

Telecommunications

9.29 A well spread out telecommunication network provides a great impetus to the economic growth in a country. Considering the significance of its contribution and also the need to integrate with the global economy, several policy initiatives have been taken by the government. An independent ministry for Communications and Information Technology has been notified with the departments of Telecom, Information Technology, and Posts under it. Another major initiative taken is the introduction of the Communication Convergence Bill 2001 in the Lok Sabha in August 2001. The Bill aims at promoting and facilitating the carriage and content of communications (including broadcasting, telecommunications and multimedia) in an orderly manner and develop the required infrastructure. The Bill, inter alia, envisages setting up of a regulatory and licensing authority known as “Communications Commission of India (CCI)”. The other initiatives include making the new regulatory framework Telecom Regulatory Authority of India (TRAI) and the Telecom Dispute Settlement Appellate Tribunal (TDSAT) more effective, enhancement of bandwidth availability, encouragement of Foreign Direct Investment (FDI), transparent spectrum management and restructuring of equity for fostering mergers, acquisitions and amalgamations to create globally competitive Indian entities.

9.30 The phenomenal growth realized in the telecommunication sector after 1995 continued and during 2000-01 about 7.8 million new connections (5.9 million by BSNL & MTNL and 1.8 million by private sector) were provided. The total telephone connections as on March 31, 2001 were 36.3 million comprising 32.4 million fixed lines provided by BSNL & MTNL and 0.3 million fixed lines and 3.6 million cellular connections by the private sector. Although, during the current year upto December 31, 2001, 2.4 million lines (fixed, cellular & WLL) have been provided by the public sector units as compared to 2.9 million during the corresponding period of last year, the private sector has provided 2 million

(fixed & cellular) during this period as against 1.3 million in the corresponding period of preceding year. Thus, the number of phones, provided by public and private sector taken together, during the current year were higher by 7 per cent. It also needs to be noted that there has been significant improvement in the private sector participation in telecom sector and about 45 per cent of the additional phones have been provided by the private operators during the current year.

9.31 During the period August 1991 to August 2001, 749 proposals of foreign direct investment (FDI) of Rs. 53,134 crore were approved and the actual flow of FDI during the above period was Rs. 7,028 crore. In terms of approval of FDI, the telecom sector is the second largest after energy sector. In the year 2001, there has been a notable increase in the FDI inflow, which is of the order of Rs. 3,608 crore during January to September 2001.

9.32 The service providing functions are now the responsibility of the public sector companies BSNL, and MTNL and private operators. The Department of Telecom and the Telecom Commission is entrusted with the functions of policy formulation, licensing, wireless spectrum management, administrative monitoring of PSUs, research and development and standardization/validation of equipment etc.

9.33 The ongoing reforms in the sector have been completed ahead of the schedule. These included corporatisation of the two service providing Departments of the Central Government on October 1, 2001 and a public sector company “Bharat Sanchar Nigam Ltd.” is now fully functional. The telecommunications network of the public sector (BSNL and MTNL) is one of the largest telecom networks in Asia. It has a capacity of 42.2 million lines and 34.1 million working connections comprising 32,509 telephone exchanges in the country as on October 31, 2001. During 2000-01, switching capacity witnessed an increase of 21.8 per cent over the preceding year. Similarly, capacities in Trunk Automatic Exchange (TAX), microwave

and optical fibre network were considerably enhanced. The total capacity of TAX is 2.5 million lines. The status of microwave and optical fibre are 1,94,430 and 241,841 Route Kms respectively. The value of equipment production is estimated at Rs.12, 271 crore in 2000-01, which is 14 per cent higher than 1999-2000. Countrywide introduction of cellular mobile services has been planned by BSNL as one of its thrust areas. This service will be provided all over the country covering 850 cities in Phase I and 171 cities in Phase-II.

