



सत्यमेव जयते

**Ministry of Power**

A large, stylized red lightning bolt graphic is positioned behind the main title text.

**PERFORMANCE REPORT**  
**2006**

**January, 2007**

## PROGRESS OF POWER SECTOR DURING 2006

### A. HIGHLIGHTS

(i) Capacity Addition	:	5093 MW (5176.8 MW)
(ii) Placement of Award (generation projects):	:	9354MW (9701 MW)
(iii) Power Generation	:	652.2Bus (605.92 Bus)
(iv) Growth in Power Generation	:	7.2% (4.8%)
(v) Plant Load Factor	:	75.77% (73.37%)
(vi) Addition in Inter Region Transmission Capacity	:	2000 MW(1000 MW)
(vii) Villages Electrified	:	23,844 villages(
(viii) Ultra Mega Power Projects	:	LOI issued in case of Sasan and Mundra
(ix) Important policies notified	:	<ul style="list-style-type: none"> <li>- Tariff Policy</li> <li>- Rural Electrification Policy</li> <li>- Policy for development of Merchant Plants</li> <li>- Guidelines for encouraging competition in development of Transmission projects.</li> </ul>

Note: Figures in brackets pertain to year 2005

### B. SECTOR WISE PERFORMANCE DURING 2006

#### I. CAPACITY ADDITION

	(in MW)			
Sector	Thermal	Hydro	Nuclear	Total
<b>Central</b>	1450.00	500	590	2540
<b>State</b>	513.00	616	-	1129
<b>Private</b>	384.80	400	-	784.80
<b>Captive*</b>	639.49	-	-	639.49
<b>Total</b>	<b>2987.29</b>	<b>1516</b>	<b>590</b>	<b>5093.29</b>

The details of projects commissioned during 2006 are at **Annex-I**.

\* This figure pertains to captive capacity addition by BHEL only. The details of the captive power projects commissioned during 2006 are at **Annex-II**.

## II. PLACEMENT OF AWARD / INVESTMENT DECISION OF GENERATION PROJECTS DURING 2006

(in MW)

Sector	Thermal		Hydro		Total	
	MW	Anticipated Inv. (Rs. Cr.)	MW	Anticipated Inv. (Rs. Cr.)	MW	Anticipated Inv. (Rs. Cr.)
<b>Central</b>	2980.0	12448.49	249	2293.65	3229	14742.14
<b>State</b>	3574.4	13878.46	60	332.13	3634.4	14210.59
<b>Private</b>	1100.0	3860.00	1391	7914.17	2491	11774.17
<b>Total</b>	<b>7654.4</b>	<b>30186.95</b>	<b>1700</b>	<b>10539.95</b>	<b>9354.4</b>	<b>40726.9</b>

The details of these projects are at **Annex-III**.

- At present over 43,600 MW is under execution with total investment commitment of 2.31 lakh crore.

## III. Ultra-Mega Power Projects

- Reorganizing the fact that economies of scale leading to cheaper power could be secured through large size power projects and for introducing the efficient super critical technology in a big way, a unique initiative has been launched for development of Ultra Mega Power Projects (UMPPs) under tariff based international competitive bidding route.
- Development of 4000 MW power project through a tariff based bidding process is a first of its kind in the world.
- 9 sites for development of 4000 MW project each have been identified so far.
- The bidding process has been initiated in respect of three projects i.e. Sasan (Madhya Pradesh), Mundra (Gujarat) and Krishnapatnam (Andhra Pradesh).
- In respect of first two sites of Sasan and Mundra there has been overwhelming response as 10 developers have submitted their bids for Sasan and six have submitted their final bids for Mundra UMPPs.
- In respect of Sasan (Madhya Pradesh) financial Bids were opened on 18<sup>th</sup> December, 2006 and the lowest tariff of Rs.1.196 per kWh. (levelised tariff for 25 years and the first year tariff as 93 Paise per unit) was quoted by Consortium of M/S Globeleq Singapore PTE. Ltd. and M/S Lanco Infratech Pvt. Ltd.
- In respect of Mundra (Gujarat) financial Bids were opened on 18<sup>th</sup> December, 2006 and the lowest tariff of Rs. 2.264 per kWh. (levelised tariff for 25 years and the first year tariff as Rs.1.91 per unit) was quoted by Tata Power Company Ltd.
- Apex Evaluation Committee evaluated the financial bids on 18<sup>th</sup> December itself and its recommendations were finalized. Letter of Intent was handed to successful developers on 28<sup>th</sup> December 2006.

