



# **CENTRAL ELECTRICITY AUTHORITY**

## **TRANSMISSION CAPACITY ADDITION PROGRAMME DURING 2007-08**

(Published under Section 73(j)of the Electricity Act, 2003.)

**POWER SYSTEM PROJECT MONITORING DIVISION**

**NEW DELHI**  
**June, 2007**

**TRANSMISSION CAPACITY ADDITION  
PROGRAMME  
DURING  
2007-08**

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## **INTRODUCTION**

1.1 The role of electricity sector in an economy hardly needs to be emphasised. Notwithstanding the substantial development made in the power sector in the country, most of the regions in the country are suffering from shortage of electricity. Adequate capacity addition and its utilization in the most optional manner remains the most important aspect of the power development.

Commensurate with the capacity addition, an extensive network of transmission and distribution has been developed over the years for evacuating power produced and utilizing the same by the ultimate consumers. The new capacity additions call for further expansion of the transmission system. The addition programme is being continuously monitored by the Power System Project Monitoring Division in the Central Electricity Authority.

1.2 **MONITORING**

The objective of Project Monitoring as enunciated under Section 73(f) of the Electricity Act, 2003 is to ensure timely completion of the schemes. The objective of monitoring is realised through the managerial techniques of “Planning & Control”. The two deliberative elements of Planning & Control are essential to every phase of capacity additions in the transmission systems. They are inter-dependent functions, for the one loses its significance without the other.

The primary responsibility arising under the planning element is the determination of the Programme of Construction for the year and laying down the general principles on the basis of which it will operate. These general principles basically involves availability of the finances, land and various clearances to undertake construction works etc. The construction programme for the year is decided and distributed properly into the four quarters of the year.

The control function is generally exercised by comparing of actual results with pre-determined programme or targets and taking corrective measures where deviation occurs. There are several phases to the effective use of monitoring functions, the achievements of programme is certainly of first importance.

### 1.3 **ROLE OF CEA**

The Central Electricity Authority is a the key institution in promoting and assisting the timely completion of the schemes for improving and augmenting the electricity system. The Power System Project Monitoring Division which acts as a facilitator in expediting construction of the transmission schemes and renders valuable help to the Utilities in solving their problems like technical, financial and arranging various clearances like forest clearance from MOE&F etc.. The site visits by the officers of the Power System Project Monitoring Division and the “Review Meetings” held in the Central Electricity Authority with the Utility representatives provide an excellent ground for inter-action to identify bottlenecks and identify action required to ensure completion of schemes as per targets.

### 1.4 **PROGRAMME FOR 2007-08**

Review meetings were held with states Power utilities and PGCIL during December 2006 to February 2007 to identify the transmission programme to be completed in the coming year i.e. 2007-08. The representatives of various agencies also held detailed discussion with CEA officers regarding their performance during the year 2006-07. Based on the inputs given by power utilities, the programme of construction of Transmission lines and Sub-Stations (220 kV and above), for the year 2007-08 has been finalized.

## **CHAPTER – 1**

### **TRANSMISSION CAPACITY ADDITIONS DURING 2006-07**

The programme for construction of transmission works (220 kV and above) during 10<sup>th</sup> plan for evacuation of power from generating stations as well as for strengthening of power system network was developed on the basis of capacity addition programme. The net achievement of the transmission capacity additions during the last two years is given below.

**A. TRANSMISSION LINES:-**

(All figures in ckm)

	TRANSMISSION CAPACITY ADDITIONS DURING 2006-07				
	Prog. 2006-07	Ach. (upto Mar 06) 2006-07	Ach as % of prog. 2006-07	Ach. 2005-06	Growth as % of 2005-06 2006-07
765 kV lines	660	580	87.9	287	202.1
± 500 kV HVDC	0	0	0.0	0	0.0
400 kV lines	7948	7940	99.9	6260	126.8
220 kV lines	4268	5226	122.4	2871	182.0

**B. SUBSTATIONS:-**

(All figures in MVA/MW)

± 500 kV HVDC CONVERTER TER.	0	0	0.0	0	-
HVDC B/B S/S	0	0	0.0	0	-
765 kV S/S	2331	0	0.0	0	-
400 kV S/S	11130	9187	82.5	10265	89.5
220 kV S/S	8183	9580	117.1	7505	127.6

Details of year wise targets vs achievements of Transmission Lines and Sub-Stations for various voltage level is given in tables 1.1(a), 1.1(b).

**TABLE - 1.1(a)**  
**YEARWISE TARGETS VS ACHIEVEMENTS-UTO 10TH FIVE YEAR PLAN &**  
**PROGRAMME FOR 1ST YEAR OF 11TH PLAN**

**TRANSMISSION LINES (CKM)**

Voltage kV	Name of the Utility	2002-03		2003-04		2004-05		2005-06		2006-07		2007-08
		P	A	P	A	P	A	P	A	P	A	P
765	POWERGRID (CS)	173	33	149	102	71	22	105	287	660	580	160
	Total (All India)	173	33	149	102	71	22	105	287	660	580	160
+/-500	POWERGRID (CS)	1134	1134	0	0	0	0	0	0	0	0	0
	Total (All India)	1134	1134	0	0	0	0	0	0	0	0	0
400	POWERGRID	2560	3424	1877	2173	3771	4351	3230	5120	6509	6579	4895
	DVC	0	0	0	0	0	0	0	0	0	0	0
	<b>TOTAL(CS)</b>	<b>2560</b>	<b>3424</b>	<b>1877</b>	<b>2173</b>	<b>3771</b>	<b>4351</b>	<b>3230</b>	<b>5120</b>	<b>6509</b>	<b>6579</b>	<b>4895</b>
	Delhi	0	0	0	106	0	0	0	0	0	0	0
	Himachal Pradesh	0	0	114	114	0	0	0	0	0	0	0
	Haryana	0	0	0	0	0	0	0	0	0	0	0
	J&K	0	0	0	0	0	0	0	0	0	0	139
	Punjab	0	0	0	0	0	0	0	0	0	0	0
	Rajasthan	0	0	327	329	0	0	210	0	250	231	199
	Uttar Pradesh	0	0	0	0	0	0	140	675	20	46	100
	Uttarakhand	0	0	0	0	0	0	60	0	60	118	390
	<b>TOTAL (NR)</b>	<b>0</b>	<b>0</b>	<b>441</b>	<b>549</b>	<b>0</b>	<b>0</b>	<b>410</b>	<b>675</b>	<b>330</b>	<b>395</b>	<b>828</b>
	Chattisgarh	0	0	0	0	0	0	0	0	0	0	514
	Daman-UT	0	0	0	0	0	0	0	0	0	0	0
	DNH-UT	0	0	0	0	0	0	0	0	0	0	0
	Gujarat	64	49	16	13	0	0	150	66	155	141	150
	Goa	0	0	0	0	0	0	0	0	0	0	0
	Madhya Pradesh	150	21	338	245	254	241	0	0	0	0	36
	Maharashtra	31	43	131	118	20	9	0	11	211	9	0
	<b>TOTAL (WR)</b>	<b>245</b>	<b>113</b>	<b>485</b>	<b>376</b>	<b>274</b>	<b>250</b>	<b>150</b>	<b>77</b>	<b>366</b>	<b>150</b>	<b>700</b>
	Andhra Pradesh	168	130	520	136	536	310	60	337	44	61	131
	Karnataka	3	0	0	0	0	0	0	0	0	0	0
	Kerala	0	0	0	0	0	0	0	0	0	0	0
	Tamilnadu	0	0	0	0	0	0	0	0	0	0	0
	<b>TOTAL (SR)</b>	<b>171</b>	<b>130</b>	<b>520</b>	<b>136</b>	<b>536</b>	<b>310</b>	<b>60</b>	<b>337</b>	<b>44</b>	<b>61</b>	<b>131</b>
	Bihar	0	0	0	0	0	0	0	0	0	0	0
	Orissa	200	137	40	32	95	141	0	2	39	16	50
	West Bengal	22	0	22	22	0	0	0	49	660	739	330
	Jharkhand	-	-	-	-	-	-	0	0	0	0	0
	<b>TOTAL (ER)</b>	<b>222</b>	<b>137</b>	<b>62</b>	<b>54</b>	<b>95</b>	<b>141</b>	<b>0</b>	<b>51</b>	<b>699</b>	<b>755</b>	<b>380</b>
	Arunachal pradesh	0	0	0	0	0	0	0	0	0	0	0
	<b>TOTAL (NER)</b>	<b>0</b>										
	<b>Total (SS)</b>	<b>638</b>	<b>380</b>	<b>1508</b>	<b>1115</b>	<b>905</b>	<b>701</b>	<b>620</b>	<b>1140</b>	<b>1439</b>	<b>1361</b>	<b>2039</b>
	<b>Total (All India)</b>	<b>3198</b>	<b>3804</b>	<b>3385</b>	<b>3288</b>	<b>4676</b>	<b>5052</b>	<b>3850</b>	<b>6260</b>	<b>7948</b>	<b>7940</b>	<b>6934</b>

**TABLE - 1.1(a)**  
**YEARWISE TARGETS VS ACHIEVEMENTS-UPTO 10TH FIVE YEAR PLAN &**  
**PROGRAMME FOR 1ST YEAR OF 11TH PLAN**

**TRANSMISSION LINES (CKM)**

Voltage kV	Name of the Utility	2002-03		2003-04		2004-05		2005-06		2006-07		2007-08
		P	A	P	A	P	A	P	A	P	A	P
POWERGRID	8	76	486	313	72	76	0	49	0	28	159	
DVC	60	57	0	0	0	0	100	80	268	78	65	
<b>Total (CS)</b>	<b>68</b>	<b>133</b>	<b>486</b>	<b>313</b>	<b>72</b>	<b>76</b>	<b>100</b>	<b>129</b>	<b>268</b>	<b>106</b>	<b>224</b>	
Chandigarh	-	-	-	-	-	-	0	0	72	72	0	
Delhi	49	45	15	9	16	0	33	40	32	9	76.3	
Himachal Pradesh	19	19	0	0	11	11	20	0	74	9	185	
Haryana	75	72	278	282	129	320	300	306	308	442	299	
J&K	0	0	0	0	0	0	0	0	0	0	152.8	
Punjab	271	120	106	96	69	80	210	215	325	93	169	
Rajasthan	55	181	226	208	394	606	390	658	381	384	572	
Uttar Pradesh	17	58	228	317	59	12	180	221	392	455.6	420	
Uttarakhand	24	24	0	0	0	0	120	0.1	355	28.65	100	
<b>Total (NR)</b>	<b>510</b>	<b>519</b>	<b>853</b>	<b>912</b>	<b>678</b>	<b>1029</b>	<b>1253</b>	<b>1440</b>	<b>1939</b>	<b>1493.3</b>	<b>1974.1</b>	
Chhattisgarh	15	8	4	17	28	0	90	27	47	499	546	
Daman-UT	0	12	0	0	0	0	0	0	0	0	0	
DNH-UT	0	40	0	0	0	0	0	0	0	0	0	
Gujarat	234	198	675	633	103	79	210	98	361	599	282	
Goa	88	38	54	54	0	0	0	0	0	0	20	
Madhya Pradesh	100	88	9	10	40	18	205	205	189	765	380	
Maharashtra	216	295	445	442	343	184	175	162	384	451	303	
<b>TOTAL (WR)</b>	<b>653</b>	<b>679</b>	<b>1187</b>	<b>1156</b>	<b>514</b>	<b>281</b>	<b>680</b>	<b>492</b>	<b>981</b>	<b>2314</b>	<b>1531</b>	
Andhra Pradesh	593	804	310	177	163	123	180	46	222	103	231	
Karnataka	323	86	265	369	336	283	130	130	211	63	201	
Kerala	3	5	3	0	3	0	75	79	19	0	33	
Tamilnadu	266	375	205	206	303	203	120	143	166	499.75	273	
<b>TOTAL (SR)</b>	<b>1185</b>	<b>1270</b>	<b>783</b>	<b>752</b>	<b>805</b>	<b>609</b>	<b>505</b>	<b>398</b>	<b>618</b>	<b>665.75</b>	<b>738</b>	
Bihar	10	0	10	114	70	114	0	142	60	0	145	
Orissa	466	340	75	211	260	289	105	150	279	494	415	
West Bengal	132	78	153	251	30	10	90	95	88	153	361	
Jharkhand	-	-	-	-	-	-	0	0	10	0	60	
<b>TOTAL (ER)</b>	<b>608</b>	<b>418</b>	<b>238</b>	<b>576</b>	<b>360</b>	<b>413</b>	<b>195</b>	<b>387</b>	<b>437</b>	<b>647</b>	<b>981</b>	
Arunachal pradesh	0	0	19	19	0	0	0	0	0	0	0	
Assam	0	0	0	0	0	0	5	25	25	0	0	
<b>TOTAL (NER)</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>25</b>	<b>25</b>	<b>0</b>	<b>0</b>	
<b>Total (SS)</b>	<b>2956</b>	<b>2886</b>	<b>3080</b>	<b>3415</b>	<b>2357</b>	<b>2719</b>	<b>2638</b>	<b>2742</b>	<b>4000</b>	<b>5120</b>	<b>5224.1</b>	
<b>Total (All India)</b>	<b>3024</b>	<b>3019</b>	<b>3566</b>	<b>3728</b>	<b>2429</b>	<b>2795</b>	<b>2738</b>	<b>2871</b>	<b>4268</b>	<b>5226</b>	<b>5448.1</b>	

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**TABLE - 1.1(b)**

**YEARWISE TARGETS VS ACHIEVEMENTS-UTO 10TH FIVE YEAR PLAN &  
PROGRAMME FOR 1ST YEAR OF 11TH PLAN**

**SUB-STATIONS (MVA/MW)**

Voltage kV	Name of the Utility	2002-03		2003-04		2004-05		2005-06		2006-07		2007-08	
		P	A	P	A	P	A	P	A	P	A	P	
765	POWERGRID (CS)	0	0	0	0	0	0	0	0	2331	0	2169	
	Total (All India)	0	0	0	0	0	0	0	0	2331	0	2169	
HVDC	POWERGRID (CS)	2000	2000	2000	2000	0	0	0	0	0	0	0	
TERM.	Total (All India)	2000	2000	2000	2000	0	0	0	0	0	0	0	
HVDC	POWERGRID (CS)	500	500	0	0	500	500	0	0	0	0	0	
B/B	Total (All India)	500	500	0	0	500	500	0	0	0	0	0	
400	POWERGRID DVC	3335	3650	2205	1260	2205	945	3885	4725	6615	5355	8940	
		0	0	0	0	0	0	0	0	0	0	0	
	<b>TOTAL(CS)</b>	<b>3335</b>	<b>3650</b>	<b>2205</b>	<b>1260</b>	<b>2205</b>	<b>945</b>	<b>3885</b>	<b>4725</b>	<b>6615</b>	<b>5355</b>	<b>8940</b>	
	Delhi	315	0	0	315	315	0	315	630	0	315	0	
	Himachal Pradesh	0	0	0	0	0	0	0	0	0	0	0	
	Haryana	0	0	0	0	0	0	0	0	0	0	0	
	J&K	0	0	0	0	0	0	0	0	0	0	0	
	Punjab	0	0	0	0	0	0	0	0	0	0	0	
	Rajasthan	630	315	945	315	945	630	0	315	0	0	630	
	Uttar Pradesh	0	0	0	0	315	0	630	945	630	630	435	
	Uttarakhand	0	0	0	0	0	0	315	0	630	630	0	
	<b>TOTAL (NR)</b>	<b>945</b>	<b>315</b>	<b>945</b>	<b>630</b>	<b>1575</b>	<b>630</b>	<b>1260</b>	<b>1890</b>	<b>1260</b>	<b>1575</b>	<b>1065</b>	
	Chattisgarh	0	0	0	0	0	0	315	0	0	0	0	
	Daman-UT	0	0	0	0	0	0	0	0	0	0	0	
	DNH-UT	0	0	0	0	0	0	0	0	0	0	0	
	Gujarat	0	0	0	0	0	0	0	315	630	945	630	
	Goa	0	0	0	0	0	0	0	0	0	0	0	
	Madhya Pradesh	0	0	0	0	0	315	0	630	0	0	0	
	Maharashtra	0	630	1945	1445	500	500	315	0	420	482	0	
	<b>TOTAL (WR)</b>	<b>0</b>	<b>630</b>	<b>1945</b>	<b>1445</b>	<b>500</b>	<b>815</b>	<b>630</b>	<b>945</b>	<b>1050</b>	<b>1427</b>	<b>630</b>	
	Andhra Pradesh	0	0	0	0	315	0	630	1575	630	315	630	
	Karnataka	315	0	630	1130	0	0	0	500	630	315	0	
	Kerala	0	0	0	0	0	0	0	0	0	0	0	
	Tamilnadu	0	400	0	0	0	315	315	0	630	200	0	
	<b>TOTAL (SR)</b>	<b>315</b>	<b>400</b>	<b>630</b>	<b>1130</b>	<b>315</b>	<b>315</b>	<b>945</b>	<b>2075</b>	<b>1890</b>	<b>830</b>	<b>630</b>	
	Bihar	0	0	0	0	0	0	0	0	0	0	0	
	Orissa	630	0	0	0	630	0	0	630	0	0	0	
	West Bengal	0	0	630	0	0	0	735	0	315	0	630	
	Jharkhand											740	
	<b>TOTAL (ER)</b>	<b>630</b>	<b>0</b>	<b>630</b>	<b>0</b>	<b>630</b>	<b>0</b>	<b>735</b>	<b>630</b>	<b>315</b>	<b>0</b>	<b>1370</b>	
	Assam	0	0	0	0	0	0	0	0	0	0	0	
	Arunachal pradesh	0	0	0	0	0	0	0	0	0	0	0	
	<b>Total (NER)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>								
	<b>Total (SS)</b>	<b>1890</b>	<b>1345</b>	<b>4150</b>	<b>3205</b>	<b>3020</b>	<b>1760</b>	<b>3570</b>	<b>5540</b>	<b>4515</b>	<b>3832</b>	<b>3695</b>	
	<b>Total (All India)</b>	<b>5225</b>	<b>4995</b>	<b>6355</b>	<b>4465</b>	<b>5225</b>	<b>2705</b>	<b>7455</b>	<b>10265</b>	<b>11130</b>	<b>9187</b>	<b>12635</b>	

