FUNCTIONAL PLAN: TELECOMMUNICATIONS

NATIONAL CAPITAL REGION PLANNING BOARD
INDIA HABITAT CENTRE
IST FLOOR, ZONE IV
LODHI ROAD
NEW DELHI

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1. INTRODUCTION:

marked difference At present there is and the availability of Posts between facilities in NCT-Delhi and other parts of NCR. example, a local call system between Ghaziabad charged Faridabad which existed earlier has now been on STD (code 0575 & 0129) rating. Moreover, NCT-Delhi of 5 minutes duration within irrespective of the distances involved but Ghaziabad or Faridabad to Delhi, it is of 3 minutes More so it is difficult to make even local from one exchange to another due availability of adequate, reliable and modern type of transmission medias in some of DMA and priority towns. Even many exchanges are working in non standard or rented buildings which are not as per requirements. cases, ducting arrangements to cover there: either inadequate or not at all cables shortage of local and STD/ISD PCOs in the Before 1994 issue, Delhi whole region. Directory contained telephone numbers of Faridabad 1994, this provision has been After caused has MTNL , Delhi. This withdrawn by frustration and inconvenience to all Telephone users specially industrialists and commercial establishments.

Similarly, the posts and telegraph facilities are quite inadequate and are not upto the required satisfaction. Sometimes a letter posted in Delhi, reaches Ghaziabad or Faridabad takes 7 to 10 days and telegrams are either not at all delivered or if delivered, it is after inordinate delays.

1.2 The demand position as on 1.4.96 (Annexure 1, 2 & 3) shows a waiting list of 79727 in all secondary switching areas in NCR as compared to 9221 in NCT Delhi. The DMA, Priority & Counter Magnet towns also indicate a wide gap in provisioning of Telephones in Comparison to NCT-Delhi (Table :1).

Table:1 Waiting List for Telephone Connections on 1.4.1996.

S1.No.	Area - Wa	_	Existing Telephones	% short fall
1. N	ICT- Delhi	9,221	1167010	0.78
2. N	ICR	79,727	373877	17.58
3. D)MA Towns	24,477	159675	13.29
4. F	riority Towns	16,446	100980	14.00
	Counter Magnet	12,943	102266	11.23

1.3 Though distribution of Telephone connection has improved but the telecommunication facilities could not achieve the demand level in towns of Faridabad, Gurgaon, Panipat in Haryana. Ghaziabad, NOIDA, Bulandshahr and Khurja in UP and Alwar in Rajasthan. Moreover, the quality of service is far

behind to that of Delhi Telecom network. There is a waiting list of 22,690 in Faridabad-Gurgaon Distt., 22148 in Panipat area, 9689 in Ghaziábad Distt. 6869 in Rohtak distt. and 5499 in Sonepat Distt. against only 9221 in NCT-Delhi(Annexure-3).

1.4 The Telephone/Population ratio was 1:10 in NCT-Delhi against 1:63 in NCR as on 1st April, 1996. (Table :2).

Table: 2 Telephone/Population Ratio on 1.4.1996.

Sl.No	. Area	No. of Telepho- nes	Approx. Population (1.4.1996)	Ratio (Approx)
1,	NCT-Delhi	11,67,010	118 lakhs	1:10
2.	NCR	5,41,002	315 lakhs	1:63
		· · · · · · · · · · · · · · · · · · ·	-	ý

Regional Plan NCR 2001 under section 2(J) 1.5 defines Functional Plan which means to elaborate one or more elements of specific sector of Regional Plan. Section 16 of the National Capital Region Planning Board Act, 1985 provides preparation of Functional Plans by the Board with the assistance of Planning Committee for the proper guidance the participating States and the Union territory operation. Regional Plan has come into the Functional Plan for Telecommunications sector is one of such plans.