- As per indicated time line in respect of Krishnapatnam project successful developer would be finalized by the end of March 2007.

#### IV. Re-start of Ratnagiri Gas Power Station Block 1 – 740 MW, commenced generation in May 2006, supplied 346 million units to Maharashtra

On the initiative of the Ministry of Power, the synchronisation of 740 MW of Block II of the power project was successfully advanced to May 2006 as the State of Maharashtra desired to avail power from the Plant due to power shortages in the State. This timely intervention of the Ministry of Power ameliorated the power supply position in Maharashtra this summer.

#### V. GENERATION

Sector-wise generation is given below:-

Sector	BU
Thermal	519.53
Hydro	114.85
Nuclear	17.74
<b>Total</b>	<b>652.12*</b>

- \* In comparison to 2005, 7.21% growth was recorded in the generation segment.

#### VI. PLANT LOAD FACTOR

(In Percentage)

Sector	2005	2006
Central	81.91	83.48
State	66.81	69.63
Private	85.62	83.48
<b>Total</b>	<b>73.37</b>	<b>75.77</b>

Plant Load Factor of best 20 stations is at **Annex-IV**.

#### VII. TRANSMISSION

##### (i) POLICY INITIATIVE

##### Guidelines for encouraging competition in development of transmission projects

- Policy was issued on 13<sup>th</sup> April, 2006.
- Promote competitive procurement of transmission services.
- Encourage private investment in transmission lines.
- Facilitate transparency and fairness in procurement processes.

- Facilitate reduction 'of information asymmetries for various bidders'. Protect consumer interests by facilitating competitive conditions in procurement of transmission services of electricity.
- Enhance strandardisation and reduce ambiguity and hence time for materialization of projects.
- Ensure compliance with standards, norms and codes for transmission lines while allowing flexibility in operation to the transmission service providers.

## (ii) Development of Transmission Projects Through Competitive Bidding

Empowered Committee has identified 14 projects to be developed through competitive bidding route. Expression of Interest in respect of 4 projects has already been published. Power Finance Corporation and Rural Electrification Corporation have been identified as nodal agency for this initiative. Details of projects for which EoI has been published is given below:

- (i) Evacuation System for North Karanpura (1980 MW)
- (ii) Talcher Augmentation System
- (iii) Evacuation System for Maithon RB (1000 MW), Koderma (1000 MW) and Bokaro Extension (500 MW)
- (iv) Scheme for enabling import of NER / ER surplus by Northern Region

## (iii) National Grid

With the completion of Tala transmission System, the inter-regional power transfer capacity of 2000 MW was added during 2006, thus increasing the cumulative inter-regional power transmission capacity of National Grid to 11,500 MW.

## (iv) Major transmission lines commissioned during 2006

Number of lines	CKM	Completed Cost (Rs. In Crore)
20	3527	2638

Details of these projects are enclosed at **Annex- V**.

## (v) Substation (MVA addition)

Number of new Substations	MVA
6	2205
MVA addition (Ext. Projects)	MVA
6	1890
<b>Total : 12</b>	<b>4095</b>

(vi) Investment Approval Accorded To Powergrid Projects During 2006

Sl. No.	Project Name	Approved Cost (Rs. In Crore)	Approval Date
1	Northern Region System strengthening scheme-V	721.25	June 09, 2006
2	East -West Tr. Corridor strengthening scheme	803.70	June 23, 2006
3	Western Region System Strengthening Scheme-II  Total project cost: 5221.23	POWERGRID Portion: 3581.40	July 24, 2006
4	Transmission System associated with Parbati-III HEP	557.24	July 31, 2006
5	Transmission system associated with Gandhar-II Generation Project	653.21	August 18, 2006
6	Eastern Region strengthening scheme-I	975.96	October 4, 2006
	<b>Total</b>	<b>7292.76</b>	

