

**GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS**

**LOK SABHA
UNSTARRED QUESTION NO.4242
TO BE ANSWERED ON 21ST MARCH, 2018**

CALL DROP PROBLEM

4242. SHRI DILIP PATEL:
SHRI KUNWAR PUSHPENDRA SINGH CHANDEL:

Will the Minister of COMMUNICATIONS be pleased to state:

- (a) whether a permanent solution for the call drop problem has been found and if so, the details thereof;
- (b) whether the problem of call drop is unique to the country and if so, the details thereof and the reasons therefor;
- (c) whether the Government proposes to cancel license of telecom companies that fail to end call drop problem in the near future and if so, the details thereof and if not, the reasons therefor; and
- (d) whether the performance of BSNL in addressing the problem of call drop is worse as compared to other private telecom companies and if so, the details thereof and the reasons therefor along with the steps taken by the Government in this regard?

ANSWER

**THE MINISTER OF STATE (IC) OF THE MINISTRY OF COMMUNICATIONS &
MINISTER OF STATE IN THE MINISTRY OF RAILWAYS
(SHRI MANOJ SINHA)**

(a) to (c) The calls on mobile phones which, due to technical reasons, get cut off before the speaking parties finish their conversation and before one of them hangs up, are classified as dropped calls. In wireless networks, it is a world-wide phenomenon and not unique to any particular country. Call drops may happen in wireless networks due to various reasons like:

- (i) Poor radio coverage- Non availability of suitable tower-locations, may be due to acquisition problems and sealing of towers by local authorities/ Resident Welfare Organization (RWA)/ Owners due to fear of Electro Magnetic Field (EMF) issues;
- (ii) Radio interference due to use of unauthorized repeaters;
- (iii) Change in pattern of traffic- Exponential growth in traffic due to more use of smart phones which may result in shrinkage of 3G cell size;
- (iv) Non availability of 24x7 power resulting in shutdown of tower/ Base Transceiver Stations (BTS);
- (v) Poor Radio Frequency (RF) optimization efforts: Network Optimization is a process through which different soft parameters (BTS power, neighbour definitions) and hard parameters (e.g. Electrical Tilt, Mechanical Tilt, Azimuth etc.) of the BTS are changed in order to improve the coverage area and quality of signal.

In order to resolve the problem of call drop, Government and TSPs have taken various steps like:

- making available sufficient spectrum for mobile services including auction of 965 MHz in 2016,
- allowing Spectrum Sharing, Trading and liberalisation of administratively allocated spectrum as per the guidelines to facilitate efficient utilisation,
- permitting sharing of active as well as passive infrastructure by the telecom service providers for achieving higher utilisation efficiency,

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- notification of Indian Telegraph Right of Way Rules, 2016 in November 2016 for regulating underground infrastructure (optical fibre) and over-ground infrastructure (mobile towers),
- periodic review of expansion of mobile networks and related improvements carried out by the Telecom Service Providers (TSPs)- leading to addition of around 6.66 lakh additional BTS on aggregate basis for 2G/3G/4G services during the period- June 2015 to February 2018,
- facilitating use of Government estate for installation of mobile towers on multiple-sharing basis,
- launching of Tarang Sanchar, a public web portal for information sharing on mobile towers and their EMF compliances, in May 2017.

As a result of continuous efforts put-in by the Government and Telecom Service Providers (TSPs), consistent improvements have been noted in compliance to Telecom Regulatory Authority of India's (TRAI) Quality of service benchmarks for both 2G and 3G services. TRAI has been imposing financial disincentives against service providers who fail to comply with the benchmarks for various quality of service parameters, including for call drop.

To monitor the performance of Service Providers on call drop for both 2G and 3G services, TRAI has prescribed two parameters viz. "call drop rate (benchmark $\leq 2\%$)" on monthly average basis for the licensed Service Area and "worst affected cells having more than 3% Traffic Channel (TCH) drop/ Circuit Switched Voice drop rate (benchmark $\leq 3\%$)." Any Cell with TCH drop/Circuit Switched Voice drop rate $> 3\%$ is treated as bad cell whose performance is to be improved.

As per TRAI's Performance Indicator Report for the quarter July to September 2017, all TSPs providing 2G and 3G services comply to TRAI's Call drop benchmark of $\leq 2\%$ for Licensed Service Area (LSA) as a whole.

Further, compliance to another benchmark, Worst affected cells having Traffic Channel (TCH) drop rate with benchmark $\leq 3\%$ has also improved consistently. For 2G services, non-compliance in this regard has significantly decreased from 54 in quarter ending September 2015 to 20 in quarter ending September 2017. For 3G services, non-compliance in this regard has significantly decreased from 20 to 09 in the corresponding period.

Further, the network related parameters were recently reviewed and notified on 18.08.2017. Two new parameters for assessing call drop, viz. DCR spatial distribution measure or DCR Network_QSD (90,90) (benchmark 2%) implies that at-least 90% of Cells in the network should perform better than specified 2% benchmark on at-least 90% of days. Similarly, another new parameter DCR temporal distribution measure or DCR Network_QTD (97,90) will give confidence that on at-least 90% of Days, network performed better than specified 3% benchmark for at-least 97% of the Cells. Financial Disincentive have also been enhanced from Rs. 1 lakh to 5 lakh for 1st violation and 1.5 to 2 times, capping Rs. 10 lakh for 2nd & subsequent violations. The regulations have since come into force from 1st October, 2017.

(d) As per TRAI Reports, BSNL has been consistently complying to call-drop rate benchmark of $\leq 2\%$ for both 2G and 3G services in all operating LSAs for the last four quarters i.e, October to December 2016, January to March 2017, April to June 2017, July to September 2017. Further, BSNL has been complying to second benchmark i.e. Worst affected Cells having more than 3% Traffic Channel (TCH) drop/ Circuit Switched Voice drop rate $\leq 3\%$ for both 2G & 3G services in all operating LSAs except West Bengal during the corresponding last four quarters.

Hence, the overall performance of BSNL mobile networks against call-drop rate benchmarks remains comparable with other TSPs for both 2G & 3G services.