In view of statutory provisions in the Act, the Regional Plan and the Functional Plan have statutory status and, therefore, policy and programmes contained in the document after due process of approval by NCRPB and notification thereafter, would be binding on all the concerned constituent agencies of the National Capital Region.

2. OBJECTIVES OF THE FUNCTIONAL PLAN:

- In order to bring telecom services at par with Delhi, it is esential to integrate whole of NCR Telecom Network including Delhi. For this purpose, an effective and efficient postal and telecom system is required which is possible only by creating independent NCR telecom and NCR postal circles headed by Chief General Manager, Telecom and Chief Post Master General, Posts respectively or alternatively by merging of the entire NCR Postal and Telecom Areas into the existing Delhi Postal Circles and Delhi telephone network of MTNL. Following steps are essential to achieve the goal of integrating telecom network:—
- Provision of Uniform local call system in DMA Towns in the Ist phase & in rest of the NCR area in second phase.
- 2) Provision of single STD code (011)—in whole of the NCR including NCT-Delhi.

- 3) Provision of telephones on domand by 1997 in whole of the NCR.
- 4) To continue providing of telecom facilities at par with Delhi as per demand and also to the additional population of 20 lakhs and for industries being planned to be shifted to NCR before 2005 by alloting and commissioning of switching equipment on priority basis.
- 5) Replacing all non-electronic exchanges before 2001.
- 6) Provision of reliable and latest media/connectivity to maintain service quality at par with Delhi.
- 7) Provision of reliable trunk services in whole of the NCR.
 - 8) Provision of adequate number of STD/ISD PCOs.
- 9) All industrial growth centres, tourist and pilgrimage places to be covered with STD, pay phone facilities etc.
- 10) Provision of all modern facilities like, cellular, paging, voice mail, video fax, ISDN, CCS-7, automatic locking, call transfer, call waiting in whole of the NCR.
- 11) Provision of uniform postal pin code (11) in whole of the NCR at par with Delhi.

- 12) Provision of postal & telegraph facilities at par with Delhi by opening additional posts & telegraph offices.
- 13) Provision of land, building and electric sub-stations for telephone exchanges at Notional prices:

As per national Telecom Folicy - 1994, one Telephone connection (DEL) costs Rs.47000/- (on 1993-94 This cost includes component of building, cable, switching & transmission media. Lines and wires, Air conditioning etc. Due to requirement of funds, Deptt. of Telecom is not able to purchase land and construct buildings at the rates demanded by local authorities. As on 1.4.96 large number of sites are required urgently (e.g. 38 Rohtak alone). Besides this, large number of cases are pending for settlement with the authorities, for example, 6 cases in Bulandshahr Distt. alone. Similarly there exists a long delay construction of buildings. As an example, 11 buildings are yet to be completed in Rohtak Distt. alone.

14) There is need to provide Telecom lane of 2.5 feet width along with the construction of new roads and provision of RCC pipes at regular interval to avoid frequent cutting of roads and repairing.

3. THE PLAN:

The existing capacity, working lines and waiting list position as on 1.4.1996 is shown in Annexure 1 & 2. The Economic Research unit of Deptt. of Telecommunication has projected future telephone demand. Details for the years 1997, 2001, 2002 and 2005 for DMA, Priority, Counter Magnet, whole of NCR and NCT Delhi are also given in Annexure 1 & 2.

The comparative analysis of Existing equipped capacity, Working connections and the Waiting List reveals wide gap between the availability of Telephone connections in NCT Delhi and other parts of NCR. There is a huge waiting list for telephones in whole of NCR and DMA, Priority and counter magnet towns (Table:3). The Existing equipped capacity is much less in other towns of NCR.