9.34 Considering the convenience of users and advancement of technology, the use of hand held set in wireless access system (WLL) within the local area has been permitted to provide affordable communication. With the roll out obligations in terms of coverage in urban, semi-urban and rural Short Distance Charging Areas, this will ensure faster growth of network in equal proportion in rural and other areas of the country while providing the subscribers the required communication facility of limited mobility.

9.35 Upto 1998, 42 cellular telephony licenses were issued to 22 companies and services were started in all the metro cities and select cities in 18 Telecom Circles. Seventeen fresh licenses (one each in four metros and 13 circles) have been issued to private companies during September-October, 2001 for competing as the as fourth cellular operator. The public sector companies viz. BSNL and MTNL were also issued license for operation of cellular mobile telephone services as the third operator in various parts of the country. MTNL has entered as a service provider of cellular mobile service in Delhi and Mumbai. The BSNL has planned to introduce cellular services in two phases. In the initial stage, it has a plan to have a capacity of 1.5 million lines in the current financial year as phase one target. In future, it plans further expansion of 2.5 million lines. Presently it is offering service in Patna, Hazipur, Arah, Bihar Sharief, Kolkata, and Badh, which were set up as part of first phase. Services in 6 more towns viz. Ranchi, Jamshedpur, Sasaram, Babua, Coimbatore and Madurai are expected to be commissioned in the current financial year.

9.36 Subscribers of telephone services have clearly revealed their preference in favor of easily accessible and most convenient mode of communication i.e. cellular services. Despite the higher cost of communication through cellular phone, there has been a phenomenal increase in the number of cellular subscribers. From a mere 0.3 million cellular subscribers on March 31, 1997 the number increased to 3.6 million as on March 31, 2001 and 5.5 million as on December 31, 2001. The share of the cellular mobile subscribers in the total telephone subscribers (fixed line and mobile) has gone up from 6.6 per cent in March 2000 to 9.9 per cent in March 2001 and 13.5 per cent at the end of December 2001. This service was available in 1,370 cities/towns in the country.

9.37 As on September 30, 2001, there were 934,726 PCOs working all over the country. The PCO population ratio as on September 30, 2001, in urban areas is 311, much better than the National Telecom Policy 1994 target of one PCO for 500 persons. Further, according to the New Telecom Policy, every village was to be provided with one public telephone by December 2002. This target was rescheduled and is expected to be completed by the end of the Ninth Five Year Plan. Accomplishment of this task is the responsibility of both the BSNL as well as the licensed private operating companies. According to the terms of the license agreement, private operators were to provide 97,806 as Village Public Telephone (VPTs) during the first three years. Out of a total 607,491 (1990-91 census) villages in the country 428,214 (including 618 VPTs by private operators) villages were provided with public telephones by the end of December 2001. During the current year 2001-02, it is proposed to provide VPTs in 144,771 villages out of which 18,799(including 225 by private operators) villages have been covered by December 31, 2001.

9.38 In accordance with the New Telecom Policy (NTP) 1999, the Government opened National Long Distance Service to private operators without any restriction on the number of operators, with effect from August 13, 2002. During 2000-01 and 2001-02 (April-September), two companies have been issued letter of intent

BOX 9.6

Policy in the Telecom Sector

Key Policy Developments

- National long distance service opened up for unrestricted entry.
- Termination of monopoly of VSNL for International Long Distance (ILD) services has been preponed to March 31, 2002 from March 31, 2004.
- 25 new Basic Service License Agreements signed by private operators.
- Fourth cellular operator, one each in four metros and thirteen circles has been permitted with seventeen fresh licenses issued to private companies in September/October 2001.
- Wireless in Local Loop (WLL) has been introduced for providing telephone connections in urban, semi-urban and rural areas promptly.
- Process of disinvestments of VSNL is underway.

