

## OVERVIEW

This Report contains significant audit findings which arose from the Performance Audit and Compliance Audit of the Ministry of Communications (MoC) and Ministry of Electronics and Information Technology (MeitY) and Departments/ Public Sector Undertakings under the Ministries. It contains four chapters. Chapter I gives audited entity profile, analysis of expenditure, financial performance of the departments and Follow up on Audit Reports. Chapter II, III and IV relate to audit findings/observations arising out of audit of Department of Telecommunications, Department of Posts, and Public Sector Undertakings under these Ministries.

Some of the important findings in the Report are given below:

### Chapter- II Department of Telecommunications (DoT)

#### Audit on “Spectrum Management in DoT”

As per the National Telecom Policy (NTP) 2012, one of the major objectives of Spectrum Management was to re-farm spectrum and allot alternative frequency bands or media to service providers from time to time to make spectrum available for introduction of new technologies for telecom applications and prepare a roadmap for availability of additional spectrum every five years. In India, total spectrum allocated for GSM based mobile (cellular) services (2G/2.5G) is 2X25 MHz in 900 MHz band and 2X75 MHz in 1800 MHz bands. Upto 2x6.2 MHz of 900 MHz band was being used by Defence till date. No action/deliberation for re-farming of 900 MHz band was initiated by Wireless Planning & Coordination (WPC) of DoT. The continuing use of spectrum in these bands by Defence results in loss of opportunity cost for the nation as a whole.

##### *Paragraph 2.1.7.1*

Railways was assigned 1.6 MHz spectrum along seven railway tracks in 900 MHz band. Considering the increased requirement of spectrum for commercial use for telecom services, TRAI in its recommendations dated 13 May 2005 and 11 May 2010 on Spectrum related issues recommended for re-farming of spectrum in 900 MHz from incumbents for its utilization for commercial use by telecom operators. Though Telecom Regulatory Authority of India (TRAI) emphasized time and again for re-farming of spectrum assigned to Railway in 900 MHz for telecom use, Department of Telecommunication (DoT) had not taken any action in this regard. Assignment of spectrum to Railway in 900 MHz band hampered the contiguous assignment of spectrum to telecom operators which in turn adversely affected the optimal utilization of spectrum.

##### *Paragraph 2.1.7.2*

A guard band is a narrow frequency range that separates two ranges of wider frequency. During harmonization of 1800 MHz band, DoT made a provision for 0.2 MHz guard band (0.1 MHz at each side of the band, i.e. in the start and in the end of the total 55 MHz spectrum) and one additional guard band of 0.2 MHz in between this spectrum band in all 22 LSAs. It was also noticed that the location (frequency spot) of the additional guard band of 0.2 MHz considered by the DoT was varying from LSA to LSA. Additional guard band of 4.4 MHz spectrum (0.2 MHz spectrum in each 22 LSAs) was not considered while putting up spectrum in 1800 MHz band for auction and thus spectrum in 1800 MHz, which is a prime band, remained unutilized. The provision of additional guard band needs a review by DoT.

***Paragraph 2.1.8.1***

DoT prescribed (March 2013) levy of one time spectrum charge (OTSC) for spectrum held beyond 2.5 MHz by CDMA operators and issued (March 2013) demand note of ₹ 1152.68 crore to Tata Teleservices Limited (TTSL)/Tata Teleservices (Maharashtra) Limited (TTML). DoT order provided that licencees not willing to pay OTSC may surrender spectrum beyond 2.5 MHz. TTSL/TTML surrendered (April 2013) the CDMA spectrum of 2.5 MHz each in Maharashtra and Andhra Pradesh and 1.25 MHz each in Kolkata, Chennai, Bihar, Gujarat, Haryana, Karnataka, Kerala, Punjab, Rajasthan, Uttar Pradesh (East) and Uttar Pradesh (West) under protest. TTSL/TTML also surrendered 1.25 MHz in Delhi and Mumbai and retained 3.75+3.75 MHz and paid first instalment of ₹ 62.91 crore as OTSC in respect of Delhi and Mumbai under protest. The surrendered spectrum was not put to auction held in February 2014 and March 2015 by DoT on the plea that the matter was sub-judice though the High Courts had not restrained DoT from putting the surrendered spectrum to auction. The spectrum surrendered by TTSL/TTML pertaining to Mumbai, Andhra Pradesh and Maharashtra LSAs was put to auction only in October 2016 while the spectrum in the other LSAs were not put to auction though it remained unutilised. The annual value of spectrum surrendered by TTSL but not put to auction worked out to ₹ 127.33 crore.