Table: 3 Waiting list for new telephone connections as on 1.4.96

S1.No.	Areas	Waiting List
1.	DMA Towns	24,477
2.	Priority Towns	16,446
3.	Counter Magnet, Towns	53,866
4 - 7	NCT-Delhi	9,221

3.3 As per DOT policy - 1994 telephones are to be provided on demand by March, 1997 in whole of the country.

- The DOT has to ensure that the level of providing Telephone on demand has to be maintained beyond 1997. By 2005, DOT will have to meet the addl. demand of (i) 2 million people proposed to be deflected from NCT Delhi and (ii) number of industries proposed for shifting to NCR areas.
- The existing area of NCT Delhi is 1483 sq. kms. and DMA towns 1696 sq.kms. The radial distance works out about 22 kms. for NCT Delhi and 32 kms for area of 3179 sq kms comprising NCT Delhi & DMA towns. From Annexure-4 it is obvious that the DMA towns are contiguous to existing NCT Delhi towns. For providing telecom facilities at par with NCT-Delhi, and to integrate NCR with Delhi, it is essential that these two areas are treated as a single area (zone) of a radial distance of about 32 kms.
- In the present working of DOT, many places in big towns are more than 32 kms apart where charges are only for local calls. For example, in Bombay, Calcutta Delhi the distance between two farthest telephone users is more than 32 kms and these users are charged on local call basis instead of STD rating. Hence, it is essential that DOT will have to refix its boundaries in a radial distance of 32 kms covering all the DMA towns to enable it to provide local call system and single STD code among the DMA and Delhi in the first phase (i.e. by 2001).

The NCRPB is responsible for implementation of the Regional Plan and the Functional Plans. Hence, NCRPB will be monitoring the status of the Telecom development time to time. For this purpose DOT will submit a quarterly status report to NCRPB indicating achievements made or likely shortfalls etc. for each Telecom Distt. covering all the SSA (Secondry Switching Areas) & SDCAs (Short Distance Charging Areas).

4. INVESTMENT PLAN

- The National Telecom Folicy 1994 of DOT has calculated the unit cost per line as Rs.47000/— at 1993—94 prices. The policy provides for provisioning of Telephones "ON DEMAND" by March, 1997 and beyond. The 9th Plan objectives of DOT also ensures continuity in the provisioning of Telephones "ON DEMAND", irrespective of any quantam of population at any point of time. Further the 9th Plan of DOT also envisaged for upgrading and improvement in the quality of Telecom services by installing modern type media/connectivity and switching equipment.
- The investment plan for providing Telephones "On demand" in 8 DMA and 12 Priority towns during balance part of 8th Plan (1996-97), complete 9th Plan (1997-2002) and first 3 years of 10th Plan (2003-2005) is given below in Table 4.

Table : 4 Requirement of Investment 1997-2005

(Annexure 5 to 8)

S1. No.	Period	No.	of Teleph	nones	Amount (investment) (in crores)				
		DMA	Priority	Total	DMA	Priority	Total		
1.	Upto March, 1997	 69648	25438	95086	327.35	7.56	446.91		
2.	9th Plan (1997-2002)	281389	131716	413105	1322.53	618.06	1941.59		
3.	During	315407	144068	459475	1482.41	677.12	2159.5 3		
	(2002-2005) Total:	666444	301222	967666	3132.29	1414.74	4548.03		

Say Rs.4550 cror

The satisfaction ratio likely to be achieved in the corresponding periods is as follows (Annexure 6 & 8)

Year	Area	No. of Telephones	Population	V.Satisfaction Ratio
2001	NCT Delhi	2493361	144.30	1:5.8
	DMA	435102	31.34	1:7.2
	PRT	223230	28.70	1:12.8
2005	NCT Delhi	3 92335 2	164.00	1:4.2
	DMA	826119	36.43	1:4.4
·	PRT	402202	32.20	1:8.0

4.4 When NCR towns are brought in a local call system at par with Delhi, it is likely that there may be loss of revenue to DOT. It is very difficult to

conversion exact loss due to working into local call working as metering system Telecom network is such that same meter registers calls & local calls and no methodology is available However, on the basis of searedate the two revenues. projects sanctioned by DOT for big towns, STD, revenue is presumed 2/3 of the total revenue registered $\mathbf{t}_{\mathbf{k}}$ meter and rest 1/3 as local call revenue. Thus, system is changed to local call, DOT may be at a loss of 2/3rd of the revenue it is getting in a STD working. But it is expected that actual loss will be much less because traffic will increase multifold when make local calls in place of STD calls. DOT is free to enhance tarrifs to compensate for the actual this conversion which is very essential and unavoidable to integrate and to bring telecom services in NCR at par with Delhi.