**TABLE - 1.1(b)**

**YEARWISE TARGETS VS ACHIEVEMENTS- UPTO 10TH FIVE YEAR PLAN &  
PROGRAMME FOR 1ST YEAR OF 11TH PLAN**

**SUB-STATIONS (MVA/MW)**

Voltage kV	Name of the Utility	2002-03		2003-04		2004-05		2005-06		2006-07		2007-08	
		P	A	P	A	P	A	P	A	P	A	P	
	POWERGRID	100	100	250	50	360	200	0	160	800	0	200	
	DVC	50	50	0	0	100	300	500	350	100	200	200	
	<b>Total (CS)</b>	<b>150</b>	<b>150</b>	<b>250</b>	<b>50</b>	<b>460</b>	<b>500</b>	<b>500</b>	<b>510</b>	<b>900</b>	<b>200</b>	<b>400</b>	
	Chandigarh	-	-	-	-	-	-	0	0	0	0	0	
	Delhi	300	200	250	250	200	300	600	400	500	400	1060	
	Himachal Pradesh	160	0	0	0	160	80	0	80	180	0	190	
	Haryana	400	400	800	955	600	810	600	450	850	500	400	
	J&K	0	0	0	0	0	0	0	0	0	0	150	
	Punjab	400	500	450	350	500	400	900	100	750	200	200	
	Rajasthan	0	250	490	550	300	420	300	900	100	500	100	
	Uttar Pradesh	160	240	100	820	300	660	320	460	460	1300	1360	
	Uttarakhand	0	0	0	0	0	200	460	0	393	1160	300	
	<b>TOTAL (NR)</b>	<b>1420</b>	<b>1590</b>	<b>2090</b>	<b>2925</b>	<b>2060</b>	<b>2870</b>	<b>3180</b>	<b>2390</b>	<b>3233</b>	<b>4060</b>	<b>3760</b>	
	Chattisgarh	480	160	320	300	0	200	400	320	0	960	640	
	Daman-UT	0	0	0	150	0	0	0	0	0	0	0	
	DNH-UT	0	350	0	0	0	0	0	0	0	0	0	
	Gujarat	350	250	600	500	400	1150	0	400	500	250	580	
	Goa	100	100	100	0	100	0	150	0	0	150	0	
	Madhya Pradesh	0	160	160	320	640	1120	640	680	480	960	740	
	Maharashtra	275	775	700	1425	675	1745	475	855	525	1250	550	
	<b>TOTAL (WR)</b>	<b>1205</b>	<b>1795</b>	<b>1880</b>	<b>2695</b>	<b>1815</b>	<b>4215</b>	<b>1665</b>	<b>2255</b>	<b>1505</b>	<b>3570</b>	<b>2510</b>	
	Andhra Pradesh	632	1100	600	732	300	100	200	200	400	600	400	
	Karnataka	600	500	200	600	200	500	500	400	500	800	450	
	Kerala	0	0	100	100	100	0	200	300	200	0	200	
	Tamilnadu	150	50	100	200	300	100	400	700	300	300	350	
	<b>TOTAL (SR)</b>	<b>1382</b>	<b>1650</b>	<b>1000</b>	<b>1632</b>	<b>900</b>	<b>700</b>	<b>1300</b>	<b>1600</b>	<b>1400</b>	<b>1700</b>	<b>1400</b>	
	Bihar	100	0	0	0	0	0	0	200	200	0	1450	
	Orissa	600	120	0	0	400	200	200	140	400	0	700	
	West Bengal	320	160	1280	1120	800	640	600	160	320	0	800	
	Jharkhand	-	-	-	-	-	-	0	0	0	0	0	
	<b>TOTAL (ER)</b>	<b>1020</b>	<b>280</b>	<b>1280</b>	<b>1120</b>	<b>1200</b>	<b>840</b>	<b>800</b>	<b>500</b>	<b>920</b>	<b>0</b>	<b>2950</b>	
	Assam	25	0	0	0	25	37	275	250	225	50	0	
	Arunachal pradesh	0	0	33	0	33	0	0	0	0	0	0	
	<b>TOTAL (NER)</b>	<b>25</b>	<b>0</b>	<b>33</b>	<b>0</b>	<b>58</b>	<b>37</b>	<b>275</b>	<b>250</b>	<b>225</b>	<b>50</b>	<b>0</b>	
	<b>Total (SS)</b>	<b>5052</b>	<b>5315</b>	<b>6283</b>	<b>8372</b>	<b>6033</b>	<b>8662</b>	<b>7260</b>	<b>6995</b>	<b>7283</b>	<b>9380</b>	<b>10620</b>	
	<b>Total (All India)</b>	<b>5202</b>	<b>5465</b>	<b>6533</b>	<b>8422</b>	<b>6493</b>	<b>9162</b>	<b>7760</b>	<b>7505</b>	<b>8183</b>	<b>9580</b>	<b>11020</b>	

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## **CHAPTER – 2**

### **CONSTRUCTION PROGRAMME OF TRANSMISSION SCHEMES FOR THE YEAR 2007-08**

The construction programme of transmission schemes (220 kV and above) for the year 2007-08 was formulated in consultation with Central and State Power Utilities during the meeting with Central and State power utilities and are listed in the Annexure.

± 500 kV HVDC lines are not proposed during the current year. The programme of construction of 765 kV, 400 kV and 220 kV transmission lines for the year 2007-08 is 24.24 %, 87.24 % and 126.85 % respectively of the last year programme. Similarly, the programme for transformation capacity additions at 765 kV, 400 kV and 220 kV levels is 93.05 %, 113.52% and 132.22 % respectively of last year programme.

Table 2.1 depicts the programme of construction of the transmission schemes (220 kV and above) for the year 2007-08 at various voltage levels. Table 2.2(a) depicts the utility wise details of construction programme of transmission lines and table 2.2(b) depicts same for the transformation works (220 kV and above) for the year 2007-08 quarterwise.

The list at Annexure given at the end indicates the transmission lines and the substations scheduled for completion during the year 2007-08 and also the transmission lines under construction scheduled for commissioning during the subsequent years, mainly the power evacuation lines associated with generating stations.

**TABLE – 2.1**  
**ABSTRACT OF THE CONSTRUCTION PROGRAMME OF**  
**THE TRANSMISSION SCHEMES (220 KV AND ABOVE)**  
**FOR THE YEAR 2007-08**

**ANNUAL ACTION PLAN**

**TRANSMISSION LINES (CKM) :**

Voltage Level	<u>Quarter (2007-08)</u>				Total 2007-08
	1st	2nd	3rd	4th	
765 kV	0	0	0	160	160
+/- 500 kV	0	0	0	0	0
HVDC					
400 kV	1947	1713	1899	1375	6934
220 kV	962	846	1493	2113	5414

**SUB-STATIONS (MVA/MW) :**

Voltage Level	<u>Quarter (2007-08)</u>				Total 2007-08
	1st	2nd	3rd	4th	
765 kV	669	0	1500	0	2169
HVDC TER.	0	0	0	0	0
HVDC B/B	0	0	0	0	0
400 kV	3650	1890	3780	3315	12635
220 kV	1800	850	2340	5830	10820

NOTE :- The details of the construction programme of transmission lines and transformation works (220 kV and above) for the year 2007-08 utility wise are given in table – 2.2(a) and 2.2(b).

**TABLE - 2.2(a)**

**UTILITYWISE DETAILS OF THE CONSTRUCTION PROGRAMME OF  
TRANSMISSION SCHEMES FOR THE YEAR 2007-08**

**TRANSMISSION LINES (CKM) :**

Utility	Voltage	Q1	Q2	Q3	Q4	Total
1	2	3	4	5	6	7
POWERGRID (CS)	765	0	0	0	160	160
<b>Total (CS)</b>	<b>765</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>160</b>	<b>160</b>
<b>Total (All India)</b>	<b>765</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>160</b>	<b>160</b>
POWERGRID (CS)	400	1424	1158	1472	841	4895
<b>Total (CS)</b>	<b>400</b>	<b>1424</b>	<b>1158</b>	<b>1472</b>	<b>841</b>	<b>4895</b>
Himachal Pradesh	400	0	0	0	0	0
Rajasthan	400	66	123	0	10	199
Uttar Pradesh	400	0	0	10	90	100
Uttarakhand	400	0	37	98	255	390
J & K	400	139	0	0	0	139
Chhattisgarh	400	114	240	160	0	514
Gujarat	400	0	23	47	80	150
Madhya Pradesh	400	0	0	0	36	36
Maharashtra	400	0	0	0	0	0
Andhra Pradesh	400	60	49	22	0	131
Orissa	400	15	11	12	12	50
West Bengal	400	129	72	78	51	330
Jharkhand	400	0	0	0	0	0
<b>Total (SS)</b>	<b>400</b>	<b>523</b>	<b>555</b>	<b>427</b>	<b>534</b>	<b>2039</b>
<b>Total (All India)</b>	<b>400</b>	<b>1947</b>	<b>1713</b>	<b>1899</b>	<b>1375</b>	<b>6934</b>
POWERGRID	220	45	74	30	10	159
DVC	220	0	0	12	53	65
<b>Total (CS)</b>	<b>220</b>	<b>45</b>	<b>74</b>	<b>42</b>	<b>63</b>	<b>224</b>
Chandigarh	220	0	0	0	0	0
Delhi	220	14	0	17	45.3	76.3
Himachal Pradesh	220	20	23	56	86	185
Haryana	220	0	8	125	166	299
Punjab	220	132	29	8	0	169
Rajasthan	220	94	40	138	300	572
Uttar Pradesh	220	62	62	138	158	420
Uttarakhand	220	0	0	0	100	100
Jammu & Kashmir	220	79.9	30	30	12.9	152.8
Chhattisgarh	220	127	122	163	134	546
Gujarat	220	70	55	84	73	282
Goa	220	0	0	0	20	20
Madhya Pradesh	220	33	31	96	220	380
Maharashtra	220	33	27	77	136	273
Andhra Pradesh	220	45	66	57	59	227
Karnataka	220	0	40	91	70	201
Kerala	220	0	10	11	12	33
Tamilnadu	220	59	88	63	63	273
Bihar	220	0	30	51	64	145
Orissa	220	88	51	126	150	415
Jharkhand	220	0	0	24	36	60
West Bengal	220	60	60	96	145	361
Assam	220	0	0	0	0	0
<b>Total (SS)</b>	<b>220</b>	<b>917</b>	<b>772</b>	<b>1451</b>	<b>2050</b>	<b>5190</b>
<b>Total (All India)</b>	<b>220</b>	<b>962</b>	<b>846</b>	<b>1493</b>	<b>2113.2</b>	<b>5414.1</b>

Legend

CS - Central Sector

SS - State Sector

Q - Quarter

**TABLE - 2.2(b)**

**SUBSTATION (MVA/MW) :**

Utility	Voltage	Q1	Q2	Q3	Q4	Total
1	2	3	4	5	6	7
<b>POWERGRID (CS)</b>	<b>765</b>	<b>669</b>	<b>0</b>	<b>1500</b>	<b>0</b>	<b>2169</b>
<b>POWERGRID (CS)</b>	<b>400</b>	<b>3020</b>	<b>1575</b>	<b>3465</b>	<b>880</b>	<b>8940</b>
Delhi	400	0	0	0	0	0
Rajasthan	400	0	0	0	630	630
Uttar Pradesh	400	0	0	0	435	435
Uttarakhand	400	0	0	0	0	0
Gujarat	400	0	0	0	630	630
Maharashtra	400	0	0	0	0	0
Andhra Pradesh	400	315	0	315	0	630
Karnataka	400	0	0	0	0	0
Tamilnadu	400	0	0	0	0	0
Jharkhand	400	0	0	0	740	740
West Bengal	400	315	315	0	0	630
<b>Total (SS)</b>	<b>400</b>	<b>630</b>	<b>315</b>	<b>315</b>	<b>2435</b>	<b>3695</b>
<b>Total (All India)</b>	<b>400</b>	<b>3650</b>	<b>1890</b>	<b>3780</b>	<b>3315</b>	<b>12635</b>
POWERGRID	220	0	0	0	0	0
DVC	220	0	0	0	200	200
<b>Total (CS)</b>	<b>220</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200</b>	<b>200</b>
Chandigarh	220	0	0	0	0	0
Delhi	220	0	100	220	740	1060
Himachal Pradesh	220	0	0	0	190	190
Haryana	220	0	0	200	200	400
Punjab	220	100	100	0	0	200
Rajasthan	220	0	0	0	100	100
Uttar Pradesh	220	0	0	400	960	1360
Uttarakhand	220	100	0	200	0	300
PDD, J & K	220	0	0	0	150	150
Chattisgarh	220	0	0	0	640	640
Gujarat	220	0	0	100	480	580
Goa	220	0	0	0	0	0
Madhya Pradesh	220	0	0	0	740	740
Maharashtra	220	0	0	0	550	550
Andhra Pradesh	220	100	100	200	0	400
Karnataka	220	50	100	300	0	450
Kerala	220	100		100	0	200
Tamilnadu	220	150	0	100	100	350
Bihar	220	700	450	100	200	1450
Orissa	220	500	0	100	100	700
West Bengal	220	0	0	320	480	800
Jharkhand	220	0	0	0	0	0
Assam	220	0	0	0	0	0
<b>Total (SS)</b>	<b>220</b>	<b>1800</b>	<b>850</b>	<b>2340</b>	<b>5630</b>	<b>10620</b>
<b>Total (All India)</b>	<b>220</b>	<b>1800</b>	<b>850</b>	<b>2340</b>	<b>5830</b>	<b>10820</b>

Legend

CS - Central Sector

SS - State Sector

Q - Quarter

## **CHAPTER – 3**

### **FUND REQUIREMENTS FOR TRANSMISSION SCHEMES FOR 10<sup>TH</sup> & 11<sup>TH</sup> PLAN PERIOD**

The requirement of funds for transmission systems 220 kV and above, (66 kV and above in North-Eastern Region) for 10<sup>th</sup> Plan period works out to be ***Rs 44740 crores*** excluding the states of Sikkim who could not furnish their proposals till date. The requirement of funds for 11<sup>th</sup> Plan period is proposed as ***Rs 140000 crores***.

The transmission function still remains with the public sector utilities who are heavily dependent on the plan outlays for undertaking construction programme. At times, the plan allocation, though meager, is not made available to these utilities by some State Governments. In some cases, the plan allocation is made available after deducting the dues outstanding against these utilities from CPSUs and others. The other sources of financing transmission schemes like International and Domestic financial institutions etc are also drying up as the Utilities do not meet the norms set by such institutions. Utilities own contribution, however, is marginal. All these aspects are contributing towards slower growth of capacity addition in transmission network.

Table 3(a) & 3(b) depicts the Utilitywise fund requirements for transmission schemes for 10<sup>th</sup> Plan period (2002-07) and 11<sup>th</sup> plan period (2007-12) respectively.

**TABLE 3 (a)**

(As on March 2007)

**FUNDS REQUIREMENTS FOR TRANSMISSION SCHEMES FOR X TH PLAN PERIOD**

Sl. No.	Name of the Utility	Transmission Works						Remarks		
		Actual 2002-03	Actual 2003-04	Actual 2004-05	Proposed 2005-06	Proposed 2006-07	Total 10th plan			
<b>I State Sector</b>										
<b>a. Northern Region</b>										
1 Chandigarh	3.55		5.20	6.45	2.77	<b>17.97</b>				
2 DTL	56.65	67.06	103.87	65.71	31.41	<b>324.70</b>				
3 HPSEB	38.00	35.22	20.80	33.41	154.96	<b>282.39</b>				
4 HVPN	60.67	95.90	105.58	100.97	223.11	<b>586.23</b>				
5 PDD, J&K	3.80	2.05	21.91	34.07	11.94	<b>73.76</b>				
6 PSEB	132.54	87.12	93.93	206.60	197.50	<b>717.69</b>	Including R&M			
7 RVPN	276.22	358.77	256.20	336.80	475.71	<b>1703.70</b>	Including R&M			
8 UPPCL	168.32	200.00	545.00	525.00	355.00	<b>1793.32</b>				
9 Uttarakhand	61.05	9.74	66.65	184.16	83.66	<b>405.26</b>	Including R&M			
<b>Total N.R.</b>	<b>800.80</b>	<b>855.86</b>	<b>1219.14</b>	<b>1493.17</b>	<b>1536.06</b>	<b>5905.02</b>				
<b>b. Western Region</b>										
1 CSEB	19.15	4.60	23.48	62.66	433.54	<b>543.43</b>	Including R&M			
2 GETCO	12.92	15.86	14.86	50.50	128.20	<b>222.34</b>	Including R&M			
3 GOA	42.35	4.44	2.09	9.90	16.50	<b>75.28</b>	Including R&M			
4 MPPTCL	60.62	142.22	110.32	137.50	499.85	<b>950.51</b>	Including R&M			
5 MSETCL	198.00	210.06	220.00	90.00	511.17	<b>1229.23</b>	Including R&M			
6 D&D	6.97	22.51	0.00	0.00	5.81	<b>35.29</b>	Including R&M			
7 DNH	19.64	0.00	0.00	4.87	0.00	<b>24.51</b>	Including R&M			
<b>Total W.R.</b>	<b>359.65</b>	<b>399.69</b>	<b>370.75</b>	<b>355.43</b>	<b>1595.07</b>	<b>3080.59</b>				
<b>c. Southern Region</b>										
1 APTRANSCO	452.33	265.97	395.26	293.99	525.91	<b>1933.46</b>	Including R&M			
2 KPTCL	308.33	515.24	474.63	435.57	1755.00	<b>3488.77</b>	Including R&M			
3 KSEB	62.77	183.48	204.86	253.23	228.35	<b>932.69</b>	Including R&M			
4 TNEB	186.52	274.38	211.73	357.74	814.48	<b>1844.85</b>	Including R&M			
5 Puducherry	7.30	8.82	7.87	9.54	11.45	<b>44.98</b>	Including R&M			
<b>Total S.R.</b>	<b>1017.25</b>	<b>1247.89</b>	<b>1294.35</b>	<b>1350.07</b>	<b>3335.19</b>	<b>8244.75</b>				
<b>d. Eastern Region</b>										
1 BSEB	0.00	0.00	191.57	510.00	552.00	<b>1253.57</b>				
2 OPTCL	899.41	968.75	1029.75	1059.23	1110.30	<b>5067.44</b>				
3 JSEB	6.12	2.23	0.00	9.00	176.60	<b>193.95</b>				
4 WBSEB	152.99	93.34	93.70	108.68	501.81	<b>950.52</b>				
5 Sikkim	-	-	-	-	-	<b>0.00</b>	Not furnished			
<b>Total E.R.</b>	<b>1058.52</b>	<b>1064.32</b>	<b>1315.02</b>	<b>1686.91</b>	<b>2340.71</b>	<b>7465.48</b>				
<b>e. N-E Region</b>										
1 Arunachal Pradesh	21.71	22.00	24.00	25.00	31.50	<b>124.21</b>				
2 ASEB	22.64	13.70	36.47	50.88	100.30	<b>223.99</b>				
3 Manipur	2.02	2.05	7.28	0.14	0.10	<b>11.59</b>				
4 MeSEB	2.80	16.77	8.02	23.96	88.50	<b>140.05</b>				
5 Mizoram	0.055	0.039	0.043	0.025	0.180	<b>0.342</b>				
6 Nagaland	0.00	0.00	42.28	25.30	11.30	<b>78.88</b>				
7 Tripura	0.89	1.15	2.02	0.00	6.47	<b>10.53</b>				
<b>Total N-E Region</b>	<b>50.12</b>	<b>55.71</b>	<b>120.11</b>	<b>125.31</b>	<b>238.35</b>	<b>589.59</b>				
<b>II Central Sector</b>										
1 PGCIL	2764.89	2421.20	3222.40	4133.57	5644.59	<b>18186.65</b>	Including JV			
2 JV with PGCIL						<b>923.00</b>	Excl equity of PG			
3 DVC	35.53	63.71	59.10	64.92	121.37	<b>344.63</b>				
<b>Total C.S. &amp; JV</b>	<b>2800.42</b>	<b>2484.91</b>	<b>3281.50</b>	<b>4198.49</b>	<b>5765.96</b>	<b>19454.28</b>				
<b>Total all India</b>	<b>6086.76</b>	<b>6108.38</b>	<b>7600.87</b>	<b>9209.37</b>	<b>14811.34</b>	<b>44739.71</b>				

