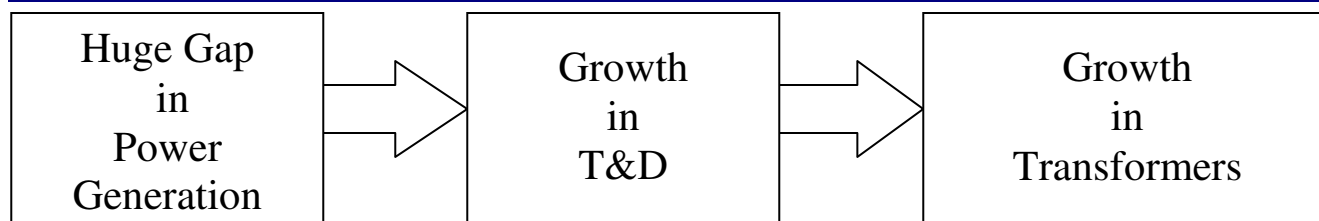


Transformer Industry

Sector on Topmost priority of GOI

Today, Indian economy is on fast track with GDP growing at 8-9%. To augment or even sustain this growth, massive investment is required in infrastructure sector especially in power sector. Faced with a substantial deficit in availability of power in most regions of the country and to sustain current GDP growth rate, the Government of India has stepped up efforts towards a fast-track development for the power sector.

Growth Drivers



There has always been huge Demand-Supply Gap in power generation. In 2006-07, power supply fell short of demand by 9-14%. The GOI has planned to wipe out this gap by 2012 and has planned to add around 69000MW of generation capacity by 2012 with a CAGR of more than 9%. Rs.276000 crore will be required for such ambitious plan.

T&D requirement will automatically increase with the growth in Power Generation. Coupled with demand to evacuate fresh power generation, GOI has planned to build a National Grid to evacuate power from surplus areas to deficit areas. Rs.70000 crore is required in T&D sector. We expect an annual growth rate of more than 20% in transmission capacity during 2007-12.

Transformer demand comes from fresh power addition and replacement demand. With each 1 MW additional power generation capacity, 7 MVA transformer capacities are required. Coupled with fresh addition in power generation and replacement demand, transformer industry will witness an annual average demand of 153550 MVA of transformer capacity for the next five years.

Current Scenario

Generation

Today, various parts of India are facing huge power shortage. India has a total installed power generation capacity of 127753 MW, majority of which comes from the state sector (56.5%) followed by central sector (32.1%) and rest from private sector (11.4%). During 2006 the total power shortage was 8.3% of total requirement and peak shortage was 12.3% of peak demand requirement. The power generation resources are unevenly located, the hydro in northern and north-eastern states and coal being mainly in the eastern part of the country.

Total Installed Capacity as on 31/12/2006

Sector	Hydro	Total Thermal	Thermal Breakup				Nuclear	R.E.S.	Total
			Coal	Lignite	Gas/LNG	Oil			
Central	6672	32409	24020	2490	5899	0	3900	0	42981
State	25664	42590	37386	465	3500	1239	0	2568	70822
Private	1306	9021	2831	500	4183	1507	0	3623	13950
All-India	33642	84020	64237	3455	13582	2746	3900	6191	127753

Source: Planning Commission



Demand/Supply Situation

Year	Peak				Normal			
	Requir. (MW)	Availability (MW)	Shortage (MW)	Shortage (%)	Requir. (MW)	Availability (MW)	Shortage (MW)	Shortage (%)
2002-03	81492	71547	9945	12.20	545983	497690	48293	8.85
2003-04	84574	75066	9508	11.24	559264	519398	39866	7.13
2004-05	87906	77652	10254	11.66	591373	548115	43258	7.31
2005-06	93255	81792	11463	12.29	631757	578819	52938	8.38
2006-07 (Upto Dec06)	100466	86425	14041	13.98	510223	465149	45074	8.83

Source: Planning Commission

Expected Electricity Demand vis-à-vis GDP growth rate

The Demand Side		
Year	GDP Growth Rate	
	8%	9%
2011-12	206000	215000
2016-17	303000	331000
2021-22	445000	510000
2026-27	655000	785000
2031-32	962000	1027000

Source: Planning Commission

Supply Side	
Particulars	MW
Total installed capacity	127925
Capacity addition during Xth Plan	34024
Capacity addition during XIth Plan	68000
Total Planned additional capacity	102024
Total addition during Xth Plan	13774
Required Addition	88250

Source: Ministry of Power

Transmission

The transmission line in India has expanded from 3708 ckm in 1950 to 170800 ckm in 1990-91 and more than 264240 ckm in 2005 at a CAGR of 8.1%. Inter-regional capacity increased from 5050 MW during March 2002, to 9500 MW by the end of FY 05 and to 11450 MW in Aug 2006.

