us, such claims are baseless as they will continue to carry their operations in the same band except for change of frequency. As per our estimates it will require retuning of some filters the cost of which is negligible as compare to the benefits of unlocking this spectrum from 800MHz band.
3. **Legal rights over 800MHz spectrum:** The CDMA operators claim that they have legal rights over 800MHz spectrum till the current validity of their licence. According to us, these claims are also incorrect as the E-GSM harmonization will neither decrease the quantum of assigned spectrum nor change the assigned spectrum band. We therefore, fail to understand how legal rights over the present holding of 800MHz will get affected.
4. **Adverse impact to the PSUs subscriber base:** The CDMA operators claim that the harmonization will adversely impact the subscriber base of PSU operators. We support the Authority's view that the number of subscribers of PSUs being served on 800MHz band is very small and hence the PSUs can be asked to vacate this spectrum. It is also learned that both PSUs have already stopped all kinds of expansion of their CDMA network and are in a process of closing these CDMA networks.
5. **Issues in vacation and use of 925-935 MHz for E-GSM:** As per the CDMA operators the harmonization exercise will impact the current users of the 925-935 MHz. Some spectrum required for E-GSM harmonization is also being used by Defence. We would like to clarify that this apprehension is manageable due to following facts:-
 - a. **448 assignments to different users for captive use:** We understand that 448 assignments for captive use would be either point-to-point connectivity or point-to-multipoint connectivity with at most 1 transceiver. These 448 transceiver or point-to-point links by the captive users is miniscule as compared to the number of BTSs deployed for cellular mobile services across the country. Thus the non-availability of E-GSM spectrum in few pockets should not pose any deterrent for larger use. Such practice has been adopted in other frequencies bands as well, i.e. 1800 MHz/2100 MHz where the assigned spectrum was not made available in few pockets of a particular service area. Thus, once the E-GSM is put up for auction, the interested bidders can always take an informed decision. Nevertheless, the government may migrate these captive users to alternate media.
 - b. **Around 7MHz is being used by Defence:** We believe that the Defence might not be using this 7MHz for cellular networks or any other type of network having pan India presence. At the most, Defence would be using these 900MHz frequencies in some confined areas/geographies. Therefore, the E-GSM band spectrum can be utilized for cellular mobile services across the country except those few identified areas of Defence in co-ordination with WPC. This is prudent

to monetize this precious and scarce natural resource and maximize the revenue for the exchequer.

We, therefore, propose that before auctioning the E-GSM spectrum, the government may inform the prospective bidders about the areas where the spectrum would not be made available. In fact, during November 2012 spectrum auction, the government proactively informed about such areas in Rajasthan circle. Moreover, the start-up spectrum (given administratively) in some districts of Gujarat, Punjab, Haryana, UP(W), UP(E), Rajasthan, West Bengal, Himachal Pradesh and Bihar has not been assigned to some operators till date.

The process of E-GSM harmonization including the retuning of CDMA filters may take 6-9 months. Thus, we propose that while auctioning the E-GSM spectrum in the upcoming auction, the government may indicate the expected timeframe for the assignment of these frequencies. In the past, while auctioning 2100MHz and 900 MHz, an expected timeframe of 6 to 18 months for assignment of frequencies was informed to all prospective bidders.

D. E-GSM harmonization is a win-win situation for all stakeholders:

During the November 2012 auction, the government failed to sell 800MHz spectrum. Subsequently, in March 2013 auction, despite lowering the reserve price of 800 MHz than 1800 MHz, only one operator whose license had been cancelled by the Hon'ble Supreme court acquired some spectrum in 800MHz for eight circles. Hence it was a case of 'distress buying'.

In their response to the consultation paper, the CDMA operators have themselves admitted that CDMA services have no future and their subscriber base is declining faster. Our analysis on the basis of industry data also corroborate that the existing CDMA operators are holding more spectrum than required to serve their existing customer base.

Despite CDMA being much efficient technology as compared to TDMA based GSM; the utilization of 800 MHz band as compared to 900/1800MHz is very low. The following data illustrate that the CDMA operators provide much lower return to the society and exchequer as compared to the GSM:

S. No.	Parameter	GSM (1800MHz/900MHz)	CDMA (800MHz)	Efficiency of CDMA as compared to GSM
1	Subscriber per MHz	744,097	283,760	38%
2	Revenue in crores per MHz	93.76	32.35	34%
3	Annual spectrum usage charge in crores per MHz	4.58	0.65	14%

Note:

1. The figures have been derived from the TRAI PMR report for March 2013.
2. The spectrum usage charge has been derived basis Q4 2012-13.

Since, the demand of 900MHz is admittedly much higher than 800MHz and the CDMA operators also aspire to acquire 900MHz, it will be a sensible decision, both technically and economically, to (i) harmonize the vacant 800MHz spectrum (ii) refarm it to E-GSM band and (iii) auction it as 900MHz band.

The auction of E-GSM as 900MHz will be a win-win situation for all stakeholders due to the following:

- an equal opportunity to all including CDMA operators to get spectrum in 900 MHz band
- discovery of market price for 900 MHz for extension of existing licenses and spectrum
- unlocks the precious 800 MHz band from CDMA technology and is put to a better public good.
- brings more revenue to the exchequer while ensuring the continuity of services and investments of the CDMA operators

E. Reserve Price of Spectrum should be set at realistic value:

The results of the last two auctions clearly indicate that high reserve price can be a dampener and lead to failure of the auction. It is worthwhile to mention that the reserve price in last two auctions was even higher than the final price of spectrum in the developed countries and acted as a deterrent for the serious operators to participate in the auction. The spectrum prices during the last auctions can therefore neither be taken as the valuation of spectrum nor as its reserve price.

Therefore, we request the Authority that instead of discovering the price administratively by fixing a high reserve price closer to the value of the spectrum, the reserve price should be kept at a realistic level to generate adequate interests from stakeholders to participate in the auction. The true value of the spectrum will then be appropriately discovered through the bidding thereby ensuring a successful auction and consequently a vast roll out of network

Given the failure of the last few auctions due to exorbitant reserve price and the critical need of the hour to have a highly successful auction that is in the overall interest of the nation, we are very surprised that some operators want to continue with the present reserve price.

We sincerely urge the Authority not to consider suggestions that support continuation of the existing reserve price as it will once again lead to another failed auction which is surely not the expected outcome of this detailed and very progressive consultation paper.

F. Roll Out Obligations:

One of the stakeholders has suggested the imposition of additional rollout obligations for spectrum beyond 6.2MHz.

The objective of imposing the rollout obligations conditions is to ensure that after getting the start-up spectrum, the operator covers a specified geography within a defined timeframe. However, the additional spectrum is required for capacity enhancement in those areas where network has already been rolled out. To cover the uncovered areas, the operators need additional sites (to be built up with start-up spectrum) and not additional spectrum.

The startup spectrum is sufficient to provide coverage throughout the service area. For example, an operator has the start-up spectrum of 4.4 MHz in Madhya Pradesh service area and has not rolled out its services in Itarasi. The startup spectrum allocated to that operator is sufficient to provide basic coverage in Itarasi. It is only when the capacity of the network already deployed (in covered areas) is exceeded then the additional spectrum is required.

Therefore, the rollout obligation should only be linked with startup spectrum and not with incremental spectrum. Since the old operators have already fulfilled their rollout obligations, they should not be subjected to additional rollout obligations for incremental spectrum.