Say 44740.00

**TABLE 3 (b)**

**FUNDS REQUIREMENTS FOR TRANSMISSION SCHEMES FOR XI TH PLAN PERIOD**

Sl. No.	Name of the Utility	Transmission Works							Remarks		
		Proposed 2007-08	Proposed 2008-09	Proposed 2009-10	Proposed 2010-11	Proposed 2011-12	R&M	Total 11th plan			
<b>I State Sector</b>											
<b>a. Northern Region</b>											
1	Chandigarh	12.27	4.00*	4.00	6.00*	7.00*		<b>33.27</b>			
2	DTL	375.00	595.00	541.00	378.00	117.00		<b>2006.00</b>			
3	HPSEB	300.15	238.62	394.67	210.18	84.92		<b>1228.54</b>			
4	HVPN	42.58	126.50	236.00	128.00	20.00		<b>553.08</b>			
5	PDD,J&K	204.60	199.69	104.00	400.00	434.71		<b>1343.00</b>			
6	PSEB	184.86	241.10	309.50	378.00	421.00		<b>1534.46</b>			
7	RVPN	448.00	640.00	843.00	710.00	630.00		<b>3271.00</b>			
8	UPPCL	561.59	600.00*	650.00	700.00*	750.00*		<b>2611.59</b>			
9	Uttarakhand	100.00*	150.00*	200.00	250.00*	250.00*		<b>950.00</b>			
	<b>Total N.R.</b>	<b>2129.05</b>	<b>2040.91</b>	<b>2432.17</b>	<b>2204.18</b>	<b>1707.63</b>	<b>0.00</b>	<b>13530.94</b>			
<b>b. Western Region</b>											
1	CSEB	552.91	1185.20	1391.78	773.50	177.00		<b>4080.39</b>			
2	GEICO	39.00	265.29	305.09	35.74	100.00		<b>745.12</b>			
3	GOA	35.00	42.00	45.00*	45.00*	50.00*		<b>217.00</b>			
4	MPPTCL	346.29	696.77	714.63	451.62	126.25		<b>2335.56</b>			
5	MSETCL	581.43	1116.70	2799.61	2506.66	1836.48		<b>8840.88</b>			
6	D&D	2.00*	2.50	30.50	15.00	2.40		<b>52.40</b>			
7	DNH	3.00	23.00	26.84	30.00*	1.00		<b>83.84</b>			
	<b>Total W.R.</b>	<b>1557.63</b>	<b>3331.46</b>	<b>5268.45</b>	<b>3782.52</b>	<b>2243.13</b>	<b>0.00</b>	<b>16355.19</b>			
<b>c. Southern Region</b>											
1	APTRANSCO	744.03	896.91	945.76	765.88	909.14		<b>4261.71</b>			
2	KPTCL	1188.68	1298.36	447.30	217.56	374.50		<b>3526.40</b>			
3	KSEB	250.00*	300.00*	350.00*	400.00*	450.00*		<b>1750.00</b>			
4	TNEB	1701.62	1666.01	267.76	478.27	1216.87		<b>5330.53</b>			
5	Puducherry	32.19	51.25	49.23	55.40	55.81		<b>243.88</b>			
	<b>Total S.R.</b>	<b>3666.52</b>	<b>3912.53</b>	<b>1710.05</b>	<b>1517.11</b>	<b>2556.32</b>	<b>0.00</b>	<b>15112.52</b>			
<b>d. Eastern Region</b>											
1	BSEB	500.00*	550.00*	600.00	650.00*	700.00*	54.00	<b>3054.00</b>			
2	OPTCL	659.53	404.81	246.17	127.69	92.69		<b>1530.89</b>			
3	JSEB	155.00	319.00	220.00	192.50	145.00		<b>1031.50</b>			
4	WBSEB	141.67	204.37	1425.50	287.28	308.64		<b>2367.46</b>			
5	Sikkim	638.21	2588.21	2919.10	1300.00	650.00		<b>8095.52</b>			
	<b>Total E.R.</b>	<b>1594.41</b>	<b>3516.39</b>	<b>4810.77</b>	<b>1907.47</b>	<b>1196.33</b>	<b>54.00</b>	<b>16079.37</b>			
<b>e. N-E Region</b>											
1	Arunachal Pradesh	106.72	128.54	174.49	242.80	192.90		<b>845.44</b>			
2	ASEB	111.63	293.87	443.02	477.56	340.74		<b>1666.82</b>			
3	Manipur	30.00	35.00	40.00	45.00	57.18		<b>207.18</b>			
4	MeSEB	129.26	147.48	106.13	72.00	56.75		<b>511.62</b>			
5	Mizoram	85.91	52.45	19.44	18.94	19.94		<b>196.68</b>			
6	Nagaland	93.35	114.23	14.30	0.00	0.00		<b>221.88</b>			
7	Tripura	26.06	55.00	60.00	65.00	66.90		<b>272.96</b>			
	<b>Total N-E Region</b>	<b>476.21</b>	<b>698.03</b>	<b>682.89</b>	<b>678.50</b>	<b>541.51</b>	<b>0.00</b>	<b>3922.58</b>			
	<b>Total State Sector</b>	<b>9423.82</b>	<b>13499.32</b>	<b>14904.33</b>	<b>10089.78</b>	<b>8244.92</b>	<b>54.00</b>	<b>65000.60</b>			
<b>II Central Sector</b>											
1	PGCIL	6465.00	11014.00	13084.00	13009.00	10979.00		<b>54551.00</b>			
2	JV with PGCIL	35.00	167.00	120.00	68.00	42.00		<b>432.00</b>			
3	DVC	101.98	428.18	367.37	378.57	418.44		<b>1694.54</b>			
4	Private Bidders	2500.00	3000.00	4000.00	4500.00	5000.00		<b>19000.00</b>	**		
	<b>Total C.S. &amp; JV</b>	<b>9101.98</b>	<b>14609.18</b>	<b>17571.37</b>	<b>17955.57</b>	<b>16439.44</b>	<b>0.00</b>	<b>75677.54</b>			
	<b>Total all India</b>	<b>18525.80</b>	<b>28108.50</b>	<b>32475.70</b>	<b>28045.35</b>	<b>24684.36</b>	<b>54.00</b>	<b>140678.14</b>			

\* Assumed based on past data

\*\* Estimated figure

## CHAPTER 4

### TRANSMISSION LINES AND TRANSFORMATION CAPACITY EXISTING AT THE END OF VARIOUS PLAN PERIODS IN INDIA

The transmission line capacity additions (220 kV and above) during various plan periods till end of 10<sup>th</sup> plan at various voltage levels viz 765 kV, ± 500 kV HVDC, 400 kV and 220 kV are indicated in table 4.1.(a)and 4.1(b). Similarly, the transformation capacity (220 kV and above) during various plan periods till end of 10<sup>th</sup> plan at various voltage levels viz 765 kV, 400 kV, 220 kV sub stations and ± 500 kV HVDC, HVDC (Back-to-Back) terminals are indicated in table 4.2(a) and 4.2(b). These tables provide information regarding the construction of transmission works, the achievement vis-à-vis programme during various plan periods.

#### Growth in Transmission Lines (CKm) at the end of :

	6th plan	7th plan	8th plan	9th plan	10th plan
<b>765 kV</b>					
Central	0	0	0	751	1775
State	0	0	0	409	409
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1160</b>	<b>2184</b>

#### ± 500 kV HVDC

Central	0	1634	1634	3234	4368
State	0	0	0	1504	1504
<b>Total</b>	<b>0</b>	<b>1634</b>	<b>1634</b>	<b>4738</b>	<b>5872</b>

#### 400 kV

Central	1831	13068	23001	29345	50992
State	4198	6756	13141	20033	24730
<b>Total</b>	<b>6029</b>	<b>19824</b>	<b>36142</b>	<b>49378</b>	<b>75722</b>

#### 220 kV

Central	1641	4560	6564	8687	9444
State	44364	55071	73036	88306	105185
<b>Total</b>	<b>46005</b>	<b>59631</b>	<b>79600</b>	<b>96993</b>	<b>114629</b>

**Growth in Sub-Stations (MVA) at the end of :**

	<b>6th plan</b>	<b>7th plan</b>	<b>8th plan</b>	<b>9th plan</b>	<b>10th plan</b>
--	-----------------	-----------------	-----------------	-----------------	------------------

**765 kV**

Central	0	0	0	0	0
State	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**HVDC B/B**

Central	0	0	500	2000	3000
State	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>500</b>	<b>2000</b>	<b>3000</b>

**± 500 kV HVDC TERMINAL**

Central	0	0	3000	3000	7000
State	0	0	0	3000	3000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3000</b>	<b>6000</b>	<b>10000</b>

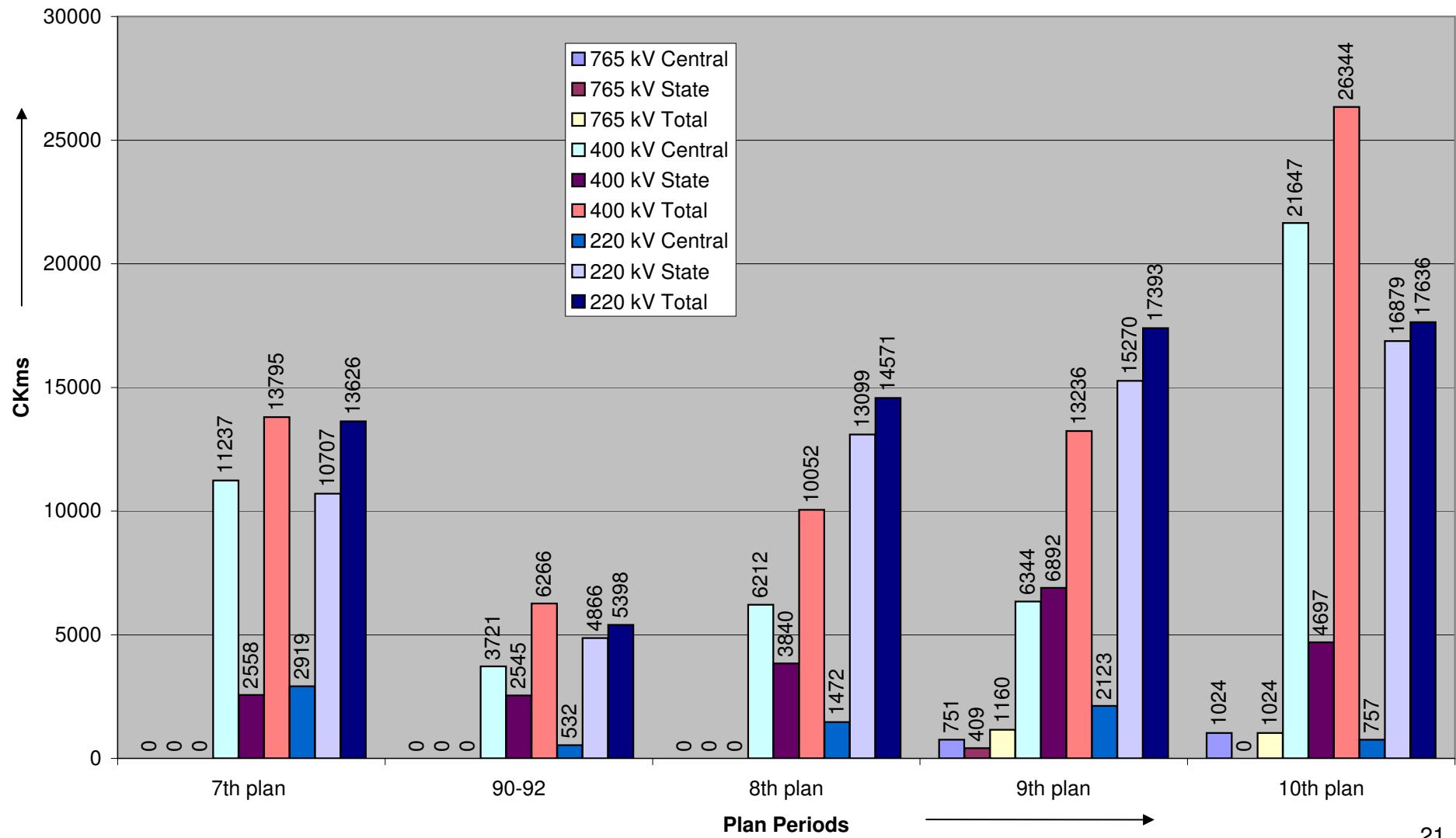
**400 kV**

Central	715	6760	17340	23575	40455
State	8615	14820	23525	36805	52487
<b>Total</b>	<b>9330</b>	<b>21580</b>	<b>40865</b>	<b>60380</b>	<b>92942</b>

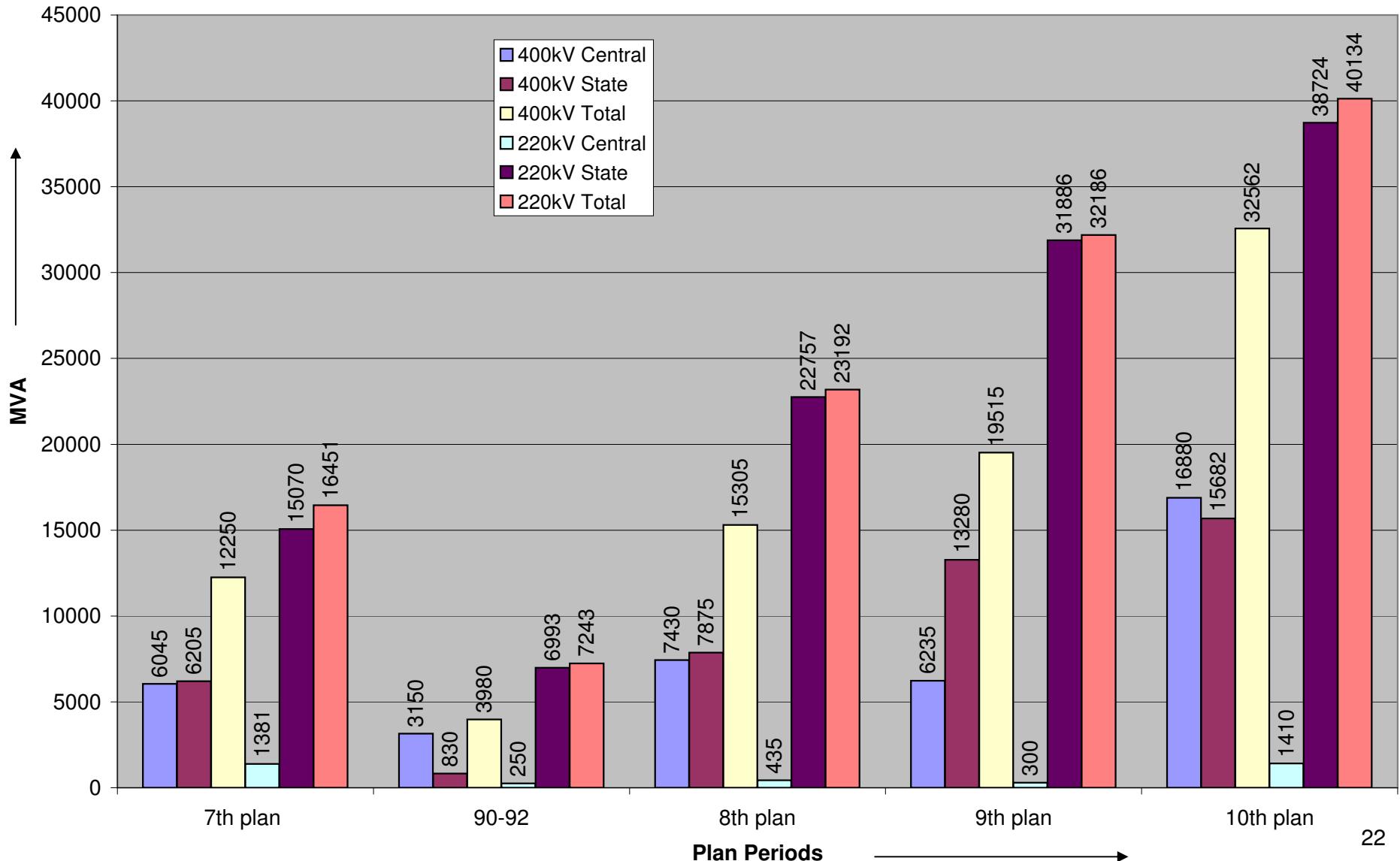
**220 kV**

Central	500	1881	2566	2866	4276
State	36791	51861	81611	113497	152221
<b>Total</b>	<b>37291</b>	<b>53742</b>	<b>84177</b>	<b>116363</b>	<b>156497</b>