BSNL was allotted start up spectrum of 6.2 MHz in 900 MHz band in all its Service Areas during 2000 and 2003. Subsequently it was allotted additional 1.8 MHz in Jammu & Kashmir in 900 MHz, 1.2 MHz in Gujarat, 1.8 MHz in Rajasthan and West Bengal and 3.8 MHz in rest of 15 LSAs except Punjab in 1800 MHz band during 2004 to 2007. After DoT's decision to levy OTSC, BSNL proposed to surrender (January 2013) 1.8 MHz in 1800 MHz band in 15 LSAs. However, DoT has not withdrawn the excess spectrum proposed to be surrendered by BSNL till date (March 2018). Financial impact due to delay in withdrawal of excess spectrum held by BSNL is ₹ 520.79 crore.

***Paragraphs 2.1.9.1 & 2.1.9.2***

The mobile backhaul (Microwave) is an integral part of the cellular telecom network which connects cell sites (Base Transceiver Stations) with Base Station Controllers.

The assignment of MW backhaul carriers is made administratively, subject to availability of spectrum. DoT constituted a committee in December 2012 to look into the allotment/assignment of spectrum in various categories of spectrum users covering different categories of licences and authorizations. The Committee proposed that the spectrum allotment in Microwave band to all the service providers should be allotted through market related process (auction). However, allocation of MW Access spectrum had been done on First Come First Serve (FCFS) basis. Though carriers were available in other bands and propagation characteristics of MWA spectrum in lower bands (say 13/15 GHz) was better compared with higher bands (18/21 GHz and beyond), allotment of MWA to Access Service providers was withheld by DoT since June 2010. Non-allotment of MWA spectrum to Access Service Providers despite availability resulted in loss of revenue to the Government.

***Paragraph 2.1.10***

The New Telecom Policy 1999 (NTP 1999) allowed the then existing Cellular Mobile Service licensees to migrate from a Fixed Licensee Fee Regime to a Revenue Share arrangement with effect from 01 August 1999. The revenue sharing was to be done as a fixed percentage of their Adjusted Gross Revenue (AGR) for Micro Wave (MW) access/backbone Spectrum also. However, the spectrum charges for MW access/backbone Spectrum and satellite Spectrum of National Long Distance (NLD) and International Long Distance (ILD) networks were still levied on formula basis instead of revenue share basis (i.e. percentage of AGR), as being done for MW access spectrum of cellular network which indicated non-uniform policy in DoT.

***Paragraph 2.1.10.1***

National Frequency Register (NFR) is the basic record for all frequency assignments and it would be referred to identify assignable frequency for any new applicant. WPC implemented (January 2005) “Automatic Spectrum Management System (ASMS)” which caters to the requirement of application, assignment, channeling plan, Standing Advisory Committee On Radio Frequency Allocations (SACFA) clearance, etc. The NFR in ASMS was not being updated at the time of assignment of new frequencies and/or surrender/withdrawal of previously assigned frequencies.

***Paragraph 2.1.11.1***

Monitoring of RF spectrum is carried out to ensure compliance with regulatory provisions governing radio communications and to intervene with national or foreign stations contravening these provisions. However, Wireless Monitoring Headquarter (MHQ)/Regional Headquarters (RHQs) nor International Monitoring Station (IMS)/Wireless Monitoring Station (WMS)/Inspection units had updated base of wireless licensees and frequency assignments since 2009-10.

***Paragraph 2.1.11.2***

Large number of equipment/Mobile Monitoring System (MMS) vehicles were supplied around 2004-05 under World Bank funded Project to all the wireless monitoring stations for carrying out the various types of monitoring activities. These equipment/MMS vehicles went faulty and remained so for several years.

***Paragraph 2.1.11.3***

Mobile monitoring function is essential in Very High Frequency (VHF) and Ultra High Frequency (UHF) frequency bands because of line of site constraints. 21 mobile monitoring Vehicles fitted with expensive electronic equipment under World Bank aided NRSMMS project procured between the year 2005 and 2007 were provided one vehicle each to all 21 WMSs/IMSs centers. However, more than 75 per cent vehicles could not be used for mobile monitoring due to faulty equipments/vehicles and non availability of drivers.

***Paragraph 2.1.11.4***

MHQ has been assigning the inspection target of 10 wireless users per month to all ten Inspections units. However, the Inspection units could not achieve the target in any year during the last five years and there was a shortfall ranging from 44 per cent to 76 per cent in conducting inspections.

***Paragraph 2.1.11.5)***

Issue/grant of wireless licences and renewal of such licences were transferred to the Regional Licensing Offices (RLOs). However, three RLOs namely Kolkata, Guwahati and Chennai had not maintained the data base of licenses issued/renewed in different categories. Further, renewal charges for the period after the expiry of the validity of licences had not been collected in 2660 cases, even though the licences had expired long back.