5. FINANCING:

5.1 For providing additional 9.68 lacs telephones by 2005 and upgrade and modernise the telecom network of NCR to bring it at par with Delhi, DOT has to ensure a provision of Rs.4550/- crores in its budget proposals. In the 1st phase, DMA towns are proposed to have full integration with Delhi Telecom Network including provisioning of local call and single STD code. In the IInd phase priority towns and other parts of NCR are to be covered. Phasewise requirement of funds is as follows:

Sl. No.	Areas	Phase	Fund requirement upto 2005 (in crores)
	9		
1 "	DMA Towns	I	3132
2.0	Priority toward other pa		1418
	of NCR		
			4550 crs.
	36		

To compensate for the loss of revenue due to conversion of STD routing into local call working, DOT is free to enhance tarriffs or to fix special charging system for an area of 32 kms. radial distance instead of existing 22 kms as marked in Annexure 3.

	Name of Area	No.	Equipped	Working	Waiting	Demand	Demand	Demand	Demand	Demand	Net De	mand to	be net.	daring
	ni ca	Exci ange	!s	tions	List		1997	2001	2002	2005	1996-97	2001	1997- 2002	2002- 2005
	2	3	4	5	. 6	7=5+6	8 .	303	10	11	112=8-5	3=9-8	14=10-8	15=11-1
HA	AND PRIORITY	TOWNS	S:			263	G.						-	
	Faridabad- Gurgaon	69	112196	82741	22690	105431	118104	202995	= 232430	348906	35363	84891	11432}	
?.	Rohtak- Bahadurgarh	49	41876	34223	6869	41092	49720	93448	109474	175785	15497	43768	59754	66311
	Panipat- Karnal	132	64640	51843	22148	73991	33353	169979	203125	346631	31510	86626.	119772	143506
١.	Kundli- Somepat	38	15328	10813	5499	16312	21604	46310	56036	99271 (2) (1) (2)	10791	24785	- wine balon	43235
i.	Rewari- Warnawl	53	12248	9524	2861	12385	13367	25396	29815	49243	3845		1	18421
٤.	Heerut	44	72376	54221	1691	55912	58034	102585	118257	181265	3813	44551	64223	63908
7.	Ghaziabad	36	115176	97356	7687	107045	123786	194685	217181	304306	26430	78299	11391	. 17125
8. *	Belandshal	32	13024	10824	3360	-MIM:	18322		20268	10663	(-) 492	- 772		1133
9.	Alwar	88	28630	22332	- 4920	27252	36346	79467	16632	179749	14014	4 0121	48206	<u>-</u> 77117
	Total:	541	475494	373877	79727	453584	21441.	931989	1883218	1708819	~ 14077 1	417241	- Sustra	625601
coul	ITER HAGNET T	OWNS:		- 5					,	~ , .		10.4		
1. "	Bareilly	26	52004	38628	10167	48795	16982	23630	25665	32881	(-)21646	1148	1683	7210
2.	Gwalior	147	58180	40816	- 147	40963	56808	114303	136135	229988	15992	57495	79327	9385
3.	Hissar	144	59840	50533	10578	61103	50753	88459	101639	154177	220	37706	50006	5253
Œ.	Kota	28	26804	22790	8519	31309	4234	76046	87910	135803	19794	33462	45326	4789:
5.	Patiala	63	27472	14358	1697	16055	49665	76762	85590	118644	35307	27097	35925	3305
ě	Total:	408	224360	167125	31100	198225	216792	379200	436939	671493-	49667	162403	7.mm	23455
Tot	al for MCR:	949	699854	541002	110827	651829	731440	1311189	1520157	2380312	_ 190438	579749	788717	86015
For	NCT Belbi:	129	1435600	1167010	7221	. 1176231	1584576	2493361	2792565	3723352	417566	408785	1207989	1130787