## Growth in Transmission Lines (CKm) During Various Plan Periods



## Growth in Sub-Stations (MVA) During Various Plan Periods



**TABLE 4.1(b)**  
**TRANSMISSION LINES (CKM) ADDITIONS OF 400 KV & 220 KV IN INDIA**

400 KV TRANSMISSION LINES						220 KV TRANSMISSION LINES					
CENTRAL		STATE		TOTAL		CENTRAL		STATE		TOTAL	
Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement
<b>1. Transmission lines existing at the end of 6th plan</b>											
	1831		4198	0	6029		1641		44364	0	46005
<b>2. Addition during 7th plan:</b>											
85-86	1138	1181	1290	623	2428	1804	546	617	3052	1930	3598
86-87	1577	2631	483	802	2060	3433	106	232	2601	1922	2707
87-88	1790	1800	904	884	2694	2684	214	214	2516	2473	2730
88-89	2474	2911	350	223	2824	3134	815	956	2380	2042	3195
89-90	2547	2714	303	26	2850	2740	898	900	2322	2340	3220
Total	9526	11237	3330	2558	12856	13795	2579	2919	12871	10707	15450
											13626
<b>3. Total at the end of 7th plan:</b>											
	13068		6756		19824		4560		55071		59631
<b>4. Addition during 1990-92:</b>											
90-91	2207	2011	1033	1897	3240	3908	327	148	2703	2341	3030
91-92	2137	1710	741	648	2878	2358	469	384	2556	2525	3025
Total	4344	3721	1774	2545	6118	6266	796	532	3259	4866	6055
											5398
<b>5. Total at the end of 1991-92:</b>											
	16789		9301		26090		5092		59937		65029
<b>6. Addition during 8th plan:</b>											
92-93	1283	870	1207	1087	2490	1957	512	501	2772	2536	3284
93-94	637	581	786	796	1423	1377	491	526	2479	2734	2970
94-95	855	1057	651	536	1506	1593	317	192	2783	2867	3100
95-96	1479	1569	419	876	1898	2445	80	12	2035	2532	2115
96-97	1872	2135	2096	545	3968	2680	496	241	2755	2430	3251
Total	6126	6212	5159	3840	11285	10052	1896	1472	12824	13099	14720
											14571
<b>7. Total at the end of 8th plan:</b>											
	23001		13141		36142		6564		73036		79600
<b>8. Addition during 9th plan:</b>											
97-98	2027	2061	963	706	2990	2767	418	345	2406	2569	2824
98-99	2024	2378	980	884	3004	3262	696	629	2514	2701	3210
99-2000	640	616	2488	2720	3128	3336	669	791	2884	3141	3553
2000-01	478	672	1495	1419	1973	2091	389	310	4669	3364	5058
2001-02	630	617	1150	1163	1780	1780	108	48	4132	3495	4240
Total	5799	6344	7076	6892	12875	13236	2280	2123	16605	15270	18885
											17393
<b>9. Total at the end of 9th plan:</b>											
	29345		20033		49378		8687		88306		96993
<b>10. Addition during 10th plan:</b>											
2002-03	2560	3424	638	380	3198	3804	68	133	2956	2886	3024
2003-04	1877	2173	1508	1115	3385	3288	486	313	3080	3415	3566
2004-05	3771	4351	905	701	4676	5052	72	76	2357	2716	2429
2005-06	3230	5120	620	1140	3850	6260	100	129	2638	2742	2738
2006-07	6509	6579	1439	1361	7948	7940	268	106	4000	5120	4269
Total	17947	21647	5110	4697	23057	26344	994	757	15031	16879	16025
											17636
<b>11. Total at the end of 10th plan:</b>											
	50992		24730		75722		9444		105185		114629

**TABLE 4.1(a)**

**TRANSMISSION LINES (CKM) ADDITIONS OF 765 KV & +/-500 KV HVDC IN INDIA**

765 KV TRANSMISSION LINES						+/-500 KV TRANSMISSION LINES					
CENTRAL		STATE		TOTAL		CENTRAL		STATE		TOTAL	
Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement
<b>1. Transmission lines existing at the end of 7th plan</b>											
0	0	0	0	0	0	0	0	0	0	0	0
<b>2. Addition during 1990-92:</b>											
90-91	0	0	0	0	0	1634	1634	0	0	1634	1634
91-92	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	1634	1634	0	0	1634	1634
<b>3. Total at the end of 1991-92:</b>											
	0	0	0	0	0	1634	1634	0	0	1634	1634
<b>4. Addition during 8th plan:</b>											
92-93	0	0	0	0	0	0	0	0	0	0	0
93-94	0	0	0	0	0	0	0	0	0	0	0
94-95	0	0	0	0	0	0	0	0	0	0	0
95-96	0	0	0	0	0	0	0	0	0	0	0
96-97	20	0	0	0	20	0	0	0	360	0	360
<b>Total</b>	20	0	0	0	20	0	0	0	360	0	360
<b>5. Total at the end of 8th plan:</b>											
	0	0	0	0	0	1634	1634	0	0	1634	1634
<b>6. Addition during 9th plan:</b>											
97-98	0	0	0	0	0	0	0	900	369	900	369
98-99	0	0	405	318	405	318	0	0	1135	1135	1135
99-2000	325	325	91	91	416	416	0	0	0	0	0
2000-01	285	375	0	0	285	375	0	0	0	0	0
2001-02	224	51	0	0	224	51	1600	1600	0	0	1600
<b>Total</b>	834	751	496	409	1330	1160	1600	1600	2035	1504	3633
<b>7. Total at the end of 9th plan:</b>											
	751	409	0	1160	0	3234	0	1504	0	4738	0
<b>8. Addition during 10th plan:</b>											
2002-03	173	33	0	0	173	33	1134	1134	0	0	1134
2003-04	149	102	0	0	149	102	0	0	0	0	0
2004-05	71	22	0	0	71	22	0	0	0	0	0
2005-06	105	287	0	0	105	287	0	0	0	0	0
2006-07	660	580	0	0	660	580	0	0	0	0	0
<b>Total</b>	1158	1024	0	0	1158	1024	1134	1134	0	0	1134
<b>9. Total at the end of 10th plan:</b>											
	1775	409	0	2184	0	4368	0	1504	0	5872	0

**TABLE - 4.2(b)**  
**TRANSFORMATION CAPACITY (MVA) ADDITIONS OF 400 KV & 220 KV IN INDIA**

400 KV SUB-STATION (MVA)						220 KV SUB-STATION (MVA)						
CENTRAL		STATE		TOTAL		CENTRAL		STATE		TOTAL		
Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement	
<b>1. Sub-Station (MVA) existing at the end of 6th plan</b>												
	715		8615	0	9330		500	0	36791	0	37291	
<b>2. Addition during 7th plan:</b>												
85-86	1395	1395	1185	630	2580	2025	800	781	3265	2275	4065	3056
86-87	1065	1065	2195	2195	3260	3260	150	300	2485	2335	2635	2635
87-88	565	250	945	1750	1510	2000	300	150	2380	2770	2680	2920
88-89	1195	1575	1240	815	2435	2390	150	150	2688	3500	2836	3650
89-90	1575	1760	700	815	2275	2575	150	0	2956	4190	3106	4190
<b>Total</b>	<b>5795</b>	<b>6045</b>	<b>6265</b>	<b>6205</b>	<b>12060</b>	<b>12250</b>	<b>1550</b>	<b>1381</b>	<b>13772</b>	<b>15070</b>	<b>15322</b>	<b>16451</b>
<b>3. Total at the end of 7th plan:</b>												
	6760		14820		21580		1881		51861		53742	
<b>4. Addition during 1990-92:</b>												
90-91	1890	1260	830	0	2720	1260	150	250	2898	4050	3048	4300
91-92	1825	1890	630	830	2455	2720	0	0	2571	2943	2571	2943
<b>Total</b>	<b>3715</b>	<b>3150</b>	<b>1460</b>	<b>830</b>	<b>5175</b>	<b>3980</b>	<b>150</b>	<b>250</b>	<b>5469</b>	<b>6993</b>	<b>5619</b>	<b>7243</b>
<b>5. Total at the end of 1991-92:</b>												
	9910		15650		25560		2131		58854		60985	
<b>6. Addition during 8th plan:</b>												
92-93	2770	2455	1120	1710	3890	4165	300	150	2648	3992	2948	4142
93-94	1890	2140	1070	1070	2960	3210	185	150	3305	3903	3490	4053
94-95	315	315	2260	2075	2575	2390	35	35	3245	3495	3280	3530
95-96	1260	1260	1575	2075	2835	3335	0	0	2535	5790.5	2535	5790.5
96-97	1260	1260	3075	945	4335	2205	35	100	6800	5576.5	6835	5676.5
<b>Total</b>	<b>7495</b>	<b>7430</b>	<b>9100</b>	<b>7875</b>	<b>16595</b>	<b>15305</b>	<b>555</b>	<b>435</b>	<b>18533</b>	<b>22757</b>	<b>19088</b>	<b>23192</b>
<b>7. Total at the end of 8th plan:</b>												
	17340		23525		40865		2566		81611		84177	
<b>8. Addition during 9th plan:</b>												
97-98	1260	945	1890	1260	3150	2205	50	0	5360	6016	5410	6016
98-99	0	630	2205	2205	2205	2835	150	50	4690	5435	4840	5485
99-2000	3085	2455	3905	3775	6990	6230	100	150	5335	8060	5435	8210
2000-01	1575	1575	4280	2520	5855	4095	150	0	6045	8155	6195	8155
2001-02	630	630	4780	3520	5410	4150	100	100	5310	4220	5410	4320
<b>Total</b>	<b>6550</b>	<b>6235</b>	<b>17060</b>	<b>13280</b>	<b>23610</b>	<b>19515</b>	<b>550</b>	<b>300</b>	<b>26740</b>	<b>31886</b>	<b>27290</b>	<b>32186</b>
<b>9. Total at the end of 9th plan:</b>												
	23575		36805		60380		2866		113497		116363	
<b>10. Addition during 10th plan:</b>												
2002-03	3335	4280	1890	1345	5225	5625	150	150	5051.5	5315	5201.5	5465
2003-04	2205	1260	4150	3205	6355	4465	250	50	6283	8372	6533	8422
2004-05	2205	1260	3020	1760	5225	3020	460	500	6033	8662	6493	9162
2005-06	3885	4725	3570	5540	7455	10265	500	510	7260	6995	7760	7505
2006-07	6615	5355	4515	3832	11130	9187	900	200	7283	9380	8183	9580
<b>Total</b>	<b>18245</b>	<b>16880</b>	<b>17145</b>	<b>15682</b>	<b>35390</b>	<b>32562</b>	<b>2260</b>	<b>1410</b>	<b>31910.5</b>	<b>38724</b>	<b>34170.5</b>	<b>40134</b>
<b>11. Total at the end of 10th plan:</b>												
	40455		52487		92942		4276		152221		156497	

**TABLE -4.2(a)**  
**TRANSFORMATION CAPACITY (MVA)/(MW) ADDITIONS OF 765 kV, +/- 500 KV HVDC TERMINALS &**  
**HVDC (BACK-TO-BACK) SUB-STATIONS (MW) IN INDIA**

+/- 500 KV HVDC CONVERTER TERMINALS (MW)						HVDC (BACK-TO-BACK) SUB-STATIONS (MW)					
CENTRAL		STATE		TOTAL		CENTRAL		STATE		TOTAL	
Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement	Programme	Achievement
<b>1. Sub-station (MW) existing at the end of 8th plan</b>											
	3000		0		3000		500		0	0	500
<b>2. Addition during 9th plan:</b>											
97-98	0	0	0	0	0	1000	0	0	0	1000	
98-99	0	0	3000	3000	3000	3000	500	0	0	0	500
99-2000	0	0	0	0	0	0	0	0	0	0	0
2000-01	0	0	0	0	0	0	0	0	0	0	0
2001-02	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3000</b>	<b>3000</b>	<b>3000</b>	<b>3000</b>	<b>0</b>	<b>1500</b>	<b>0</b>	<b>0</b>	<b>1500</b>
<b>3. Total at the end of 9th plan:</b>											
	3000		3000		6000		2000		0		2000
<b>4. Addition during 10th plan:</b>											
2002-03	4000	4000	0	0	4000	4000	500	500	0	500	500
2003-04	0	0	0	0	0	0	0	0	0	0	0
2004-05	0	0	0	0	0	500	500	0	0	500	500
2005-06	0	0	0	0	0	0	0	0	0	0	0
2006-07	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>4000</b>	<b>4000</b>	<b>0</b>	<b>0</b>	<b>4000</b>	<b>4000</b>	<b>1000</b>	<b>1000</b>	<b>0</b>	<b>1000</b>	<b>1000</b>
<b>5. Total at the end of 10th plan:</b>											
	7000		3000		10000		3000		0		3000

## TRANSMISSION LINES PROGRAMME FOR 07-08

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

### **765 KV CENTRAL SECTOR :**

#### **POWERGRID (PGCIL) :**

1	Sipat - Seoni Line1	S/C	351	Feb-07	Jun-07
2	Sipat - Seoni Line2	S/C	354	Sep-07	
<b>Total 765 kV CS</b>			<b>705</b>		

### **400 KV CENTRAL SECTOR :**

#### **POWERGRID (PGCIL) :**

1	LILO of Dadri - Ballabghar at Delhi	D/C	60	Jun-06	Jun-07
2	Biharshariff - Balia (Quad)	D/C	484	Jul-07	Jul-07
3	Maithon - Ranchi	D/C	400	Jul-07	Jun-07
<b>4</b>	<b>Balia - Lucknow</b>	<b>D/C</b>	<b>632</b>	<b>Jul-07</b>	<b>Apr-07</b>
5	Lucknow - Bareilly	D/C	510	May-07	Jul-07
6	Ranchi - Sipat	D/C	816	Jun-07	Oct-07
7	LILO of Kahalgaon(PG) -Patna(PG) (Quad) at Barh.	D/C	100	Sep-09	Mar-08
8	Bareilly (PG) - Moradabad	S/C	91	May-07	Jul-07
9	LILO of Lucknow - Moradabad at Bareilly	D/C	22	May-07	Jun-07
10	LILO of Bareilly - Mandaula at Bareilly	2xD/C	37	May-07	Jun-07
11	LILO of Sultanpur - Lucknow at Lucknow	D/C	42	May-07	Jul-07
12	Malerkotla - Ludhiana	S/C	36	Mar-08	
13	Ludhiana - Jallandhar	S/C	85	Mar-08	
14	LILO of One ckt. of Hissar - Moga at Fatehabad.	D/C	59	Mar-08	
15	LILO of one ckt of Dhauliganga - Bareilly at Pithoragarh (Operated at 220 kV)	D/C	6	Mar-07	Mar-08
16	Line from Singrauli to a point 2.3 Km near existing Vindhya Chal - Kanpur Line.	D/C	5	Apr-07	Jun-07
17	RAPP 5 & 6 - Kankroli	D/C	396	Mar-08	
18	RAPP 5 & 6 - Kota ( 28 Km M/Ctowers)	S/C	51	Mar-08	
19	Seoni - Khandwa (Quad)	D/C	703	Feb-07	Jun-07
20	Nagda - Dehgam	D/C	664	Feb-07	Sep-07
21	LILO of S/C Bhilai - Satpura at Seoni	D/C	4	Feb-07	Jun-07
22	LILO of both ckt of Sardar Sarovar - Nagda at Rajgarh	D/C	18	Feb-07	Dec-07
23	Khandwa - Rajgarh	D/C	440	Aug-07	Dec-07
24	LILO of Korba - Raipur, S/C at Bhatapara	D/C	5	Aug-07	Aug-07
25	Bina - Nagda	D/C	662	May-07	Mar-08
26	Vindhya Chal - Korba	S/C	291	Apr-07	Jun-07
27	Satna - Bina	D/C	545	Jul-07	Jun-07
28	LILO of Rourkela - Raipur at Raigarh	D/C	37	Jul-07	
29	Sipat - Raipur	D/C	296	Sep-07	Nov-07
30	Gooty - Raichur	D/C	294	Apr-07	Jun-07

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised
31	Narendra - Davangere	D/C	312	Sep-07	
32	Mysore - Kozhikode	D/C	421	Dec-07	
33	LILO of Kolar-Sriperumbadur at Melakottaiyur .	D/C	36	Dec-07	
34	Neyveli (Expn.) Sw. Yd.- Neyveli 2x S/C	S/C	6	Dec-07	
35	Neyveli TS -II - Pugalur	D/C	438	Dec-07	
36	Pugalur - Madurai	D/C	246	Dec-07	
37	Udumalpet - Arasur	D/C	132	Dec-07	
38	LILO of Neyveli - Sriperumbadur at Pondicherry	D/C	30	Dec-07	
39	LILO of Ramagundam - Khammam at Warangal	D/C	36	Dec-07	
40	Kundankulam - Tirunelveli (Quad) -I	D/C	144	May-07	Jun-07
41	Kundankulam - Tirunelveli (Quad) -II	D/C	160	Dec-07	
42	Tirunelveli - Udumalpet	D/C	524	Dec-07	
43	LILO of both ckt of Madurai (PG) - Trivandrum (PG) at Tirunelveli	D/C	212	May-07	Jun-07
44	LILO of both Ckt of Gazuwaka-Vijayawada at Vemagiri S/S	D/C	148	Dec-07	
45	Teesta -V HEP - Siliguri	D/C	228	May-08	Mar-08
<b>Total 400 kV CS</b>			<b>10864</b>		

#### **400 KV STATE SECTOR :**

##### **NORTHERN REGION (NR) :**

###### **HIMACHAL PRADESH (HP) :**

1	Nalagarh-Kunihar	S/C	33	Sep-04	Jun-07
<b>Total</b>					<b>33</b>

###### **RAJASTHAN (RVPN) :**

1	Ratangarh-Merta	S/C	175	Mar-06	Jun-07
2	Dholpur GTPS-Heerapura	S/C	283	Mar-06	Jun-07
3	KTPS-Kota(PG) (charged at 220 kV)	D/C	10	Mar-08	
<b>Total</b>					<b>468</b>

###### **UTTAR PRADESH (UPPCL) :**

1	LILO of Anpara-Varanasi at Obra TPS	D/C	21	Jun-05	Jun-07
2	LILO Agra-Moradabad at Bagpat	D/C	100	Mar-08	
<b>Total</b>					<b>121</b>

###### **JAMMU & KASHMIR (J&K) :**

1	Kishenpur-Baglihar	D/C	136	May-07	Jun-07
2	LILO of one ckt of Wagoora -Kishenpur at Baglihar	D/C	3	May-07	Jun-07
<b>Total</b>					<b>139</b>
<b>Total 400 kV NR</b>					<b>761</b>