***Paragraph 2.1.11.6***

Though foundation stone for establishing Institute of Advanced Radio Spectrum Engineering and Management Studies (IARSEMS) was laid in March 2011 with an objective to ensure an efficient spectrum planning and engineering for achieving optimal spectrum use in present and future, no progress was made towards establishment of the institute. DoT needs to review the necessity for the Institute since there are already centres for excellence for telecom in Indian Institutes of Technology (IITs) besides DoT's own telecom technology development centre viz. Centre for Development of Telematics (C-DoT).

***Paragraph 2.1.12.1***

Central Government organizations / Ministries / Departments were exempted from payment of License Fee and Royalty Charges (Spectrum charges) for their wireless network prior to 01 June 2004. The State Police Organisations (SPOs) were exempted from payment of Royalty charges on spectrum usage, however, they were required to pay Licence Fee for the spectrum. DoT decided (April 2004) to charge for spectrum

from all the wireless users including Government departments/organizations as per the existing fixed formula with effect from 01 June 2004. Further, spectrum charges (Royalty) for captive users were revised with effect from April 2012. There were 35 SPOs and eight Central Para Military Forces (CPMFs) who were assigned spectrum for their wireless network. The decision to levy spectrum charges was taken in April 2004 but even after elapse of 13 years, reconciliation of authorized frequency could be made in respect of only 20 SPOs and CPMFs. In respect of these 20 SPOs and CPMFs, total spectrum charges for the spectrum assigned before 01 June 2004 levied was ₹ 163.58 crore and late fee levied was ₹ 284.11 crore for the period 2004-14. Out of these amounts, only ₹ 100.86 crore had been received. In respect of spectrum assigned during 01 June 2004 to 31 March 2012 to two SPOs and CPMFs, ₹ 64.20 crore was levied as Spectrum charge and ₹ 85.60 crore was levied as late fee, out of which only ₹ 13.93 crore has been received.

Doordarshan (DD) provided details of frequency assignment to WPC during 2010 and 2012. Further, DD and All India Radio (AIR) informed WPC during 2013-14 that the Government waived off their spectrum charges due upto 31 March 2011 (₹ 455.89 crore- DD and ₹ 32.48 crore- AIR) and requested WPC to reconcile the spectrum charges in respect of its transmitters with effect from 01 April 2011. WPC had not been able to reconcile the issues relating to the frequency assignments as well as the amount waived off by the Government. It was also found that DD and AIR were paying spectrum charges after March 2011 whenever it applies for frequency assignments for its new transmitters or replacements for existing transmitters. WPC had not raised demands for annual spectrum charges in respect of old existing frequency assignments as well as for newly frequency assignments made to DD and AIR though they expressed repeated willingness of paying spectrum charges from 01 April 2012.

***Paragraph 2.1.12.2***

In terms of Cabinet note on “Notification of Defence Band and Defence Interest Zone, which was approved by the Cabinet on 21 January 2015, a separate proposal for waiver of Spectrum Charges payable by Defence was to be submitted for the approval of the Cabinet. However, no such proposal for waiver of Spectrum Charges for Defence Forces has been got approved from the Cabinet till date.

***Paragraph 2.1.12.3***

Spectrum for captive users to private as well as government users is primarily allotted in spectrum band below 806 MHz. There was no mechanism put in place by WPC to review realization of spectrum charges and to raise demands regularly (annually) for timely realization of revenue from captive users. It was up to the users to pay spectrum charges on their own or WPC raised demands whenever users approached to WPC for renewal/surrender of licences.

- One such instance having substantial financial implication was noticed in respect of MRF Tyres Limited Chennai which was granted licence to operate

VHF Wireless Radios for providing communication between their vehicles participating in the motor races and rallies conducted in different parts of India. MRF paid (September 2012) renewal charges of ₹ 1,36,150 for the period from 01 October 2012 to 30 September 2013. Subsequent to payment of renewal charge by MRF Tyres, WPC issued a demand for ₹ 9,38,358 as per revised rate for the period till September 2013. MRF contested the demand stating that the wireless operations were made by them within 5 KM radius only, even though it was an all India licence and requested (December 2012) DoT to reconsider the revision of spectrum charges notice. It was noticed that MRF did not obtain WOL and had not paid spectrum charges as yet. The spectrum charges along with penalty due for the period from 01 April 2012 to 30 September 2017 at revised rates worked out to be ₹ 55.33 lakh.