Other Policy Initiatives

- Sanchar Sagar project being executed through 'DWDM' Technology to meet the bandwidth demand of IT sector.
- Asynchronous Transfer Mode (ATM) being introduced in 8 cities for high-speed data transmission.
- VSNL has developed its capacity to provide international bandwidth on demand.
- HTL disinvestments completed.
- License conditions for Global Mobile Personal Communications by Satellite (GMPCS) have been finalized on November 1, 2001.
- Policy for Voice mail /Audiotex service was announced in July 2001 by incorporating a new service called "Unified Messaging Service".
- ISPs have been permitted for setting up of Submarine cable landing station for international gateways for Internet.
- Thirteen ISPs have been given clearance for commissioning of international gateways for Internet using satellite medium for 29 gateways.
- 16 companies are operating Public Mobile Radio Trunked Service (PMRTS) started in 1995 in 25 cities. Policy for PMRTS in terms of NTP' 99 has been announced on November 1, 2001 under which fresh licenses will be granted only in digital technology.
- National Internet Backbone (NIB) has been commissioned.

for long distance service. The Government has also issued guidelines for license to Infrastructure Provider-II (IP-II) for leasing/renting out/selling end-to-end bandwidth. For Infrastructure Provider-I (IP-I), providing assets such as Dark fibres, Right of Way, Duct Space and Tower, no formal license is required. They are only required to be registered as IP-I. Twelve companies have been registered as infrastructure providers-I and three companies have been given license for infrastructure providers-II.

9.39 With a view to encouraging competition in the International Long Distance (ILD) traffic, the government had announced the termination of monopoly of VSNL in ILD services from March 31, 2002 instead of the originally planned date of March 31, 2004. Accordingly, the recommendations received from TRAI for opening up of ILD for the private operators covering terms and conditions of license have been accepted by the Government. In this regard,

guidelines for issue of ILD licenses are likely to be finalized shortly.

9.40 With a view to supplementing the efforts of public sector service providers i.e. BSNL and MTNL and to ensure greater competition in providing basic telephone services, companies registered in India are being licensed to plan, install, operate and maintain basic services. Six companies have so far signed the license agreement with the Government for providing basic telephone services in the country. Presently, these services are being provided in the states of Andhra Pradesh, Gujarat, Maharashtra, Madhya Pradesh, Rajasthan and Punjab. All the six licensees have started functioning in their respective circles. During 2000-01 and 2001-02 (April- September) 25 new basic service license agreements have been signed by private operators.

9.41 The New Telecom Policy (NTP), 1999, changed the license fee system to the payment

of license fee based on revenue share in place of fixed license fee to be paid upfront. Accordingly, to make the system uniformly applicable, the licensees of Pre-NTP'99 days have also migrated to the revenue sharing mode of license fee. The period of license has been enhanced to 20 years. Another notable feature of the migration package is that as against the earlier arrangement of two private operators and BSNL or MTNL as third operator in cellular services, and duopoly (i.e. one private operator in addition to BSNL or MTNL) in basic telecom service, there will be multiple operators to increase competition.

9.42 As on November 20, 2001, 493 licenses had been issued to Internet Service Providers (ISPs), of which 75 ISPs have been given clearance in principle for setting up of International Gateways for Internet using satellite as a medium. Four ISPs have applied for setting up of Submarine cable landing stations for International Gateways for Internet.

9.43 BSNL is providing access to the nearest Internet node on local call basis in all the district headquarters in the country. A National Internet Backbone (NIB) consisting of 45 locations covering all the states has been commissioned in December 2000. Another 376 nodes have been commissioned up to October 25, 2001. At least one Internet Node has been commissioned for every Secondary Switching Area (SSA) in all the states except J&K. International connectivity is provided at Delhi, Mumbai, Calcutta, Chennai, Bangalore and Pune using 34 Mbps links. About 1 lakh customers have been connected to the NIB. Asynchronous Transfer Mode (ATM) nodes have been installed at Delhi, Mumbai, Chennai, Calcutta, Bangalore, Hyderabad and Pune. Sanchar Sagar Project is under execution through Digital Wavelength Division Multiplexing (DWDM) technology to meet the demand of bandwidth for development of information technology sector. BSNL has also started providing WLL for urban development in order to provide prompt telephone connection and to cover non-feasible areas through providing limited mobility. This technology is also being used by BSNL to fulfill the objective of

telephone facility in every village apart from TDMA-PMP and satellite technologies.