Inter Regional Transmission Capacity

Voltage	2002	2005	2007
765 KV	0	0	1100
400 KV	1000	2400	7800
Others	4050	7050	8650
Total	5050	9450	17550

Transformer

At the beginning of 10th plan India has a total of 176026 MVA of distribution transformer capacity. This has increased to 236070 MVA by 31st March 2005. The initiative taken by government to restructure the power industry and the focus on APDRP by the Ministry of Power has resulted in significant developments and growth of transformer industry in India.

Transformer Capacity (MVA)

Fiscal year ended	Step-up transformers	Step-down transformers	Distribution transformers
1995	97153	256664	139976
1996	83952	291628	135852
1997	89462	283348	141974
1998	106564	319583	154172
1999	97937	344184	141974
2000	96157	379874	179931
2001	97901	382435	169119
2002	-	-	-
2003	117863	411288	196686
2004	130434	422138	206668

Source: Company RHP (Indo Tech Transformer)



Growth Potential

Power Generation

There are huge investments under implementation and planning for the Power Sector. The Government of India has set an ambitious target to add around 69000 MW of additional generation capacity by the year 2012. Capex required for every MW of power generating capacity is about Rs.4crore. Expenditure required in the 11th Five Year Plan for power generation alone has been estimated at Rs.276000 crore. The following tables show planned capacity additions under the 11th Five Year Plan:

Sector	Hydro	Total Thermal	Thermal Breakup			Nuclear	Total	
			Coal	Lignite	Gas/LNG			
Central	9685	23810	22060	1000	750	3160	36655	53%
State	2637	20352	19365	375	612	0	22989	33%
Private	3263	5962	5210	0	752	0	9225	13%
All-India	15585	50124	46635	1375	2114	3160	68869	100%

Source: Planning Commission

Transmission

In order to evacuate the excess supply from the power surplus areas to deficit areas, the GOI has planned to create "National Grid". This will enhance transmission capacity to 37150 ckm by 2012. For creation of such ambitious grid an investment of Rs.70000 is envisaged.

Inter Regional Transmission Capacity & Projections

Voltage	2002	2005	2007	2010	2012
765 KV	0	0	1100	2200	9200
400 KV	1000	2400	7800	11400	16400
Others	4050	7050	8650	9750	20750
Total	5050	9450	17550	23350	46350

Source: Planning Commission

Transformer

For every additional MW of power generation capacity 7 MVA of transformer capacity is required. This means there will be a requirement of 617750 MVA of transformer capacity for the fresh addition of power generation. Coupled with this demand arising from the replacement market also points to a promising future for the companies in this segment. The average age of a transformer is 20-30 years, which means that transformers installed during 5th and 7th plan have become obsolete and needed to be replaced with newer ones. This will result in 150000 MVA transformer capacity demand. A total of 767750 MVA of transformer capacity would be required in the next five years, indicating an annual demand of 153550 MVA transformer capacity requirements.

Replacement Demand

Plan	Period	Total Capacity			Capacity additions in MVA		
		Power	Distribution	Total	Power	Distribution	Total
IV	1970-75	75734	25884	101618	N/A	N/A	N/A
V	1975-80	124275	39601	163876	48541	13177	61718
VI	1980-85	191371	60506	251877	67096	21445	88541
VII	1985-90	272527	83451	355978	81156	22945	104101

Source: Company RHP (Indo Tech Transformer)

Required Transformer Capacity for next five years

Particulars	MVA
Demand for fresh additions	617750
Replacement Demand	150000
Total transformer Demand	767750
Annual transformer demand	153550



Meeting the demand

Looking at the robust growth, most of the big players have planned to increase their capacity. Coupled with low capacity utilization and 23000 MVA of additional transformer capacity, industry is rightly poised to grab the huge potential in transformer industry.

