

**TRAI releases recommendation on spectrum auction**

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**Background on spectrum auction**

On 1<sup>st</sup> August 2018, Telecom Regulatory Authority of India (TRAI) released recommendations on auction of spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300-3400 MHz, 3400-3600 MHz bands.

The date for new auction to be conducted is yet to be decided. The last auction was held in October 2016 and the overall spectrum of 2,354.55 MHz was put up for sale which belonged to 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz bands. Of this, around 965 MHz that equals to 41% of the spectrum was sold.

The spectrum however remained completely unsold in 700 MHz and 900 MHz bands. Citing high price and the lack of ecosystem for spectrum in 700 MHz band as major barriers, the telecom companies opted for spectrum in 1,800/2,300/2,500 MHz bands that can be used to provide 4G services to their customers. Also, some quantum of spectrum was unsold in other bands as well. With this notification on spectrum auction, TRAI recommended bidding of the spectrum that was not sold in October 2016 auction.

**Table 1: Band-wise units that remained unsold in October 2016 auction**

Band	Units that remained unsold in October 2016 auction (in MHz)
700 MHz	770
800 MHz	58.75
900 MHz	9.4
1800 MHz	46.8
2100 MHz	275
2300 MHz	NA
2500 MHz	230

Source: TRAI

**Introduction of new bands (3300-3400 MHz and 3400-3600 MHz band)**

Apart from this unsold spectrum, TRAI also recommended introduction of spectrum to be auctioned in new bands which are 3300-3400 MHz and 3400-3600 MHz bands. The spectrum in frequency range 3300-4200 MHz is expected to come up as primary band for early 5G introduction.

## Reserve price suggested by TRAI

**Table 1: Band-wise reserve price recommended by TRAI**

Band	Recommended reserve price per MHz (in Rs. crore)
700 MHz	6,568
800 MHz	4,651
900 MHz	1,622
1800 MHz	3,285
2100 MHz	3,399
2300 MHz	960
2500 MHz	821
3300-3600 MHz	492

Source: TRAI

Note: The price is aggregate of 22 circles for all bands except for 800 MHz band (19 circles), 900 MHz band (7 circles), 2100 MHz band (21 circles), and 2500 MHz band (12 circles)

In October 2016 auction, 770 units of spectrum were put up for sale of the 700 MHz band. Each unit of 700 MHz band was reserved at Rs.11,475 crore and it required a telco to bid for a minimum block of 5 MHz. This implies that a telco had to pay a high price of about Rs. 57,375 crore to get spectrum in this band. The telecom industry however found this deal very expensive and thus did not bid for it despite the fact that the 700 MHz band is found to be the most efficient band to provide 4G services. Also, the sale of spectrum depends on the availability of network and device ecosystem and this band lacks the device ecosystem necessary for its expansion.

Considering this scenario, the price suggested by TRAI for each unit of 700 MHz band is at Rs.6,568 crore. This is 42.7% lower compared to the earlier reserve price of Rs.11,475 crore. To buy spectrum under this band, the telco will have to buy a minimum block of 5 MHz. Thus, overall the telco will have to pay a total of Rs.32,840 crore.

The reserve price set for spectrum under new band 3300-3600 MHz band is Rs.492 crore. This band will have to be put to auction in the block size of 20 MHz. Thus, a telco will have to shell out Rs.9,840 crore to buy this spectrum. Also, TRAI suggested minimum amount of spectrum that a bidder (existing licensees and new entrants) is required to bid for other bands.

### Some observations

In analysis section, TRAI mentioned that in the last one year 4G has been taking off in real sense and the data usage has increased exponentially in India. Total mobile data usage has increased from 462 petabytes in quarter ending September-2016 to 7879 petabytes in quarter ending March-2018, thereby showing an increase of more than 17 folds. **However, it is to be noted that the data usage has primarily increased on account of cheap data services offered by telcos. Thus, the increase in data usage has been at the expense of telecom industry.**

Also it is referred in the recommendation that as the telecom industry is going through consolidation phase; the industry is in a position to assess its spectrum requirements. Though this is quite reasonable and correct, **the financial health and conditions of telcos cannot be ignored as it looks tough that the industry is ready to bid for spectrum auction.**

## Is India 5G ready?

While the 700 MHz band is being used worldwide for deployment of 4G and evolution of 5G services, this band is still not with any of the telcos in India as the players did not buy spectrum under this band in October 2016 auction on account of its higher price and the lack of device ecosystem. *Thus, the telcos are not really equipped with the most efficient band for 4G services and therefore getting ready for 5G services in this case seems to be a tough task.*

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