9.44 NTP-99 had stipulated that the Government would review the issue of opening of Internet telephony at an appropriate time. Accordingly, an Expert Committee was constituted to review the matter and Government has decided to open up Internet telephony. Now TRAI has been requested to give its recommendations on the terms and conditions for implementing this decision. TRAI has released a consultation paper on November 23, 2001 on "Introduction of Internet Telephony".

9.45 The policy decision of August 26, 1998 provided for introduction of Global Mobile Personal Communication by Satellite (GMPCS) service in the country. Indian Companies with upto 49 per cent foreign equity participation may be issued licenses on a non-exclusive basis subject to clearance of individual proposals from the security point of view. In this regard, Letter of Intent (LOI) have been issued to two companies. Policy for GMPCS in terms of NTP'99 has been finalized and the application form and license agreement for the service has now been finalized in terms of the provisions of NTP'99. A new policy for voice mail/audiotex service in terms of NTP'99 has been announced in July 2001 by incorporating a new service, namely, United Messaging Service. Twenty-Six licenses for Voice Mail/Audiotex/UMS have been granted.

9.46 In response to these policy changes, in the Indian telecom sector the tariff structure has been substantially altered. The first phase of rebalancing was made effective from May 1, 1999 when long distance STD and ISD tariff rates were reduced by about 23 per cent on an average. At the same time, in order to encourage the spread of basic telephony, the Department of Telecommunications decided not to increase the rental and calls charges for the rural subscribers and low calling urban subscribers with calls upto two hundred per month. The tariff rebalancing exercise done in the second phase of tariff rationalization with effect from October 1, 2000 has further reduced long distance STD rates by

BOX 9.7 New Initiatives in Telecom Regulation

In 2001-02, regulatory initiatives were taken relating to increased competition, tariff policies, Quality of Service (QOS), Consumer protection, and Universal Service Obligations (USO). Important amongst these are :

- **Increasing competition in the market:** TRAI provided recommendations to open up the market to competition and to introduce new services in the telecom sector. Recommendations were provided for opening the international long distance sector allowing the use of Voice Over Internet Protocol. The licensing terms and conditions for Cellular Mobile were simplified in order to encourage entry for operators in areas without effective competition. TRAI also addressed the issues relating to implementation of the National Long Distance (NLD) License regime, and provided its recommendations on the Carrier Access Code required for consumers to choose among NLD operators.
- **Universal Service Obligation:** TRAI produced recommendations in respect of policy on Universal Service Obligations, which provide inter-alia for increase in access to telecommunications within rural areas as well as for increasing tele-density. A detailed scheme including arrangements regarding fulfillment of USO, its funding and administration has been provided. The regime is to be implemented by April 1st, 2002.
- **Tariff Policy:** TRAI has been following a program of tariff re-balancing for the last three years. The last tranche of the current re-balancing exercise is likely to be implemented by the first week of April 2002. The tariff in respect of cellular phones has been monitored closely with a view to making it more consumer friendly and ensuring a level playing field for all operators.
- **Quality of Service and Consumer protection:** Following upon the previously notified QOS Regulation for Basic Service and cellular Mobile Service, the TRAI initiated a widespread customer survey to ascertain the extent to which QOS is met in these sectors. The TRAI also issued a regulation on QOS for Dial up Internet Access Network.

an average of 13 per cent for different distance slabs and ISD rates by 17 per cent. Though this put revenue streams under stress, the operators are expected to improve efficiency to reduce the

adverse impact of rebalancing on revenue generation. These steps are also expected to generate greater demand for the services, apart from benefiting users.