PROJECTED DEMAND OF TELEPHONES IN MCR AS ON 1997, 2001, 2002 & 2005.

(Based on ERU FIGS of DOT)

	Name of Towns	Equipped Capacity		Waiting List	Demand	Demand 1997	Demand	Demand	Demand		and to b		ring
		oupucity	tions				2001	2002	2005	1996-97	2001	1997-	2002- 2005
1	2	3	(4)			_				11=7-4			
DHA	TOWNS:											,	
1.	Faridabad	47000	41714	5876	47590	73942	142388	167733	274191	24935	68446	9 379 1	106458
2.	Ballabhgarh	9000	7293	1163	8456								
3.	Gurgaon	44500	25234	10493	35777	44350	36569	102325	163979	19066	42219	57975	66654
4.	8ahadurgarh	5000	4755	810	5565	7221	13952	16450	26959	2466	6731	9229	10509
٤.	Kundli	1000	754	231	985	826	1596	1382	3084	72	77 0	1056	1202
6.	Ghaziabad	57000	45259	2248	47507	65910	123931	145123	233028	20651	58021	79213	87905
7.	NOIDA	34000	33377	3497	36874	35389	63636	73691	114430	2012	28247	38302	40739
8.	Loni	1400	1239	159	1398	1685	3030	3508	5448	446	1345	1823	1940
	(a)Total :	198900	159675	24477	184152	229323	435102	510712	826119	69648	205779	281389	315407
PRI	GRITY TOWNS:			į.								Ay -	
9.	Rohtak	16000	13188	940	14128 -	16205	26704	30255	44004	3017	10499	14050	13749
10.	Rewari	4000	3719	1158	4877	4147	6387	7115	9837	428	. 2240	2968	2722
11.	Dharuhera	500	470	162	632	592	883	976	1317	122	291	384	341
12.	Palwal	2000	1949	1584	3533	4082	8049	9538	15871	2133	3967	\$456	6333
13.	Panipat	15000	13565	6032	19597	25128	52628	63311	110225	11563	27500	38183	46914
14.	Keerut	60000	43609		43609	41478	62966	69892	95586	(-) 2131	21488	28414	25694
15.	Bulandshahr	4000	3548	1454	5002	3302	4852	5342	7130	(-) 246	1550	2040	1788
16.	Khurja	3000	2952	450	3402	3925	6961	8033	12345	973	3036	4108	4312
17.	Hapur	6000	5100	1200	6300	6743	11834	13621	20771	1643	5091	6878	7150
18.	Alwar =	12024	10333	3301	13634	16938	32951	38915	64102	6605	16013	21977	25187
19.	MIA Alwar	1000	581	44	625	952	2007	2418	4231	371	1055	1466	1813
20.	Bhiwadi	2000	1966	121	2087	2926	7008	8718	16783	960	4082	5792	8065
	(b) Total:	125524	100980	16446	117426	126418	223230	258134	402202	25438	96812	131716	144068
ŝ	Total(a + b)	324424	260655	40923	301578	355741	658332	768846	1228321	95086	302591	413105	459475
						-							