#### **WESTERN REGION (WR) :**

##### **CHHATTISGARH (CSEB) :**

1	Korba (W)-Bhilai (Khedamara)	D/C	400	Mar-08	
2	JTPS- Raipur	D/C	514	Sep-07	
<b>Total</b>					<b>914</b>

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised
<b>GUJARAT (GETCO) :</b>					
1	Dehgam (PGCIL)-Ranchodpura	D/C	130	Dec-07	
2	LILO of one Ckt of Asoj-Amreli at Chorania	D/C	42	Dec-07	
3	Pirana-Dehgam	D/C	108	Mar-07	Jun-07
4	TPGL-Pirana	D/C	520	Mar-08	
5	LILO of Jhanor-Vapi S/C at TPGL	D/C	196	Apr-07	Jun-07
		<b>Total</b>	<b>996</b>		
<b>MADHYA PRADESH (MPPTCL):</b>					
1	LILO of Birsinghpur - Damoh D/C at Damoh (PG)	2xD/C	32	Jun-07	
2	Interconnector of Birsinghpur-Katni-Damoh at Birsinghpur	D/C	2	Mar-08	
		<b>Total</b>	<b>34</b>		
<b>MAHARASHTRA (MSEB) :</b>					
1	Dabhol-Nagothane (2nd Ckt)	S/C	134	Mar-07	Jan-08
2	LILO of Bhusawal-Koradi 1st Ckt at Akola	D/C	80	Sep-07	
		<b>Total</b>	<b>214</b>		
		<b>Total 400 kV WR</b>	<b>2158</b>		
<b>SOUTHERN REGION (SR) :</b>					
<b>ANDHRA PRADESH (APTRANSCO) :</b>					
1	Ramagundam(NTPC)-Ditchpally line	D/C	170	Jun-07	Mar-08
2	LILO of Ramagundam -Ghanapur S/C line at Gazwel	D/C	22	Dec-07	
		<b>Total</b>	<b>192</b>		
		<b>Total 400 kV SR</b>	<b>192</b>		
<b>EASTERN REGION (ER) :</b>					
<b>ORISSA (GRIDCO) :</b>					
1	Meramundai-Mendhasal (Chandaka)	D/C	200	Jun-02	Jun-07
2	IB-Meramundai	D/C	470	Jun-02	Jun-07
		<b>Total</b>	<b>670</b>		
<b>JHARKHAND (JSEB) :</b>					
1	Tenughat - Ranchi	D/C	200	May-07	Jun-07
2	Chandil - Jamshedpur	D/C	220	May-07	Jun-07
3	Ranchi (JSEB) - Ranchi (PG),Interconnector	D/C	40	May-07	Jun-07
		<b>Total</b>	<b>460</b>		
		<b>Total 400 kV ER</b>	<b>1130</b>		
		<b>Total 400 kV SS</b>	<b>4241</b>		
		<b>Total 400 kV CS &amp; SS</b>	<b>15105</b>		
<b><u>220 KV CENTRAL SECTOR (CS) :</u></b>					
<b>POWERGRID (PGCIL) :</b>					
1	Unchahar - Raibareilly	S/C	43	May-08	Jun-07
2	LILO of one ckt of Unchahar-Lucknow at Raibareilly.	D/C	2	May-08	Jun-07
3	LILO of one ckt of Tanakpur - Bareilly at Sitarganj	D/C	44	Mar-07	Sep-07
		<b>Total</b>	<b>89</b>		

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

**DAMODER VALLEY CORPORATION (DVC) :**

1	LIGO of Kalyaneshwari-Chandrapur TPS at Dhanbad	2xD/C	30	Jun-05	Jun-07
2	Dhanbad-Giridih	D/C	86	Jun-05	Jun-07
3	Giridih-Kodarma	D/C	200	Dec-05	Jun-07
4	MTPS-Durgapur	D/C	64	Mar-07	Jun-07
		<b>Total</b>	<b>380</b>		
		<b>Total 220 kV CS</b>	<b>469</b>		

**220 KV STATE SECTOR :**

**NORTHERN REGION (NR) :**

**CHANDIGARH :**

1	Ganguwal-Mohali (2nd Ckt. Stringing)	S/C	72	Jun-06	Jun-07
		<b>Total</b>	<b>72</b>		

**DELHI (DTL) :**

1	Gazipur-Noida	D/C	16	Mar-04	Jun-07
2	LILO of Bawana-Najafgarh at Khanjawla	D/C	12	Jun-03	Jun-07
3	LILO of South of Wazirabad – Patparganj at Geeta Colony	2xD/C	0.3	Mar-06	Jun-07
4	LILO of Narela-Najafgarh at Bawana	D/C	4	Mar-06	Jun-07
5	Papankalan-I- Papankalan-II	D/C	11	Mar-06	Jun-07
6	LILO of one circuit of Bawana - Narela at Bawana DSIDC	D/C	14	Dec-05	Jun-07
7	U/G of Maharani Bagh-Lodhi Road	D/C	2.3	Mar-08	
8	U/G of Maharani Bagh(PG)-Masjid Moth	D/C	19	Mar-08	
9	U/G of Maharani Bagh-Electric lane	D/C	19	Mar-08	
10	U/G of Maharani Bagh-AIIMS	D/C	22	Mar-08	
		<b>Total</b>	<b>120</b>		

**HIMACHAL PRADESH (HPSEB) :**

1	Kashang-Bhaba	D/C	76	Mar-07	Jul-07
2	LILO Kashang-Bhaba at Bhoktoo	D/C	220	Jul-07	
3	Giri - Mogninand (Kala Amb) 220/132kV S/S,S/C on D/C	D/C	30	Mar-08	
4	LILO of Bhaba- Kunihar-Panchkula at Baddi	D/C	42	Mar-08	
5	Khodri-Majri (1st circuit) S/C	S/C	35	Mar-08	
6	Khodri-Majri (2 <sup>nd</sup> circuit) S/C	S/C	35	Mar-08	
		<b>Total</b>	<b>438</b>		

**HARYANA (HVPN) :**

1	Badshahpur – Rewari , (2nd Circuit)		50	Jun-06	Jun-07
2	LILO of D/C of Kaithal – Cheeka at 400 kV Kaithal PG	2xD/C	8	Sep-06	Jun-07
3	Hissar(BBMB)-Hissar IA (2 <sup>nd</sup> Ckt)	S/C	1.5	Mar-07	Jun-07
4	Badshahpur – IMT Manesar (2 <sup>nd</sup> Ckt)	S/C	12	Mar-07	Mar-08
5	LILO of 2nd circuit of Narwana – Fatehabad at Bhuna	D/C	22	Dec-07	
6	Yamunanagar TPP – Salimpur (Ladwa)	D/C	120	Mar-07	Sep-07

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised
7	Yamunanagar TPP-Jorian (Yamunanagar)	D/C	40	Mar-07	Jun-07
8	YTPP- Abdullapur	D/C	50	Mar-08	
9	YTPP- Nilokheri	D/C	140	Mar-08	
10	Nilokheri-Karnal	S/C	21	Dec-07	
11	Hissar (Mayyar)-Isharwal	D/C	106	Mar-08	
		<b>Total</b>	<b>571</b>		

**PUNJAB (PSEB) :**

1	Guru Nanak Dev TPS - Muktsar (2nd ckt)	S/C on D/C	53	Jun-05	Jun-07
2	Sarna-Kotli Surat Malli	S/C on D/C	62	Sep-02	Jun-07
3	Muktsar-Abbohor	S/C on D/C	50	Jun-06	Dec-07
4	LILO of Patti-Verpal at Tarn-Taran	S/C	20	Mar-06	Dec-07
5	Khasa – Amritsar (at Balachak (PGCIL))	D/C	34	Jun-05	Jun-07
6	LILO of Malerkotla – Lalton Kalan S/C at Pakhowal	D/C	2	Mar-06	Jun-07
7	Muktasar-Ghobaya (2nd Circuit)	D/C	40	Mar-06	Jun-07
8	LILO of one ckt of Mohali - Rajpura at Mohali - II	D/C	1	Mar-07	Jun-07
9	LILO of Mohali-I – Dera Bassi at Mohali-II	D/C	2	Mar-07	Jun-07
10	LILO of Gobindgarh-I - Gobindgarh-II at Amloh Road Gobindgarh	D/C	1	Mar-07	Jun-07
11	Humbran–FZR Rd Ludhiana	D/C	30	Mar-07	Jun-07
12	Phagan Majra (400 kV) - F.P.Nabha	D/C	23	Mar-08	
13	Mohali-Dera Bassi (2nd circuit)	S/C	29	Jun-07	
14	LILO of one circuit of GGSSTP – Mohali-I at Kharar	D/C	10	Dec-07	
15	Nalagarh-Mohali -I	D/C	107	Jul-07	
16	GHTP-Kangar	D/C	52	Jun-07	
		<b>Total</b>	<b>516</b>		

**RAJASTHAN (RVPN) :**

1	Opening of one ckt of Heerapura-Bassi line and connecting Sanganer & Phulera	S/C	59	Mar-04	Jun-07
2	<b>Mada- Barmer</b>	<b>D/C</b>	<b>258</b>	<b>Jun-06</b>	<b>Apr-07</b>
3	Barsingsagar-Nagaur	S/C	107	Mar-06	Jun-07
4	Giral LTPS- Barmer ( Line-II )	S/C	32	Mar-06	Jun-07
5	LILO of Bhilwara-Kankroli, S/C at Kankroli	D/C	2	Mar-08	
6	Kankroli (400 kV)-Kankroli (220 kV)	S/C	22	Mar-08	
7	Dhorimanna-Bhinmal	S/C	96	Mar-06	Jun-07
8	Barsinghsar TPS-Khinvsar	S/C	100	Mar-08	
9	Khinvsar-Bhopalgarh	S/C	36	Mar-08	
10	LILO of Jaipur – Kota at Duni	D/C	6	Mar-08	
11	Kota (400 kV PG)-Kota (220 kV)	2xD/C	1	Mar-08	
12	Bhiwadi(PG)-Neemrana	S/C	65	Mar-08	
13	Suratgarh STPS-Bhadra	S/C	110	Mar-08	
14	Kankroli (PG)-Debari	S/C	70	Mar-08	
		<b>Total</b>	<b>964</b>		

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

**UTTAR PRADESH (UPPCL) :**

1	Matore(PG)-Nehtaur	S/C	72	Dec-07	
2	Muzaffarnagar-Shamli	S/C	65	Mar-08	
3	LILO Saharanpur-Shamli	D/C	6	Mar-08	
4	LILO Moradabad-C.B.Ganj	D/C	24	Mar-08	
5	Moradabad-NAPP	D/C	4	Mar-08	
6	Loni-Muradnagar	D/C	25	Mar-08	
7	Loni-Muradnagar (400 kV S/S)	D/C	25	Mar-08	
8	LILO Khurja-Muradnagar at Dadri	D/C	24	Mar-08	

**Total**      **245**

**UTTARAKHAND (UPCL) :**

1	Kashipur-Haldwani	S/C on D/C	70	Dec-05	Jun-07
2	Rishikesh-Maneribali Stage-II (3rd ckt)	S/C	110	Dec-05	Jun-07
3	LILO of Rishikesh- Roorkee at Haridwar	D/C	4	Dec-05	Jun-07
4	LILO of Maneri-I -- Rishikesh at Maneri -II	D/C	4	Mar-07	Jun-07
5	LILO of Khodri-Rishikesh at Dehradun	D/C	2	Mar-07	Aug-07
6	Kashipur - Barheni	D/C	52	Dec-06	Jun-07
7	Barheni - Pantnagar	S/C	60	Dec-06	Jun-07
8	Barheni - Haldwani	S/C	35	Dec-06	Jun-07

**Total**      **337**

**JAMMU & KASHMIR (J&K) :**

1	Barn-Kishenpur	D/C	74.8	Mar-08	
2	Stringing of 2nd ckt Thein-Hiranagar	S/C	40	Mar-08	

**Total**      **115**

**Total 220 kV NR**      **3377**

**WESTERN REGION (WR) :**

**CHATTISGARH (CSEB) :**

1	Korba (E)-Bhatapara	D/C	280	Mar-08	Dec-07
2	LILO of Korba – Amarkantak at Pendra	D/C	23	Jun-06	Jun-07
3	Bhatapara (Suhela) – Mahasamund	D/C	124	Dec-07	Jun-07
4	LILO of Korba (E) – Bhatapara 2 <sup>nd</sup> Ckt. at Champa	D/C	2	Mar-08	Mar-08
5	JTPS-Raigarh Industrial Estate	D/C	40	Dec-06	Jul-07
6	JTPS-Raigarh	D/C	108	Jun-07	
7	Rajendra Steel-Siltara 2nd S/C	S/C	2	Jun-07	
8	LILO Bhatapara-Kumari at Bhatapar(PG)	D/C	12	Aug-07	

**Total**      **591**

**GUJARAT (GETCO) :**

1	Bardoli-Chikali	D/C	96	Dec-07	
2	Rajkot-Morbi	D/C	146	Apr-07	Jun-07
3	LILO of Kansari - Tharad D/C at Lakhani	D/C	8	Mar-07	Jun-07

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised
4	Dhanki-Adalsar	D/C	18	Mar-07	Jun-07
5	Akhakol-Puna	D/C	73	Apr-07	Jun-07
6	Akhakol-Bhatar	D/C	130	Apr-07	Jun-07
7	Akhakol-Ved	D/C	46	Apr-07	Jun-07
8	LILO of Vav-Jagadia on Ckt-1 at Kosamba	D/C	10	Mar-08	
9	LILO of Anjar-Panandro both ckt at Kukma	D/C	10	Mar-08	
10	GSEG-Kosamba	D/C	130	Mar-08	
11	LILO of 2nd ckt of Ukai(T)-Vav at Bardoli	D/C	10	Mar-08	
12	Adalsar-Bala	D/C	20	Mar-08	
13	LILO of GSEC-Kim Ckt 1 at Ichhapore	D/C	10	Mar-08	
14	LILO of Nanikhakhar-Shivlakha D/C at Varsana	D/C	20	Mar-08	
			<b>Total</b>	<b>727</b>	

**GOA :**

1	Xeldem-Cuncolin	D/C	20	Jun-07
		<b>Total</b>	<b>20</b>	

**MADHYA PRADESH (MPPTCL) :**

1	LILO of Barwaha-Nepanagar (Khandwa) at Omkareshwar	2xD/C	120	Mar-08	
2	Birsinghpur-Jabalpur	D/C	274	Sep-08	Mar-08
3	LILO of both ckt of Bhopal-Itarsi at Itarsi	2xD/C	4	Apr-07	Jun-07
4	LILO of Birsinghpur-Satna at Amarkantak	D/C	88	Mar-08	
5	LILO of Birsinghpur-Rewa for Sidhi	D/C	118	Mar-08	
6	LILO of Dhar-Rajgarh at Rajgarh(PG)	2xD/C	46	Feb-08	Mar-08
7	Seoni 400 kV(PG)-Seoni(MP)	D/C	9	Sep-07	Jun-07
8	LILO of Birsinghpur(T)-Birsinghpur(H) 2nd Ckt at Birsinghpur	D/C	8	Dec-07	
9	LILO of 1st Ckt of Itarsi-Bhopal at Mandideep	D/C	12	Mar-08	
10	LILO of 1st Ckt Damoh-Tikamgarh at Damoh(400 kV)	D/C	4	Mar-08	
11	LILO of 1st Ckt Jabalpur-Itarsi at Piparia	D/C	1	Mar-08	
12	LILO of Birsinghpur(T)-Nowrozabad D/C at Birsinghpur S/S	2xD/C	22	Mar-08	
			<b>Total</b>	<b>706</b>	

**MAHARASHTRA (MSETCL) :**

1	Theur-Jejuri	D/C	38	Dec-06	Jun-07
2	LILO of Malharpeth-Wankuswade for Satara MIDC S/S	D/C	60	Sep-06	Jun-07
3	LILO of Kanhan-Umred S/C on D/C at Umred	D/C	50	Apr-07	Jun-07
4	LILO of Apta-Chinchwad at Urse	D/C	22	Mar-07	Dec-07
5	LILO of Dhule-Dondaicha at Amalner	D/C	80	Mar-07	Dec-07
6	LILO Tarapur-Borivali at Boisar II	D/C	16	Mar-07	Jun-07
7	Boisar (PG)-Wada S/C on D/C	S/C	57	Mar-07	May-07
8	Kolhapur II-Kolhapur-III interconnector	S/C	18	Mar-08	
9	Kolhapur(400 kV) –Talandge S/C on D/C	S/C	4	Mar-08	
10	LILO of Karad – Kolhapur D/C at Wather	D/C	6	Mar-08	

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised
11	LILO Pune Ringmain at Chakan S/C on D/C	S/C	43	Mar-08	
12	Talegaon 400 kV(PG)S/S – Talegaon 220 kV S/S D/C	D/C	20	Mar-08	
13	LILO of Pusad – Nanded (ckt-1) at Hingoli	D/C	72	Mar-08	
14	LILO of Nasik – Kalwa Ckt 3&4 at Bapgaon	2xD/C	6	Mar-08	
15	LILO of Padghe – Wada (Ckt-1) at Kudus	D/C	2	Mar-08	
16	LILO of Kalwa – Padghe (Ckt-1)at Airoli (Knowledge Park)	D/C	2	Mar-08	
17	LILO of Kandalaon – Chinchwad D/C at Hinjewadi-II	2xD/C	6	Mar-08	
18	LILO of Theur – Jejuri D/ConM/C at Magarpatta	2xD/C	30	Mar-08	
19	WCL Ghugus – Matradevi	D/C	30	Mar-08	
20	LILO of Khaperkherda-Bhandara both ckts at Kanan	2xD/C	20	Mar-08	
21	<b>Satara MIDC-Vankusawade</b>	D/C	30	<b>Apr-07</b>	
		<b>Total</b>	<b>612</b>		
	<b>Total 220 kV WR</b>		<b>2656</b>		

#### **SOUTHERN REGION (SR) :**

##### **ANDHRA PRADESH (APTRANSCO) :**

1	Talapally-Chalakurthy S/C on D/C	S/C	26	Jun-06	Jun-07
2	Vemagiri-Bhimavaram-Gudivada-Nunna	D/C	332	Sep-07	
3	Chalakurthy-Kondamallepalli S/C on D/C	S/C	43	Sep-07	
4	LILO of Nellore-Renigunta at Nellore	D/C	20	Apr-07	Jun-07
5	Vetloor 400 kV S/S - Jurala	D/C	62	Jun-08	
6	Ramagundam- Bellampalli S/C on D/C	S/C	43	Mar-08	
7	LILO from Vijjeswaram-VTPS at Kamavarapukota	D/C	46	Sep-07	
8	Boddepallipeta-Tekkali S/C on D/C	S/C	44	Dec-07	
9	LILO from Mamidipally- Yeddumallaram at Shadnagar	D/C	36	Mar-08	
10	Dichpally 400 kV S/S- Dichpally	D/C	8	Dec-07	Mar-08
11	<b>Tap line of Mamidipally-Chandrayanagutta to Hyderabad Airport</b>	D/C	1	<b>Apr-07</b>	
12	<b>245 kV XLPE UG cable Asifnagar-Karwan</b>		3	<b>Apr-07</b>	
		<b>Total</b>	<b>664</b>		