*Paragraph 2.1.12.4*

### **Chapter- III Department of Posts (DoP)**

#### **Audit of Core Insurance Solution (CIS) in Department of Post**

Unique customer ID were not generated resulting in failure in exercising necessary system based controls on the financial limit on sum assured for an insurant. Despite specific provision in the Request For Proposals (RFP) for Financial Services System Integrator for IT Modernisation Project, functional deficiencies existed in the system in areas like medical examination of insurant, revival of lapsed policies, Agency Management System and Work Flow methodologies. There were computational errors in surrender value, rebate and interest leading to manual intervention. Changes made in POLI Rules were not incorporated immediately in the Core Insurance Solution (CIS) through necessary modifications in the software. Due to non-integration of CBS with CIS neither insurant could pay premium/loan amount by auto transfer nor department could credit maturity value/ loan to his POSB account. System suffered IT deficiencies like Multiple Log on Functionality, Unrestricted rights/privileges to System Administrator, non-availability of user log and audit trail. There were inadequate IT controls in bulk upload facilities, lack of supervisory controls in premium cancellation, inadequate controls in suspense maintenance and Lack of functionalities in Fraud management system. Disaster Recovery Centre was non-functional on account of non-loading of CIS Application software. Roll out of CIS in Port Blair HO and Army Postal service (APS) was not carried out due to which the policies of these two centres were being maintained in the system of National Informatics Centre (NIC) causing inconvenience to the department as well as to the customers. Department failed to adhere to timeline prescribed for delivery of services in Citizen Charter due to poor planning and implementation.

*Paragraph 3.1*

### **Stocking of Cash Certificates in Department of Posts (DoP)**

**Non-linking of Receipts of Cash Certificates (CCs) from India Security Press (ISP), Nasik with the indents placed by Circle Stamp Depots (CSD) resulted in excess receipt and resultant accumulation of CCs at the CSDs. As the retention of the certificates in the CSDs is prone to misuse, DoP needs to take immediate action to ensure that all the unsold certificates are obtained by ISP Nasik for appropriate disposal.**

*Paragraph 3.2*

### **Chapter- IV Public Sector Undertakings under the Ministry**

#### **Telecom services provided by Bharat Sanchar Nigam Limited (BSNL) in North Eastern Region (NER) of India**

Bharat Sanchar Nigam Limited (BSNL) failed in implementing Comprehensive Telecom Development Plan (CTDP) for North Eastern Region (NER) approved by the Cabinet in September 2014 .This was because of failure of the major tenders under CTDP as given below:

- Tender relating to Survey, Planning, Supply, Installation, Testing, Commissioning, Integration with existing core network and Operations & Maintenance for five years of 2G Global System For Mobile Communications (GSM) Network along with Very Small Aperture Terminal (VSAT), Network Hub & radio backhaul to provide coverage in uncovered villages at an estimated project cost of ₹ 1460 crore in April 2016 .
- Tender relating to laying of Under Ground (UG) cable, cable ducts, etc. issued by Chief General Manager (CGM) Telecom Stores, Kolkata in February 2015 and the tender for procurement of Dense Wavelength Division Multiplexing (DWDM) equipment floated by BSNL Corporate office in February 2015.

Thus, due to failure of the above two major tenders the objective of CTDP i.e. rollout for 2G coverage in uncovered areas of NER and OFC Ring connectivity along with augmentation of transmission media was yet to be achieved.

Regional Trunk Planning Committee (RTPC) approved (April 2008 and June 2014) 116 OFC routes for rehabilitation work in Assam, NE-I and NE-II Circles. The works were to be executed by North East Task Force (NETF), Guwahati. The progress of work was 10 *per cent* in Assam and nil in NE-I and NE-II as on date and the delays ranged between 3 to 10 years. Due to poor progress of rehabilitation OFC work in the region, BSNL hired media mostly from M/s Oil India Ltd and M/s Power Grid Corporation of India Ltd (PGCIL).

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Nagaland does not have a single tower within 10 Km range of 215 Km long international border with Myanmar while the tower density was 130 Km/tower in Arunachal Pradesh, 99.5 Km /tower in Manipur and 170 Km/tower in Mizoram. Further, although MHA had proposed to DoT for creation of communication infrastructure in the form of towers in the border areas with the funds available under USOF, DoT stated that DoT/USOF did not propose to fund the provision of mobile services in border and naxal affected areas. Thus, even though MHA initiated the proposal for improving telecom services in border areas of North Eastern Region as early as 2014, there was virtually no progress resulting in spill-over signals from neighboring countries being used by the civilians posing threat to national security/economy.

Mean time to Repair (MTTR) is the sum of duration of repair time in hours for all the fault incidences in a quarter divided by total number of fault incidences in a quarter. MTTR was higher than the bench mark of “less than or equal to eight hours” fixed by Telecom Regulatory Authority of India (TRAI) in Assam, NE-I, ETR Circles and Sikkim SSA during the years from 2014-15 to 2016-17.

***Paragraph 4.1***