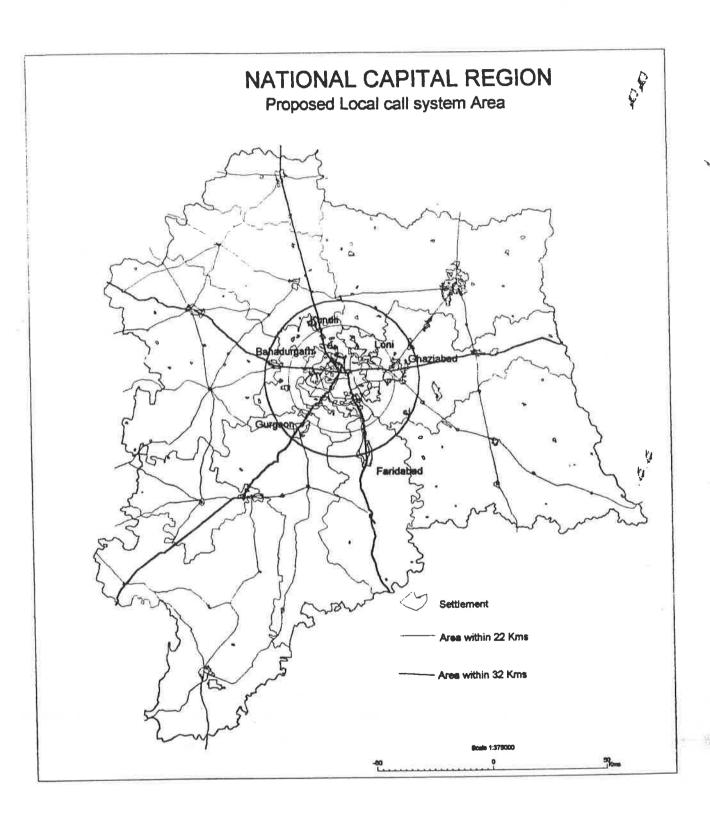
ANNEXURE II

COUNTER	MAGNET	TOWNS:
COOMILLY	HAUNEL	12812.

21.	Bareilly	24000	12083	1647	13730	14605	19418	20851	25816	2522	4813	6246	4965	
	Gwalior	48000	34602	57	34659	46429	89406	105320	172166	11827	42977	58891	66846	
23.	Hissar	13200	9439	2915	12354	17631	30730	35308	53560	3192	13099	17677	13252	
24.	Kota	21380	18350	8324	26674	33481	58967	67930	103854	15131	25486	Q34449	35924	
25.	Patiala	33100	27792	*	27792	22970	32329	35212	45501	(-) 4822	9359	2 12242	10289	
	(c) Total:	139680	102266	12943	115209	135116	230850	264621	400897	32850	95734	129505	136276	
	Total(a+b+c)	464104	362921	53866	416787	490857	389182	1033467	1629218	127936	398325	542610	595731	

UNIT WISE STATUS AS ON 31.3.96

51.	Name c	 f the	T	E L	E	P	Н	0	N	Ε	Ś	,
↑l÷,	Equipped Direc Capacity Excha Lines								ange Lis			
1.	Delhi		14356	00		1.16	701	.0		ç	221	P
2.	Uttar	Pradesh(E)	4708	52		39	328	34		52	2733	
3,	Uttar	Pradesh(W)	5483	846		41	1664	15		65	813	
4	Harya	na	3829	32		29	945:	4		76	5914	
Jan *	Rajas	than	6351	.43		4	944:	10		138	3150	
	Total	:	34728	373		27	558	63		34:	2831	



ANNEXURE V

ESTIMATED COST FOR PROVIDING TELEPHONE CONNECTIONS DURING 1996-97 (PART OF 8TH PLAN)