##### **KARNATAKA (KPTCL) :**

1	Chikkodi-Kudachi	D/C	72	Sep-06	Jun-07
2	Neelamangala-DB Pura	D/C	33	Dec-06	Jun-07
3	Sharavati Generating Station-Dugadimane	M/C	26	Dec-06	Jun-07
4	LILO of Sharawati- Hubli at Sirsi Sw. Stn.	D/C	13	Jun-06	Jun-07
5	LILO of Hoody-Kolar at Hoskote	D/C	32	Sep-07	
6	LILO of Harohalli- T K Halli at Kanakapura	D/C	6	Dec-07	
7	Hiriyur 400kV S/S- Gowribidanur	D/C	121	Mar-08	
8	RTPS - Raichur	D/C	20	Dec-07	
9	Bastipura - Kadakola	D/C	54	Mar-08	
		<b>Total</b>	<b>377</b>		

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised
<b>KERALA (KSEB) :</b>					
1	LIGO of Kozhikode-Idukki at Malaparamba	D/C	2	Dec-06	Jun-07
2	Tap line to Vadakara S/S	D/C	2	Mar-08	
3	LIGO of New Pallom- Mavelikkara at Punnapra	D/C	10	Mar-08	
4	LIGO both ckt of Kalamassery-Brahmapuram at Pallikkara (Kochi East)	M/C	20	Dec-07	
5	Areacode(PGCIL)400kV S/S- Areacode S/S	M/C	1	Dec-07	
		<b>Total</b>	<b>35</b>		
<b>TAMILNADU (TNEB) :</b>					
1	S.P.Koil-Tharamani (Perambakkam-Tharamani portion)	S/C	45	Jun-06	Jun-07
2	LIGO of Korattur-Koyambedu at Alamathy	D/C	34	Jun-06	Sep-07
3	LIGO of Neyveli TS-II-Neyveli Zero Unit at Cuddalore	D/C	28	Jun-06	Sep-07
4	Sriperumbudur -Korattur (Changing of conductor)	S/C	20	Sep-06	Dec-07
5	<b>LIGO of S P Koil-Tharamani at Siruseri</b>	<b>D/C</b>	<b>20</b>	<b>Jun-06</b>	<b>Apr-07</b>
6	Alamathy S/S - Manali	D/C	50	Jun-07	
7	LIGO of Pugalur-Checkanoorani at Renganathapuram	D/C	24	Jun-07	
8	Myvadi Sw.Stn.-Ponnapuram	D/C	38	Dec-07	
9	Alamathy S/S - Avadi (cable)		35	Sep-07	
10	Common point - Myvadi S/S	S/C on D/C	17	Mar-08	
11	Valuthur - Paramakudi	S/C on D/C	50	Dec-07	
		<b>Total</b>	<b>361</b>		
		<b>Total 220 kV SR</b>	<b>1437</b>		
<b>EASTERN REGION (ER) :</b>					
<b>BIHAR (BSEB) :</b>					
1	Begusarai-Purnea	D/C	385	Sep-03	Jun-07
2	Muzzafarpur-Begusarai	D/C	256	Dec-03	Jun-07
3	Patna-Sipara	D/C	10	Jun-07	
		<b>Total</b>	<b>651</b>		
<b>ORISSA (GRIDCO) :</b>					
1	Theruvali -Narendrapur-Chandaka	D/C	750	Jun-03	Jun-07
2	Budhipadar-Bolangir	D/C	346	Dec-02	Jun-07
3	Mendhasal-Bidanasi (Cuttack)	D/C	66	Sep-03	Jun-07
4	IbThermal-Budhipadar(2nd D/C)	D/C	52	Apr-07	Jun-07
5	LIGO of Bhanjnagar-Chandaka at Mendhasal	D/C	12	Apr-01	Jun-07
6	Duburi-Paradeep	D/C	233	Jun-03	Jun-07
7	Kailash Chandrapur - Padmanavpur	D/C	68	Jun-06	Jun-07
8	Padmanavpur - Balasore	D/C	44	Jun-07	
		<b>Total</b>	<b>1571</b>		
<b>WEST BENGAL (WBSEB) :</b>					
1	LIGO of Farakka STPS-Durgapur circuit -I at Asansol	D/C	80	Sep-06	Jun-07
2	LIGO of one Circuit of Kasba Jeerat-Lakshmikantapur D/C at Subhashgram	D/C	1	Mar-07	Jun-07

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised
3	LILO of Farakka STPS-Arambagh at Bishnupur	D/C	4	Mar-07	Mar-08
4	Sagardighi-Gokarna	D/C	121	Mar-07	
5	Teesta LD III-New Jalpaiguri	S/C	50	Mar-07	Mar-08
6	Teesta LD IV-New Jalpaiguri	D/C	120	Mar-07	Mar-08
7	Teesta LD III-Teesta LD IV	S/C	10	Mar-07	Mar-08
8	Santaldih TPS-Bishnupur	S/C	140	Mar-07	Jun-07
9	LILO of Santaldih-Arambagh at Bisnupur	D/C	8	Mar-07	Jun-07
		<b>Total</b>	<b>534</b>		
		<b>Total 220 kV ER</b>	<b>2756</b>		
<b>NORTH-EASTERN REGION (NER) :</b>					
<b>ASSAM (ASEB) :</b>					
1	Kathalguri-Tinsukia (2nd Circuit)	S/C	50	Oct-05	Mar-08
2	BTPS-Agia-Sarusajai (2nd Circuit)	S/C	396	Oct-05	Mar-08
		<b>Total</b>	<b>446</b>		
		<b>Total 220 kV NER</b>	<b>446</b>		
		<b>Total 220 kV SS</b>	<b>10672</b>		
		<b>Total 220 kV CS&amp;SS</b>	<b>11141</b>		

## SUB STATIONS PROGRAMME FOR 07-08

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

### **765 KV CENTRAL SECTOR (CS):**

**POWERGRID (PGCIL) :**

1	Seoni Sub station ( 7x ( 500-333 ))	765/400	7x500	35	Feb-07	Jun-07
2	Seoni Sub St Extn. (3x500)	765/400	3x500	1500	Aug-07	
<b>Total 765 kV CS</b>				<b>1535</b>		

### **400 KV CENTRAL SECTOR (CS):**

**POWERGRID (PGCIL) :**

1	Muzaffarpur (ICT-II)	400/220	1x315	315	Apr-07	Jun-07
2	Delhi (GIS)	400/220	2x315	630	May-07	Jun-07
3	Wagoora (3rd ) (3x105)	400/220	3x105	315	Dec-06	Jun-07
4	Seoni	400/220	2x315	630	Feb-07	Jun-07
5	Raigarh (New)	400/220	2x315	630	Feb-07	Jul-07
6	Ranchi	400/220	2x315	630	Apr-07	Jun-07
7	Ludhiana (New)	400/220	2x315	630	Mar-07	Mar-08
8	Fatehabad (New)	400/220	2x315	630	Mar-07	Mar-08
9	Kota	400/220	2x315	630	Mar-08	
10	Kankroli	400/220	3x315	945	Mar-08	
11	Gwalior (New)	400/220	2x315	630	Mar-07	Jun-07
12	Bhatapara (New)	400/220	2x315	630	Aug-07	Aug-07
13	Itarsi Extn.	400/220	1x315	315	Nov-07	
14	Kadapah Extn.	400/220	1x315	315	Jun-07	
15	Gooty Extn.	400/220	1x315	315	Jun-07	
16	Munerabad Extn.	400/220	1x315	315	Jun-07	Sep-07
17	Kolar Extn.	400/220	3x167	501	Jun-07	Jun-07
18	Gazuwaka Extn.	400/220	1x315	315	Jun-07	Sep-07
19	Khammam Extn.	400/220	1x315	315	Jun-07	Sep-07
20	Melakottaiyur	400/220	2x315	630	Dec-07	
21	Kozhikode	400/220	2x315	630	Dec-07	
22	Hiriyur Extn.	400/220	1x315	315	Dec-07	
23	Pugalur	400/220	2x315	630	Dec-07	
24	Warrangal	400/220	2x315	630	Dec-07	
25	Arasur	400/220	2x315	630	Dec-07	
26	Pondicherry	400/220	2x315	630	Dec-07	
27	Tirunelveli	400/220	2x315	630	May-07	
28	Udumalpet Extn.	400/220	1x315	315	Dec-07	
29	Vijayawada Extn.	400/220	1x315	315	Dec-07	
30	Baripada Extn.	400/220	1x315	315	May-08	Mar-08
31	Rajgarh (New)	400/220	2x315	630	Dec-07	
32	Amritsar (Aug)	400/220	1x315	315	Mar-08	
33	Moga (Aug)	400/220	1x250	250	Mar-08	
34	Patna 2nd ICT	400/220	1x315	315	May-07	Jun-07
35	Bareilly Sw. Stn. Extn.	400			Jul-07	Jun-07

**Total 400 kV CS**

**16816**

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

### 400 kV STATE SECTOR (SS) :

#### **NORTHERN REGION (NR) :**

##### **HIMACHAL PRADESH (HPSEB) :**

1	Kunihar (1st)	400/132	1x315	315	Jul-06	Jun-07
2	Kunihar (2nd )	400/132	1x315	315	Jul-06	Jun-07
		<b>Total</b>		<b>630</b>		

##### **RAJASTHAN (RVPN)**

1	Kankroli S/S (2x315)	400/220	2x315	630	Mar-08	
		<b>Total</b>		<b>630</b>		

##### **UTTAR PRADESH (UPPCL) :**

1	Sarnath Extn.2x(160-100)	400/220	120	120	Mar-08	
2	Bagpat	400/220	3x315	945	Mar-08	
		<b>Total</b>		<b>1065</b>		
		<b>Total 400 kV NR</b>		<b>2325</b>		

#### **WESTERN REGION (WR) :**

##### **CHHATTISGARH (CSEB) :**

1	Bodhghat	400/220	1x315	315	Apr-07	Apr-08
		<b>Total</b>		<b>315</b>		

##### **GUJARAT (GETCO) :**

1	Rajkot(Hadala)	400/220	1x315	315	Mar-08	
2	Ranchodpura(Vadavi)(2nd)	400/220	1x315	315	Mar-08	
		<b>Total</b>		<b>630</b>		
		<b>Total 400 kV WR</b>		<b>945</b>		

#### **SOUTHERN REGION (SR) :**

##### **ANDHRA PRADESH (APTRANSCO) :**

1	Dichpally	400/220	2x315	630	Mar-07	Sep-07
2	Gajwel	400/220	2x315	630	Dec-07	
		<b>Total</b>		<b>1260</b>		

##### **KARNATAKA (KPTCL) :**

1	Talaguppa (3rd)	400/220	1x315	315	Sep-07	Dec-07
		<b>Total</b>		<b>315</b>		

##### **TAMILNADU (TNEB) :**

1	Alamathy	400/230	2x315	630	Dec-06	Sep-07
		<b>Total</b>		<b>630</b>		
		<b>Total 400 kV SR</b>		<b>2205</b>		

#### **EASTERN REGION (ER) :**

##### **JHARKHAND (JSEB) :**

1	Hatia (Ranchi)	400/220	2x295	590	Mar-08	
2	Chandil	400/220	1x295	295	Mar-08	
3	Hatia	400/220	2x150	300	Mar-08	
		<b>Total</b>		<b>1185</b>		

##### **WEST BENGAL (WBSEB) :**

1	Durgapur	400/220	7x105	735	Mar-07	Jun-07
		<b>Total</b>		<b>735</b>		
		<b>Total 400 kV ER</b>		<b>1920</b>		
		<b>Total 400 kV SS</b>		<b>7395</b>		
		<b>Total 400 kV CS&amp;SS</b>		<b>24211</b>		

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

### **220 KV CENTRAL SECTOR (CS) :**

#### **POWERGRID (PGCIL) :**

1	Pithoragarh	220/132	6x33.3	200	Mar-07	Mar-08
2	Sitarganj	220/132	6x100	600	Mar-07	Sep-07
3	Raebareilly	220/132	200	200	May-07	Jun-07

**Total**

**1000**

#### **DAMODER VALLEY CORPORATION (DVC) :**

1	Giridih	220/132	2x150	300	Mar-08	
2	Gola	220/132	2x50	100	Mar-08	

**Total**

**400**

**Total 220 kV CS**

**1400**

### **220 KV STATE SECTOR (SS) :**

#### **NORTHERN REGION (NR) :**

##### **CHANDIGARH (CHND) :**

1	Manimajra (Chandigarh)	220/66	1x100	100	Apr-07	Jun-07
<b>Total</b>				<b>100</b>		

##### **DELHI (DTL) :**

1	Masjid-Moth (Sirifort)	220/33/11	1x100	100	Mar-06	Jun-07
2	Shalimar Bagh (3rd)	220/33/11	1x100	100	Mar-06	Mar-08
3	Bawana DSIDC	220/33/11	2x100	200	Apr-06	Jun-07
4	Gopalpur (4th)	220/33	1x100	100	Mar-07	Mar-08
5	Vasant Kunj (3rd)	220/33	1x100	100	Mar-07	Jun-07
6	GT S/S (Aug)	220/33	2x160	320	Mar-07	Dec-07
7	Bawana DSIDC Extn.	220/33	1x100	100	Dec-07	
8	Aug. at GT/IP Extn.2x(160-100)	220/33	120	120	Dec-07	
9	SOW (1x100 MVA-4 <sup>th</sup> ICT)	220/66	1x100	100	Mar-08	
10	Masjid Moth Extn.	220/33	1x100	100	Sep-07	
11	Electric Lane (2x160 MVA)	220/33	2x160	320	Mar-08	
12	AIIMS (2x160 MVA)	220/33	2x160	320	Mar-08	

**Total**

**1980**

##### **HIMACHAL PRADESH (HPSEB) :**

1	Nalagarh	220/66	2x100	200	Mar-07	Mar-08
2	Pong(Aug) (40-20 )	220/66	1x20	20	Mar-07	Jun-07
3	Bokhtoo S/S , 1x25 MVA	220/66	1x25	25	Mar-08	
4	Jassure S/S, 1x25 MVA	220/33	1x25	25	Mar-08	
5	Baddi(Addl.) , 1x100 MVA	220/66	1x100	100	Mar-08	

**Total**

**370**

##### **HARYANA (HVPN) :**

1	Rania (2nd)	220/132	1x100	100	Jun-05	May-07
2	Salempur	220/66	2x100	200	Jun-06	Jun-07
3	IMT Manesar (2nd)	220/66	1x100	100	Mar-06	Jun-07
4	Daultabad	220/66	2x100	200	Mar-06	Jun-07
5	IMT Manesar(Aug.)	220/66	1x100	100	Mar-07	Mar-08
6	Nilokheri S/S, (2x100 MVA)	220/132	2x100	200	Mar-08	
7	Bhuna, (2x 100 MVA)	220/132	2x100	200	Dec-07	

**Total**

**1100**

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised
<b>PUNJAB (PSEB) :</b>						
1	Abohor (New) (1st )	220/132	1x100	100	Mar-06	Jun-07
2	Landran (New) (1st )	220/66	1x100	100	Mar-06	Jun-07
3	Kartarpur (Aug) (2nd)	220/66	1x100	100	Mar-06	Jun-07
4	Lalton Kalan (Aug) (3rd)	220/66	1x100	100	Mar-06	Jun-07
5	Pakhowal (new)	220/66	1x100	100	Mar-06	Jun-07
6	Dhuri (Aug) (2nd )	220/66	1x100	100	Mar-06	Dec-07
7	Ghobaya (Aug) (1x100-1x50)	220/66	1x50	50	Mar-06	Mar-08
8	Amloh Rd Gobindgarh	220/66	1x100	100	Mar-07	Sep-07
9	Ferozepur Road Ludhiana	220/66	1x100	100	Mar-07	Oct-07
10	Kharar	220/66	1x100	100	Mar-07	Dec-07
11	Sultanpur Lodhi	220/66	2x50	100	Mar-07	Mar-08
12	GHTP (1x100-1x50)	220/66	2x50	100	Mar-07	Sep-07
13	Nabha S/S , 1x100MVA	220/66	1x100	100	Aug-07	
14	Kangar S/S, 1x100 MVA	220/66	1x100	100	Jun-07	
<b>Total</b>				<b>1350</b>		
<b>RAJASTHAN (RVPN) :</b>						
1	Khinvsar S/S 1X100 MVA	220/132	1x100	100	Mar-08	
<b>Total</b>				<b>100</b>		
<b>UTTAR PRADESH (UPPCL) :</b>						
1	Nanauta (160+100)	220/132	260	260	Mar-08	
2	Sambhal, Muradabad	220/132	2x100	200	Dec-07	
3	Gajraula	220/132	2x100	200	Mar-08	
4	Loni	220/132	2x100	200	Dec-07	
5	Dadri	220/132	2x100	200	Mar-08	
6	Sikandrabad	220/132	2x100	200	Dec-07	
7	Muzaffarnagar (160+100)	220/132	260	260	Mar-08	
8	Jhansi	220/132	2x100	200	Dec-07	
9	Dohna, Bareilly	220/132	2x100	200	Mar-08	
10	Sohawal	220/132	2x100	200	Mar-08	
11	Atrauli Extn. 2	220/132	1x100	100	Mar-08	
12	Bharthana	220/132	2x100	200	Dec-07	
13	Etah	220/132	2x100	200	Mar-08	
14	Gajokhar	220/132	2x100	200	Mar-08	
15	Rewa Road Aug. (160-100)	220/132	1x100	100	Mar-08	
16	Azamgarh Aug.2x(160-100)	220/132	120	120	Mar-08	
17	Basti Aug. (160-100)	220/132	60	60	Mar-08	
18	Rampur	220/132	2x100	200	Mar-08	
19	Nehtaur Aug. (160-100)	220/132	60	60	Mar-08	
20	Muradnagar Aug. (160-100)	220/132	60	60	Mar-08	
21	Saharanpur Aug. (160-100)	220/132	60	60	Mar-08	
22	Gokul Aug. (160-100)	220/132	60	60	Mar-08	
23	Sultanpur Aug. (160-100)	220/132	60	60	Mar-08	
24	Shahjahanpur 2x(160-100)	220/132	120	120	Mar-08	
25	C.B. Ganj 2x(160-100)	220/132	120	120	Mar-08	
<b>Total</b>				<b>3840</b>		