Individual Expansion Plans

Company	Product Range (Kv)	Current Capacity (MVA)	Expansion Plan (MVA)	Capacity Utilisation (%)
ABB	525-800	10000		55.6
Areva T&D	Upto 400	8500		64.6
BHEL	Upto 400	12000	4000	88.9
Crompton Greaves	Upto 500	23400	7000	64
EMCO	Upto 400	15000	5000	74.4
Bharat Bijlee	Upto 220	8000	3000	50.2
Indo Tech Transformers	Upto 132	3450	4000	75.2
Voltamp Transformers	Upto 132	5400		83.4
Total Capacity		85750	23000	69.54

Performance of Major Players

Company	Year End	Price (Rs.) 30/7/07	EPS	P/E 30/7/07	Net Sales	Growth (Y-o-Y)	Operating Profit	OPM (%)	Net Profit	NPM (%)
Indo Tech	0703	458.2	24.73	18.53	155.65	67.87	36.59	23.51	26.26	16.87
Voltamp Trans	0703	768.35	38.70	19.86	404.89	62.74	58.86	14.54	39.16	9.67
EMCO	0703	915.25	39.76	23.02	655.89	61.80	80.59	12.29	40.60	6.19
Bharat Bijlee	0703	2339.1	97.50	23.99	469.86	56.21	83.96	17.87	56.04	11.93
B H E L	0703	1660.4	49.32	33.67	17237.53	30.31	3017.93	17.51	2414.70	14.01
Areva T&D	0612	1529.9	27.30	56.05	1351.37	55.42	155.31	11.49	104.21	7.71
A B B	0612	1077.5	16.06	67.10	4274.01	44.24	450.24	10.53	340.31	7.96
Crompton Greaves	0703	281.6	5.25	53.66	3367.61	33.60	302.47	8.98	192.37	5.71
Accurate Trans.	0703	68.85	20.41	3.37	179.74	19.23	11.93	6.64	6.04	3.36

Our Picks

Indo Tech Transformers

Impressive Performance

ITTL demonstrated impressive performance during the Q1FY08. Sales witnessed robust growth of 84.1% to 39.38 crore against 21.39 crore during Q1FY07. EBIDTA grew by a whopping 127.6% to 10.72 crore compared to 4.71 of Q1FY07. Net profit rose by 115% to Rs.6.90 against 3.21 crore during Q1FY07.

Astonishing 785 basis points jump in OPM, NPM up by 251 basis points

OPM during the quarter surged by astonishing 758 basis points to 24.12% compared to 16.27 during Q1FY07. NPM improved by 251 basis points to 17.52%.

Cost cutting

ITTL buys copper rods from domestic manufacturers and outsource its conversion into the desired sizes thereby saving on costs. It buys the material from one manufacturer only, which enables it to earn volume discounts resulting into lower costs. The company follows this for both CRGO and copper. ITTL purchases its requirement of CRGO from ThyssenKrupp, as there is no manufacturer in the country.



ABB

Strong Results

ABB the power equipment and process automation major turned in a strong all round performance for the quarter ended Jun2007. The sales grew by 44% to Rs.1400.88 crore and bottom line grew by 51% to Rs.108.55 crore. OPM witnessed 120 basis points improvement. The order intake surged by 38% to Rs.1996.3 crore. Segment profit on power products was higher by 124% to Rs.54.11 crore on the back of strong expansion in revenue and segment margin.

Healthy Order Book Position

Order backlog as at 30th June 2007 stood at Rs.4636.2 crore against Rs.3372.3 at the beginning of FY08.

BHEL

Firing on all cylinders

BHEL presented stupendous show during the quarter ended June 2007. On a traditionally weak quarter, sales grew by 22% to Rs.3233.90 crore. PAT also recorded a healthy growth of 22% to Rs.288.90 crore. Segment revenue of Power segment grew by 25% to Rs.2736.20 crore while that of industry grew by 19% to Rs.919.80 crore.

Tie up with Alstom

Having tied up with Alstom for super critical thermal sets, materialization of couple of orders on the basis of negotiated basis will hasten the process of technology absorption improving BHEL's competitiveness in growing power sector.

Strong Order Book Position

BHEL saw an impressive order flow during the first quarter FY08 and the order backlog of the company as end of June 2007 stood impressive at Rs.62400 crore, a rise of 13% from 55000 crore reported on 31st March 2007.

Major Capacity Expansion Plans

BHEL has planned to invest around Rs.3200cr during the 11th five year plan to increase its manufacturing capacity from current 6000MW to 15000MW per annum. BHEL would also replace the ageing facilities to improve product quality, reduce costs and the cycle time and enhance productivity.

Foreign Collaboration

BHEL recently signed a MOU with Toshiba of Japan for know-how in higher horsepower locomotive. Railways is keen to move more freight and is therefore interested in buying larger capacity wagons as well as increasing the number of wagons in a freight train. The tie up with Toshiba will strengthen its presence in the market.



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