S1. No.		xisting orking	Projected	Net Demand	Estimated		Damarka
	0		Demand - 1997	to be met during (1996-97) (Part of 8th Plan)	cost @ Rs.47000/- per Del (in crores		REMAINS
l 	2	3	4	5(4-3)	6		7
1.	8 DMA towns	159675	229323	69648	327.35		Sl.No. 1,2,3 show the details
2.	12 Priority towns						of demand/cost on the basis of
ía.	Total:	260655	355741	95086	446.91		figures of indi-
3.	S counter Hagnet towns	102266	135116	32850	154.40	2.	Sl.No.4,5,6 show the details of demand/cost on
4.	Whole of NER including Counter Magnetowns		731440	190438	895.06		on the basis of ligs. of compl- ete secondary switching area in which the
5.	5 Counter Magnet Towns (Complete SS/		216792	49667	233.44		particular toun is situated.
6.	Whole of MCR Excluding Counter Magne towns		514648	140771	661.62		
7.	NCT- Delhi	1167010	1584576	417566	1962.56		

ANNEXURE VI

ESTIMATED COST FOR PROVIDING TELEPHONE CONNECTIONS DURING 1997-2001 (PART OF 9TH PLAM)

	Youns 8	xisting Demand - 1997	Demand - 2001		cost @ Rs.47000/- per line (in crores	
1	2	3	4	5(4-3)	6	7
1.	3 DMA towns	229323	435102	205779	967.16	1. Sl.Mo. 1,2,3 show the details
2.	12 Priority	126418	223230	96812	455.02	of demand/cost on the basis of
		355741	1 458332		1422.18	figures of individual towns.
3.	5 counter Magnet town		6 230850	95734	449.95	2. Sl.No.4,5,6 show the details of demand/cost on on the basis of
4.	Whole of NC including Counter Hag towns		0 1311189	579749	2774.82	
\$.	S Counter Magnet Town (Complete S	ıs	379200	162408	763.32	
6.	Whole of M Excluding Counter Ma towns		48 931989	417341	1961.50	
7.	NCT- Delhi	15845	76 2493361	908785	4271.29	

ESTIMATED COST FOR PROVIDING TELEPHONE CONNECTIONS DURING 1997-2002 (PART OF 9TH PLAN)

					H	
No.		Demand - 1997	Oemand - 2002	to be met during (1997-2002)	cost @ Rs.47000/- per line	Remarks)
1	2	3	4	5(4-3)	6	
4.1	8 DMA towns	229323	510712	281389	1322.53	1. Sl.No. 1,2,3 show the details
2.	12 Priority	126418	258134	131716	618.06	of demand/cost on the basis of
		355741	768846		1941.59	figs. of individual towns.
3.	5 counter Magnet towns		264621	129505	608.67	2. Sl.No.4,5,6 show the details of demand/cost on
4.	Whole of MCR including Counter Magn towns		1520157	788717	3706.97	ete secondary switching area in which the
۶.	5 Counter Magnet Town: (Complete S	\$	2 436939 =	220147	5677.55	particular town is situated.
6.	Whole of MC Excluding Counter Mag towns		8 1083218	568570	2672.28	
7.	NCT- Delhi	158457	6 2792565	1207989	5677.55	

ANNEXURE VIII

ESTIMATED COST FOR PROVIDING TELEPHONE CONNECTIONS DURING 2002-2005 (PART OF 10TH PLAN)

.eoK	27 -	Demand - 2002	Demand - 2005	to be met during (2002-2005)	(in crores)	
1	2	3	4	5(4-3)	6	7
١.	3 DMA towns	510712	326119	315407	1482.41 1,	sl.No. 1,2,3
2.						show the detail/ cost on the basis
		768846	1228321	459475		of figs. of individual towns.
3.	5 counter Magnet towns		400897	136276	640.50 2	2. Sl.No.4,5,6 show the details of demand/cost on on the basis of figs. of complete secondary switching area in which the particular town is situated.
4.	Whole of NCR including Counter Magn towns		2380312	860155	4042.73	
5.	5 Counter Magnet Towns (Complete SS	8	671493	234554	1102.41	
6.	Whole of MCI Excluding Counter Hagi towns		1708819	625601	2940.32	
7.	NCT- Delhi	279256	3923352	1130787	5314.70	

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