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised
<b>UTTARAKHAND (UPCL) :</b>						
1	Dehradun (1st)	220/132	1x100	100	Jun-06	Jun-07
2	Dehradun (2nd)	220/132	1x100	100	Jun-06	Jun-07
3	Almora	220/132	4x33.3	133	Dec-06	Dec-07
4	Dehradun (Selakui)	220/132	2x100	200	Aug-06	Jun-07
	<b>Total</b>			<b>533</b>		
<b>JAMMU &amp; KASHMIR (J&amp;K):</b>						
1	Zainkote (Aug)	220/132	3x50	150	Mar-08	
	<b>Total</b>			<b>150</b>		
	<b>Total 220 kV NR</b>			<b>9523</b>		
<b>WESTERN REGION (WR) :</b>						
<b>CHHATTISGARH (CSEB) :</b>						
1	Mandirhasod	220/132	1x160	160	Apr-07	Mar-08
2	Bhatapara(Suhela)	220/132	1x160	160	Apr-07	Mar-08
3	Vishrampur	220/132	1x160	160	Apr-07	Mar-08
4	Rajnandgaon	220/132	1x160	160	Mar-08	
	<b>Total</b>			<b>640</b>		
<b>GUJARAT (GETCO) :</b>						
1	Puna	220/66	2X160	320	Mar-08	
2	Bhatar	220/66	2X160	320	Mar-08	
3	Ved	220/66	2X160	320	Mar-08	
4	Lakhani	220/66	2x100	200	Mar-07	Jun-07
5	Versana	220/66	1x100	100	Mar-08	
6	Kosamba	220/66	1x100	100	Mar-08	
7	Kukma	220/66	1x100	100	Mar-08	
	<b>Total</b>			<b>1460</b>		
<b>GOA :</b>						
1	Tivim (2nd )	220/110	1x100	100	Mar-08	
2	Xeldem (Aug./Additional)	220/33	1x50	50	Mar-08	
	<b>Total</b>			<b>150</b>		
<b>MADHYA PRADESH (MPPTCL) :</b>						
1	Mansa (Additional)	220/132	1x160	160	Mar-08	
2	Dhuri (Additional)	220/132	1x160	160	Mar-08	
3	Sidhi(New)	220/132	1x160	160	Mar-08	
4	Sidhi(Additional)	220/132	1x160	160	Mar-08	
5	Sabalgarh	220/132	1x160	160	Mar-08	
6	Chhatarpur	220/132	1x160	160	Mar-08	
7	Mandideep	220/132	1x160	160	Mar-08	
8	Indore(E)	220/33	1x100	100	Mar-08	
9	Chhindwara	220/132	1x160	160	Mar-08	
10	Astha	220/132	1x160	160	Mar-08	
	<b>Total</b>			<b>1540</b>		

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

**MAHARASHTRA (MSEB) :**

1	Urse	220/33	2x25	50	Mar-08	
2	Amalner	220/132	2x100	200	Mar-08	
3	Temburni	220/33	1x25	25	Mar-08	
4	Umred(2nd)	220/33	1x25	25	Mar-08	
5	Savangi(2nd)	220/33	100	100	Mar-08	
6	Talangde	220/33	1x50	50	Mar-08	
7	Hinjewadi	220/22	2x50	100	Mar-08	
8	Magarpatta	220/22	2x50	100	Mar-08	
9	Wather	220/132	2x100	200	Mar-08	
10	Wather	220/33	2x50	100	Mar-08	
11	Chakan	220/132	2x200	400	Mar-08	
12	Chakan	220/33	2x50	100	Mar-08	
<b>Total</b>				<b>1450</b>		
<b>Total 220 kV WR</b>					<b>5240</b>	

**SOUTHERN REGION (SR) :**

**ANDHRA PRADESH (APTRANSCO) :**

1	Tekkali	220/132	1x100	100	Mar-07	Dec-07
2	Kamavarepukota	220/132	1x100	100	Mar-07	Jun-07
3	Kondamallepalli	220/132	1x100	100	Sep-07	
4	Shadnagar	220/132	1x100	100	Mar-08	
5	Brandix	220/132	2x100	200	Mar-08	
<b>Total</b>				<b>600</b>		

**KARNATAKA (KPTCL) :**

1	Puttur	220/110	2x100	200	Jun-06	Jun-07
2	HAL	220/66	2x100	200	Dec-07	
3	Sirsi	220/66	1x50	50	Jun-07	
4	Shahapur	220/110	2x100	200	Sep-06	Dec-07
5	Yachanahalli	220/66	2x100	200	Dec-06	Dec-07
<b>Total</b>				<b>850</b>		

**KERALA (KSEB) :**

1	Malapparamba	220/110	2x100	200	Dec-06	Sep-07
2	Punnapra	220/110	2x100	200	Jun-07	Mar-08
<b>Total</b>				<b>400</b>		

**TAMILNADU (TNEB) :**

1	Siruseri	230/110	2x100	200	Jun-07	
2	Ponnapuram	230/110	2x100	200	Dec-07	
3	Valuthur	230/110	3x100	300	Mar-08	
4	Renganathapuram	230/110	2x50	100	Jun-07	
<b>Total</b>				<b>800</b>		
<b>Total 220 kV SR</b>					<b>2650</b>	

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

**EASTERN REGION (ER) :**

**BIHAR (BSEB) :**

1	Begusarai	220/132	2x100	200	Mar-08
2	Siwan (New) (Gopalganj)	220/132	2x100	200	Mar-08
3	Sipara	220/132	2x100	200	Mar-08
4	Hazipur	220/132	2x100	200	Mar-08
5	Biharshariff Extn.	220/132	1x150	150	Mar-08
6	Pusauli	220/132	2x150	300	Mar-08
7	Dehri	220/132	1x100	100	Mar-08
8	Khagaul	220/132	1x100	100	Mar-08
<b>Total</b>				<b>1450</b>	

**ORISSA (GRIDCO) :**

1	Burla	220/132	2x100	200	Dec-05	Jun-07
2	Bolangir	220/132	2x100	200	Dec-05	Jun-07
3	Paradeep (1st)	220/132	1x100	100	Dec-04	Jun-07
4	Paradeep (2nd)	220/133	1x100	100	Mar-05	Dec-07
5	Tarkera (4th)	220/132	1x100	100	Mar-08	
<b>Total</b>				<b>700</b>		

**WEST BENGAL (WBSEB) :**

1	Krishna Nagar	220/132	2x160	320	Jun-05	Mar-08
2	Asansol	220/132	1x160	160	Dec-06	Mar-08
3	Singur	220/132	2x160	320	Mar-08	
<b>Total</b>				<b>800</b>		
<b>Total 220 kV ER</b>				<b>2950</b>		

**NORTH-EASTERN REGION (NER) :**

**ASSAM (ASEB) :**

1	Agia	220/132	1x50	50	Dec-04	Mar-08
2	Agia	220/132	1x25	25	Dec-04	Mar-08
3	Balipara (Tezpur)	220/132	1x50	50	Dec-05	Mar-08
<b>Total</b>				<b>125</b>		

**ARUNACHAL PRADESH (APSEB) :**

1	Deomali	220/132	4x11.1	44	Dec-04	Jun-07
<b>Total</b>				<b>44</b>		
<b>Total 220 kV NER</b>				<b>169</b>		
<b>Total 220 kV SS</b>				<b>20533</b>		
<b>Total 220 kV CS&amp;SS</b>				<b>21932</b>		

**132 kV STATE SECTOR :**

**ARUNACHAL PRADESH (APSEB) :**

1	Namsai	132/33	1x10	10	Dec-05	Jun-07
2	Itanagar	132/33	1x20	20	Jun-06	Jun-07
3	Bhalukong	132/33	1x10	10	Jun-06	Jun-07
4	Passi Ghat	132/33	1x10	10	Jun-06	Jun-07
5	Changlang	132/33	1x10	10	Jun-06	Jun-07
6	Khonsa	132/33	1x10	10	Jun-06	Jun-07
7	Tenga	132/33	1x10	10	Jun-06	Jun-07
<b>Total</b>				<b>80</b>		

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

**ASSAM (ASEB) :**

1	Dhemaji	132/33	1x16	16	Oct-05	Jun-07
		<b>Total</b>		<b>16</b>		

**MEGHALAYA**

1	Lumshung 2x5	132/33	2x5	10	Jun-06	Jun-07
2	Nangalibra (Aug.)	132/33	1x12.5	25	Jun-06	Jun-07
3	Umiam	132/33	2x20	40	Mar-07	Jun-07

<b>Total</b>	<b>75</b>
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<b>Total 132 kV NER</b>	<b>171</b>
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## TRANSMISSION LINES PROGRAMME FOR 08-09

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

### **765 KV CENTRAL SECTOR :**

#### **POWERGRID (PGCIL) :**

1	Seoni - Wardha (operated at 400kV) Line1	S/C	269	Jun-08	Jun-08
2	LILO of Tehri-Meerut at Tehri Pooling point (op. at 400 kV)	D/C	36	Jun-08	
3	Agra - Gwalior - II (operated at 400 kV)	S/C	130	Jan-09	
<b>Total 765 kV CS</b>			<b>435</b>		

### **400 KV CENTRAL SECTOR :**

#### **POWERGRID (PGCIL) :**

1	Koteswar -Tehri Pooling Point	D/C	16	Jun-08	
2	Koldam - Nalagarh (Quad)	D/C	90	Sep-08	Oct-08
3	Koldam - Ludhiana (JVPG)	D/C	306	Sep-08	
4	Parbati-II - Koldam line -I (Quad)	S/C	61	Dec-08	
5	Parbati-II - Koldam line -II (Quad)	S/C	68	Dec-08	
6	Wardha - Akola	D/C	368	Jun-08	Jun-08
7	Akola - Aurangabad	D/C	530	Jun-08	Jun-08
8	Tirunelveli - Edamon (KSEB)	M/C	322	Nov-08	
9	Edamon - Muvattupuzha (PG) (Quad)	D/C	290	Nov-08	
10	Muvattupuzha - North Trichur (Quad)	D/C	180	Nov-08	
11	Zerda -Kankroli	D/C	468	Jan-09	
12	Gandhar-Kawas	D/C	190	Apr-08	
13	Gandhar-Rajkot	D/C	600	Apr-08	
14	LILO Bina-Nagda at Shujalpur	2xD/C	60	Apr-08	
<b>Total 400 kV CS</b>			<b>3549</b>		

### **400 KV STATE SECTOR :**

#### **NORTHERN REGION (NR) :**

#### **RAJASTHAN (RVPN) :**

1	Chhabra TPS-Bhilwara S/C	S/C	270	Mar-09	
2	Chhabra TPS-Hindaun S/C	S/C	280	Mar-09	
3	Suratgarh STPS -Bikaner S/C	S/C	185	Mar-09	
<b>Total</b>			<b>735</b>		

#### **UTTARAKHAND (UPCL) :**

1	Srinagar-Nehtaur	S/C	150	Dec-08	
2	Srinagar-Kashipur	S/C	175	Dec-08	
3	Lohri Nagpala-Srinagar	S/C	150	Dec-08	
4	Lohri Nagpala-Rishikesh	S/C	200	Dec-08	
5	Lohri Nagpala-Pala Maneri	S/C	50	Dec-08	
6	Tapovan-Bawla Nand-Prayag	S/C	40	Dec-08	
7	Tapovan -Srinagar	S/C	100	Dec-08	

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised
8	Tapovan-Vishnu Prayag	S/C	50	Dec-08	
9	Kotli Behl-Rishikesh	D/C	50	Dec-08	
10	Kotli Behl-Kahipur	S/C	150	Dec-08	
11	Kishau Bandh-Rishikesh	S/C	150	Dec-08	
12	Kishau Bandh-Dakpathar	S/C	50	Dec-08	
		<b>Total</b>	<b>1315</b>		
		<b>Total 400 kV NR</b>	<b>2050</b>		

**WESTERN REGION (WR) :**

**CHHATTISGARH (CSEB) :**

1	Bhilai (Khedamara)-Raipur	D/C	100	Mar-09
		<b>Total</b>	<b>100</b>	

**GUJARAT (GETCO) :**

1	LILO of Jhanor- Vapi at Akhakol	D/C	28	Dec-08
2	Kasor-Vapi	D/C	260	May-08
3	Kasor-New Mumbai	D/C	320	May-08
4	Gandhar-Hadala	D/C	680	May-08
5	Gandhar-Kawas	D/C	140	May-08
		<b>Total</b>	<b>1428</b>	

**MADHYA PRADESH (MPPTCL) :**

1	Indore – Pithampura	D/C	80	Mar-09
		<b>Total</b>	<b>80</b>	
		<b>Total 400 kV WR</b>	<b>1608</b>	

**SOUTHERN REGION (SR) :**

**ANDHRA PRADESH (APTRANSCO) :**

1	LILO of Srisailam-Vijayawada at Narasaraopet	D/C	5	Dec-07	Jun-08
2	Narasaraopet -Vemagiri	D/C	170	Dec-07	Jun-08
		<b>Total</b>	<b>175</b>		
		<b>Total 400 kV SR</b>	<b>175</b>		

**EASTERN REGION (ER) :**

**WEST BENGAL (WBSEB) :**

1	LILO of Farakka-Subhashgram at Sagardighi	D/C	26	Dec-08
2	Sagardighi TPP-Subhasgram (PGCIL)	S/C	245	Dec-08
3	Sagardighi - Purulia (PGCIL)	D/C	60	Dec-08
		<b>Total</b>	<b>331</b>	
		<b>Total 400 kV ER</b>	<b>331</b>	
		<b>Total 400 kV SS</b>	<b>4164</b>	
		<b>Total 400 KV CS&amp;SS</b>	<b>7713</b>	

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

**220 KV CENTRAL SECTOR (CS) :**

**POWERGRID (PGCIL) :**

**A. International Lines**

1	Kabul-Pul-e-Khumri (Afganistan)	S/C	202	Oct-08
<b>Total</b>			<b>202</b>	

**B. National Lines**

1	Vapi (PG) - Kharadpada (DNH)	D/C	36	Aug-08
2	Vapi (PG) - Magarwada (DD) & 7 Km Multi-ckt Portion	D/C	50	Aug-08
<b>Total</b>			<b>86</b>	

**DAMODER VALLEY CORPORATION (DVC) :**

1	Mejia-Gola - Ramgarh	D/C	406	Dec-05	Dec-08
<b>Total</b>			<b>406</b>		
<b>Total 220 kV CS</b>			<b>694</b>		

**220 KV STATE SECTOR :**

**NORTHERN REGION (NR) :**

**RAJASTHAN (RVPN) :**

1	Chhabra TPS-Jhalawar S/C	S/C	100	Mar-09
2	LILO Bhilwara-Pali at Bhilwara D/C	D/C	10	Mar-09
3	LILO Bhilwara-Bali at Bhilwara D/C	D/C	10	Mar-09
4	Hindaun (400 kV)-Hindaun (220 kV) D/C	D/C	20	Mar-09
5	Hindaun (400 kV)-Mandawar D/C	D/C	65	Mar-09
6	Chhabra-Baran-Dahra	D/C	130	Mar-09
7	LILO Bikaner-Sridungargarh at Bikaner (400 kV) D/C	D/C	20	Mar-09
8	LILO Bikaner- Nagaur at Bikaner (400 kV) D/C	D/C	20	Mar-09
9	LILO one ckt Bassi-Heerapura at Jagatpura	D/C	22	Mar-09
10	Giral LTPS- Balotra	S/C	100	Mar-09
11	Barsinghsar TPS-Phalodi S/C	S/C	150	Mar-09
12	LILO of Chittorgarh- Debari, S/C at Kankroli	D/C	70	Mar-09
<b>Total</b>			<b>717</b>	

**UTTAR PRADESH (UPPCL) :**

1	Nanauta-Muzaffarnagar	S/C	65	Apr-08
2	Matore (PG)-Gajraula		75	Apr-08
3	LILO Khurja-Muradnagar at Sikandrabad	D/C	36	Apr-08
4	G. NOIDA-Sikandrabad		15	Apr-08
5	LILO Paricha-Safai at Bharthana	D/C	8	Apr-08
6	LILO C.B. Ganj-Bareilly at Dona	D/C	10	Apr-08
7	LILO Gonda-Sultanpur at Sohawal	D/C	60	Apr-08
8	LILO Sarojininagar-Chinhat at Gomtinagar	D/C	14	Apr-08
9	Basti-Gonda	D/C	113	Apr-08
10	LILO Orai-Paricha at Jhansi	D/C	50	Apr-08
<b>Total</b>			<b>446</b>	

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised
<b>UTTARAKHAND (UPCL) :</b>					
1	Lakhawar Vyasi –Dakpathar	D/C	70	Dec-08	
2	Lakhawar Vyasi –Dehradun	D/C	70	Dec-08	
		<b>Total</b>	<b>140</b>		
<b>JAMMU &amp; KASHMIR (J&amp;K) :</b>					
1	Zainkote-Wagoora-Mirbazar	D/C	156	Mar-09	
2	LILO of Zainkote – Wagoora at Budgam	D/C	8.6	Mar-09	
3	Gladni-Udhampur	S/C	48	Apr-08	
		<b>Total</b>	<b>213</b>		
		<b>Total 220 kV NR</b>	<b>1516</b>		
<b>WESTERN REGION (WR) :</b>					
<b>CHATTISGARH (CSEB) :</b>					
1	Korba-Darri-Bishrampur	D/C	306	Mar-08	Dec-08
2	Bhatapara (Suhela) – Bemetara	D/C	89	Mar-08	Oct-08
3	Kumhari (PGCIL) – Mandirhasod	D/C	40	Mar-08	Apr-08
4	Bhatapara 400 kV (PGCIL) – Bhatapara	S/C	30	Dec-07	Mar-09
5	Siltara-Doma	D/C	100	Jun-08	
		<b>Total</b>	<b>565</b>		
<b>GUJARAT (GETCO) :</b>					
1	Utran - Kosamba	2xD/C	160	Dec-08	
2	Kosamba-Mobha	2xD/C	440	Dec-08	
		<b>Total</b>	<b>600</b>		
<b>MADHYA PRADESH (MPPTCL) :</b>					
1	Amarkantak-Jabalpur	D/C	470	Dec-08	
2	LILO of Gwalior-Malanpur at Gwalior 400 kV (PG)	D/C	34	Mar-08	Apr-08
3	LILO of Birsinghpur-Satna 1st Ckt at Chachai	D/C	88	Apr-08	
4	Satna-Chhatarpur	S/C	140	Apr-08	
5	Shivpuri-Sabalgarh	D/C	210	Apr-08	
6	Seoni (PG)-Chindwara	D/C	140	Apr-08	
7	Pitampur-Raigarh (2nd) Ckt	S/C	69	Apr-08	
8	LILO of Pitampur-Raigarh D/C at Rajgarh(PG)	2xD/C	60	Apr-08	
9	Bhopal(400 kV)-Ashta	D/C	194	Apr-08	
10	Pithampura 400 kV – Pithampura Inter Connector	D/C	20	Mar-09	
		<b>Total</b>	<b>1425</b>		
<b>MAHARASHTRA (MSETCL) :</b>					
1	Kolhapur III-Mundhadtitta	S/C	40	Mar-07	Apr-08
		<b>Total</b>	<b>40</b>		
		<b>Total 220 kV WR</b>	<b>2630</b>		

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

**SOUTHERN REGION (SR) :**

**ANDHRA PRADESH (APTRANSCO) :**

1	Vijayawada TPS-Tallapally	D/C	130	Jun-08
2	Vetloor 400 kV S/S - Jurala	D/C	62	Jun-08
3	Narasaraopet 400 kV -Narsaraopet 220 kV	D/C	50	Dec-08
4	Narasaraopet 400 kV -Parchur 220 kV	D/C	120	Dec-08
5	Parchur -Podili	D/C	152	Dec-08
6	RTPP-Pulivendala	D/C	80	Sep-08
7	Vetloor- Wanaparthy	D/C	40	Jun-08
8	Kalpa S/S - Ms. Brandix	D/C	42	Jun-08
9	Gajwel -Kamareddy S/C on D/C	S/C	67	Jun-08
<b>Total</b>			<b>743</b>	

**KARNATAKA (KPTCL) :**

1	Hiriyur 400kV S/S- Tallak	D/C	61	Jun-08
<b>Total</b>			<b>61</b>	

**KERALA (KSEB) :**

1	LILO of Kayamkulam-Edaman (ckt-2) at Edappon	D/C	17	Dec-08
<b>Total</b>			<b>17</b>	

**TAMILNADU (TNEB) :**

1	Malumichampatty- Common point	D/C	81	Jun-08
2	LILO of Alagar koil(North Madurai)- Karaikudi at Valuthur S/S	D/C	210	Jun-08
<b>Total</b>			<b>291</b>	
<b>Total 220 kV SR</b>			<b>1112</b>	

**EASTERN REGION (ER) :**

**JHARKHAND (JSEB) :**

1	Hatia-Lohardagga-Latehar-Daltonganj-Garhwa	D/C	450	Mar-07	Mar-09
2	PGCIL (Ranchi) - Hatia (Grid)	D/C	40	Mar-07	Mar-09
<b>Total</b>			<b>490</b>		
<b>Total 220 kV ER</b>			<b>490</b>		
<b>Total 220 kV SS</b>			<b>5748</b>		
<b>Total 220 kV CS&amp;SS</b>			<b>6442</b>		

## SUB STATIONS PROGRAMME FOR 08-09

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

**± 500 kV HVDC Terminal :**

**CENTRAL SECTOR (CS):**

**POWERGRID (PGCIL) :**

1	Talchar Aug.	500	500	Mar-09
2	Kolar Aug.	500	500	Mar-09
<b>TOTAL (CS) HVDC</b>			<b>1000</b>	

**400 kV CENTRAL SECTOR (CS) :**

**POWERGRID (PGCIL) :**

1	Wardha	400/220	2x315	630	Jun-08
2	Damoh	400/220	2x315	630	Aug-08
3	Pune (New)	400/220	2x315	630	Apr-08
4	Pandharpur/Solapur (New)	400/220	2x315	630	Apr-08
5	Shujalpur	400/220	2x315	630	Apr-08
6	Muvattapuzha	400/220	2x315	630	Nov-08
7	Trivandrum Extn.	400/220	1x315	315	Nov-08
<b>Total 400 kV CS</b>				<b>4095</b>	

**400 kV STATE SECTOR (SS) :**

**NORTHERN REGION (NR) :**

**RAJASTHAN (RRVPN) :**

1	Bhilwara S/S (1x315)	400/220	315	315	Mar-09
2	Hindaun S/S (1x315)	400/220	315	315	Mar-09
3	Bikaner S/S (1X315)	400/220	315	315	Mar-09
<b>Total 400 kV NR</b>				<b>945</b>	

**WESTERN REGION (WR) :**

**CHHATTISGARH (CSEB) :**

1	Bodhghat	400/220	1x315	315	Apr-07	Apr-08
<b>Total 400 kV WR</b>				<b>315</b>		

**SOUTHERN REGION (SR) :**

**ANDHRA PRADESH (APTRANSCO) :**

1	Narasaraopet	400/220	2x315	630	Dec-08
<b>Total 400 kV SR</b>				<b>630</b>	
<b>Total 400 kV SS</b>				<b>1890</b>	
<b>Total 400 kV CS&amp;SS</b>				<b>5985</b>	

**220 kV CENTRAL SECTOR (CS) :**

**POWERGRID (PGCIL) :**

**A. International S/S**

1	Chimtala (Afganistan)	220/110	1x160	160	May-08
<b>Total 220 kV CS</b>				<b>160</b>	

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

**220 kV STATE SECTOR (SS) :**

**NORTHERN REGION (NR) :**

**RAJASTHAN (RVPN) :**

1	Baran S/S (1x100)	220/132	100	100	Mar-09
2	Jagatpura (1x100)	220/132	100	100	Mar-09
<b>Total</b>				<b>200</b>	

**JAMMU & KASHMIR (J&K):**

1	Mirbazar	220/132	320	320	Mar-09
2	Budgam	220/132	320	320	Mar-09
3	Barn	220/132	2x160	320	Apr-08
<b>Total</b>				<b>960</b>	
<b>Total 220 kV NR</b>				<b>1160</b>	

**WESTERN REGION (WR) :**

**MAHARASHTRA (MSEB) :**

1	Kolshet(Aug)	220/100	200	200	Apr-08
2	Tambati(Aug)	220/100	100	100	Apr-08
3	Tambati(Aug)	220/22	25	25	Apr-08
4	Nagothane(Aug)	220/22	25	25	Apr-08
<b>Total 220 kV WR</b>				<b>350</b>	
<b>Total 220 kV SS</b>				<b>1510</b>	
<b>Total 220 kV CS&amp;SS</b>				<b>1670</b>	

## TRANSMISSION LINES PROGRAMME FOR 09-10

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

### **± 500 KV HVDC Line :**

#### **POWERGRID (PGCIL) :**

1	Balia-Bhiwadi HVDC Bipole (2500 MW)	Bipole	1606	Sep-07	Sep-09
		<b>Total HVDC</b>	<b>1606</b>		

### **765 kV CENTRAL SECTOR :**

#### **POWERGRID (PGCIL) :**

1	Seoni-Bina (operated at 400kV)	S/C	293	Sep-09
2	Seoni - Wardha (operated at 400kV) Line2	S/C	268	Jul-10
			<b>Total 765 kV</b>	<b>561</b>

### **400 kV CENTRAL SECTOR :**

#### **POWERGRID (PGCIL) :**

1	Barh (PG) - Balia (PG) (Quad)	D/C	470	Sep-09
2	LILO of Rishikesh - Muzaffarnagar at Roorkee	D/C	3	Mar-09
3	LILO of one ckt of Madurai (PG) - Trichy (PG) at Karaikudi	D/C	100	Jul-09
4	LILO of one ckt of Talaguppa -Neelamangla at Hassan	D/C	156	Jul-09
5	Ranchi - Rourkela	D/C	340	Jun-09
6	Rourkela - Raigarh	D/C	440	Jun-09
7	Raigarh - Raipur	D/C	450	Jun-09
8	Bhiwadi -Agra	D/C	408	Jun'09
9	Bhiwadi-Maga	D/C	702	Jun'09
10	LILO S/C Hissar - Jaipur at Bhiwadi	D/C	156	Jun'09
11	LILO Parbati-II - Koldam/Nalagarh at Parbati Pooling Point (Quad)	D/C	20	Jan'10
12	LILO one circuit Parbati-II - Parbati Pooling Point line at Parbati-III HEP(Quad)	D/C	7	Jan'10
13	Parbati Pooling Point - Amritsar (ACSR Moose)	D/C	516	Jan'10
14	Kota-Merta	D/C	496	Apr-09
15	Kankroli-Jodhpur	S/C	171	Oct-09
16	LILO one ckt Kankroli-Zerda at Bhinmal	D/C	68	Nov-09
17	Durgapur-Jamshedpur	D/C	362	Oct-09
18	Jamshedpur-Baripada	D/C	270	Oct-09
19	Baripada-Chandaka	D/C	310	Oct-09
20	LILO Ballabhgarh-Bhiwadi at Gurgaon	D/C	54	Jul-09
			<b>Total 400 kV CS</b>	<b>5499</b>

### **400 kV STATE SECTOR :**

#### **WESTERN REGION (WR) :**

#### **MAHARASHTRA (MSEB) :**

1	LILO of Chandrapur - Koradi at TPS	D/C	50	Mar-10
			<b>Total 400 kV WR</b>	<b>50</b>

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

**EASTERN REGION (ER) :**

**ORISSA (GRIDCO) :**

1	Meramundai-Duburi	D/C	200	Sep-02	Jun-09
	<b>Total 400 kV ER</b>		<b>200</b>		
	<b>Total 400 kV SS</b>		<b>250</b>		
	<b>Total 400 kV CS&amp;SS</b>		<b>5749</b>		

**220 kV STATE SECTOR :**

**NORTHERN REGION (NR) :**

**HARYANA (HVPN) :**

1	Sawra-Kuddu – Mogninand	D/C	266	Mar-10	
	<b>Total</b>		<b>266</b>		

**JAMMU & KASHMIR (J&K) :**

1	Zainkote – Alusteng-Mirbazar	D/C	254	Mar-10	
2	Zainkote – Amargarh	D/C	85	Mar-10	
	<b>Total</b>		<b>339</b>		
	<b>Total 220 kV NR</b>		<b>605</b>		

**WESTERN REGION (WR) :**

**GUJARAT (GETCO) :**

1	LILO Jetpur-Jamnagar at Sikka	2XD/C	64	Mar-10	
2	Sikka-Rajkot	D/C	160	Mar-10	
	<b>Total</b>		<b>224</b>		

**MADHYA PRADESH (MPPTCL) :**

1	Maheshwar – Pitampura	D/C	106	Mar-10	
2	LILO of Omkareshwar – Nimrani/Julvania	D/C	40	Mar-10	
3	Malwa TPS – Chhegaon	D/C	160	Mar-10	
	<b>Total</b>		<b>306</b>		

**MAHARASHTRA (MSETCL) :**

1	TPS - Khaperkheda	D/C	20	Mar-10	
	<b>Total</b>		<b>20</b>		
	<b>Total 220 kV WR</b>		<b>550</b>		
	<b>Total 220 kV CS&amp;SS</b>		<b>1155</b>		

## SUB STATIONS PROGRAMME FOR 09-10

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

**± 500 kV HVDC Terminal :**

**CENTRAL SECTOR (CS):**

**POWERGRID (PGCIL) :**

1	Ballia		2500	2500	Sep-09
2	Bhiwadi		2500	2500	Sep-09
<b>Total HVDC</b>				<b>5000</b>	

**400 kV CENTRAL SECTOR (CS) :**

**POWERGRID (PGCIL) :**

1	Roorkee	400/220	2x315	630	May-09
2	Ludhiana (3rd ICT)	400/220	1x315	315	Mar-10
3	Wagoora (4th ) (3x105)	400/220	3x105	315	Mar-10
4	Bhinmal	400/220	2x315	630	Nov-09
5	Hissar (3rd ICT)	400/220	1x315	315	Nov-09
6	Karaikudi	400/220	2x315	630	Jul-09
7	Hassan	400/220	2x315	630	Jul-09
8	Gurgaon (GIS)	400/220	2x315	630	Jul-09
<b>Total 400 kV CS</b>				<b>4095</b>	

**220 KV CENTRAL SECTOR (CS) :**

**POWERGRID (PGCIL) :**

1	Kopili Extn.	220/132	160	160	Apr-09
2	Dimapur Extn.	220/132	160	160	Apr-09
<b>Total 220 kV CS</b>				<b>320</b>	

**220 KV STATE SECTOR (SS) :**

**NORTHERN REGION (NR) :**

**JAMMU & KASHMIR (J&K):**

1	Alusteng	220/132	320	320	Mar-10
2	Amargarh	220/132	160	160	Mar-10
3	Bishna	220/132	2x160	320	Mar-10
<b>Total 220 kV NR</b>				<b>800</b>	

**WESTERN REGION (WR) :**

**GUJARAT (GETCO) :**

1	Sikka S/S	220/132	200	200	Mar-10
<b>Total 220 kV WR</b>				<b>200</b>	
<b>Total 220 kV SS</b>				<b>1000</b>	
<b>Total 220 kV CS&amp;SS</b>				<b>1320</b>	

## TRANSMISSION LINES PROGRAMME FOR 10-11

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

### **± 800 kV HVDC CENTRAL SECTOR:**

#### **POWERGRID (PGCIL) :**

1 Biswanath-Agra HVDC (3000 MW)	Bipole	3600	Mar-11
<b>TOTAL ± 800 kV HVDC CS</b>			<b>3600</b>

### **765 kV CENTRAL SECTOR :**

#### **POWERGRID (PGCIL) :**

1 Sasaram-Fatehpur	S/C	400	Mar-11
2 Fatehpur-Agra	S/C	330	Mar-11
3 SipatPP-Seoni Line 3	S/C	340	Mar-11
4 SipatPP-Sipat	S/C	30	Mar-11
5 Bina-Gwalior Line 2	S/C	250	Mar-11
6 Ranchi-SipatPP	S/C	350	Mar-11

**TOTAL 765 kV CS**

### **400 kV CENTRAL SECTOR :**

#### **POWERGRID (PGCIL) :**

1 WR Strengthening Scheme-II		6807	Jul-10
<b>Total 400 kV CS</b>			<b>6807</b>

### **400 kV STATE SECTOR :**

#### **WESTERN REGION (WR) :**

#### **MADHYA PRADESH (MPPTCL):**

1 Malwa TPS – Khandwa (PGCIL)	D/C	100	Jul-10
2 Malwa TPS – Pithampura	D/C	240	Jul-10
<b>Total</b>			<b>340</b>

#### **MAHARASHTRA (MSEB) :**

1 Koradi – Wardha(PG)	D/C	200	Mar-11
2 Koradi – Akola	D/C	480	Mar-11
3 Bhusawal-II-Bhusawal (Khadaka)	D/C	20	Mar-11
4 Bhusawal – II – Aurangabad	D/C	340	Mar-11
<b>Total</b>			<b>1040</b>
<b>Total 400 kV SS</b>			<b>1380</b>
<b>Total 400 kV CS&amp;SS</b>			<b>8187</b>

### **220 kV STATE SECTOR :**

#### **NORTHERN REGION (NR) :**

#### **HIMACHAL PRADESH (HPSEB) :**

1 Sainj-Kangoo(220/132 kV S/S)	D/C	130	Mar-11
2 LILO of one Ckt of Sainj-Kangoo at Bajoura 220kV S/S	D/C	50	Mar-11
3 Kuther Pooling point-Chamba(Karian) 220kV S/S	D/C	75	Mar-11
4 Nalagarh(Reeru Majra)(PGCIL)-Nalagarh(Baddi)	D/C	32	Mar-11
<b>Total</b>			<b>287</b>

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

**PUNJAB (PSEB) :**

1	Shahpurkandi PH-I - Shahpurkandi PH-II	D/C	6	Mar-11
2	Shahpurkandi PH-I – Sarna	D/C	30	Mar-11
<b>Total</b>			<b>36</b>	
<b>Total 220 kV NR</b>			<b>323</b>	

**WESTERN REGION (WR) :**

**MAHARASHTRA (MSETCL) :**

1	LILO of Koradi – Ambazari D/C at Koradi	2XD/C	50	Mar-11
2	LILO of Koradi – Buttibori S/C at Koradi	D/C	50	Mar-11
3	Bhusawal –II –Bhusawal	D/C	10	Mar-11
<b>Total 220 kV WR</b>			<b>110</b>	
<b>Total 220 kV CS&amp;SS</b>			<b>433</b>	

## SUB STATIONS PROGRAMME FOR 10-11

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

**± 800 KV HVDC Terminal :**

**CENTRAL SECTOR (CS):**

**POWERGRID (PGCIL) :**

1	Bishwanath	3000	3000	Mar-11
2	Agra	3000	3000	Mar-11
<b>Total (CS)±800 KV HVDC</b>			<b>6000</b>	

**± 500 KV HVDC Terminal :**

**CENTRAL SECTOR (CS):**

**POWERGRID (PGCIL) :**

1	Talchar Aug.	500	500	Mar-09
2	Kolar Aug.	500	500	Mar-09
<b>TOTAL (CS)± 500 KV HVDC</b>			<b>1000</b>	

**765 KV CENTRAL SECTOR (CS):**

**POWERGRID (PGCIL) :**

1	Unnao	765/400	2000	Mar-11
2	Agra	765/400	3000	Mar-11
3	Fatehpur	765/400	2000	Mar-11
4	Gwalior	765/400	2000	Mar-11
5	Bina	765/400	2000	Mar-11
6	Wardha	765/400	3000	Mar-11
7	SipatPP	765/400	2000	Mar-11
8	Sasaram	765/400	2000	Mar-11
9	Ranchi	765/400	3000	Mar-11
<b>TOTAL 765 KV CS</b>			<b>21000</b>	

**400 KV STATE SECTOR (SS) :**

**WESTERN REGION (WR) :**

**MAHARASHTRA (MSEB) :**

1	Koradi (2x315 MVA)	400/220	630	630	Mar-11
2	Bhusawal (2x315 MVA)	400/220	630	630	Mar-11
<b>Total 400 KV</b>			<b>1260</b>		

## SUB STATIONS PROGRAMME FOR 11-12

Sl. No.	Name of the Sub-Station	Voltage ratio (kV/kV)	Capa- city	MW/MVA	Target	
					Original	Revised

### **765 kV CENTRAL SECTOR (CS):**

**POWERGRID (PGCIL) :**

1	Meerut	765/400	4500	Mar-12		
2	Gaya	765/400	3000	Mar-12		
3	Ballia	765/400	3000	Mar-12		
4	Lucknow	765/400	3000	Mar-12		
5	Bareilly	765/400	3000	Mar-12		
6	Tehri	765/400	3000	Mar-12		
7	Mundka	765/400	3000	Mar-12		
8	Moga	765/400	3000	Mar-12		
<b>TOTAL 765 kV CS</b>				<b>25500</b>		

## TRANSMISSION LINES PROGRAMME FOR 11-12

Sl. No.	Name of the transmission line	No. of Circuits	Total length (CKM)	Target	
				Original	Revised

### **765 KV CENTRAL SECTOR :**

#### **POWERGRID (PGCIL) :**

1	Gaya-Sasaram	S/C	180	Mar-12
2	Gaya-Ballia	S/C	250	Mar-12
3	Ballia-Lucknow	S/C	250	Mar-12
4	Lucknow-Bareilly	S/C	250	Mar-12
5	Bareilly-Meerut	S/C	200	Mar-12
6	Agra-Mundka	S/C	250	Mar-12
7	Agra-Meerut	S/C	250	Mar-12
8	Mundka-Meerut	S/C	100	Mar-12
9	Mundka-Moga	S/C	350	Mar-12

**TOTAL 765 kV CS                            2080**

#### **POWERGRID (PGCIL) :**

1	Uri-I - Uri-II	S/C	14	Apr-11
2	Uri-II - Wagoora	S/C	108	Apr-11

**Total 400 kV CS                            122**