### VIII. DISTRIBUTION

- In principle approval accorded for 90 projects with an outlay for Rs.1588 crore to strengthen the distribution system in urban areas
- More than Rs.2030 crore utilised under APDRP for strengthening & up gradation of electricity distribution network.
- Incentive for cash loss reduction has been disbursed to Kerala, Punjab and West Bengal.
- Andhra Pradesh, Goa, Himachal Pradesh, Punjab, Gujarat, Meghalaya, Chattisgarh and West Bengal have reported profits during 2005-06. Jharkhand, Madhya Pradesh, Haryana, Rajasthan, Uttaranchal, Karnataka, Kerala and Assam have reported reduction in losses during 2005-06.
- Andhra Pradesh, Goa and Tamil Nadu have AT&C losses below 20% during 2005-06. Punjab and 2 DISCOMs of Gujarat (Madhya & Uttar) have AT&C losses below 25% during 2005-06.
- Action plan prepared for franchising in urban areas to reduce AT&C losses and improve efficiency in distribution. Maharashtra, Rajasthan and Madhya Pradesh have invited tenders for franchisee in urban areas. The first urban franchisee has been awarded by Maharashtra in Bhiwandi town.

- 5304 engineers of State distribution utilities were trained under Distribution Reforms capacity building programme.
- Started the Advanced Certificate Programme in Distribution Management in collaboration with IGNOU, about 1212 have registered so far.

➤ **AT&C LOSS STATUS**

• **NO. OF TOWNS WITH <15% AT&C LOSS**

○	ANDHRA PRADESH	: 94 TOWNS
○	CHATTISGARH	: 01 TOWN
○	GUJARAT	: 05 TOWNS
○	H.P.	: 03 TOWNS
○	KARNATAKA	: 17 TOWNS
○	M.P.	: 01 TOWNS
○	MAHARASHTRA	: 06 TOWNS
○	PUNJAB	: 07 TOWNS
○	RAJASTHAN	: 03 TOWNS
○	TAMILNADU	: 32 TOWNS
	<b>TOTAL</b>	<b>:169TOWNS</b>

• **Number of towns with AT&C losses between 15 to 20%.**

○	ANDHRA PRADESH	: 02 TOWNS
○	CHATTISGARH	: 01 TOWN
○	GOA	: 01 TOWN
○	GUJARAT	: 06 TOWNS
○	H.P.	: 03 TOWNS
○	KARNATAKA	: 14 TOWNS
○	KERALA	: 04 TOWNS
○	MAHARASHTRA	: 02 TOWNS
○	PUNJAB	: 04 TOWNS
○	TAMILNADU	: 04 TOWNS
○	TRIPURA	: 01 TOWN
○	UTTAR PRADESH	: 01 TOWN
	<b>TOTAL</b>	<b>: 43 TOWNS</b>

- For restructuring of APDRP, Abraham Committee submitted its report.

**IX. RURAL ELECTRIFICATION**

- 23,844 villages electrified during 2006.
- 1,87451 BPL free electricity connections provided.
- 134 projects sanctioned for electrification of 18,497 un-electrified villages and 111 lakh un-electrified rural households for Rs.5,654 crore, were sanctioned in 2006 calendar year

- 98 projects covering 18,220 un-electrified villages for Rs.4,970 crore tendered.
- Contracts for 82 projects for 18,440 un-electrified villages for Rs 3,380 crore awarded.
- Further to facilitate preparatory work for speedy implementation in – principle approval was accorded for 144 projects at the cost of Rs.5956 crore for electrification of 21,105 un-electrified villages.
- National programme on Franchisee for rural sector was launched in May 2006.
- In 14 States rural Franchising process has been initiated and in respect of 12 States this has been installed, 38,692 villages covered under so far.
- 25 States have constituted District Committees to review and monitor rural electrification.
- 24 States have notified rural areas exempting generators from licensing to distribute electricity in rural areas.

#### **X. FUNDING BY PFC AND REC**

	(Rs. in crore)	
Organization	Sanctions	Disbursements
<b>Power Finance Corporation</b>	33,308	13,512
<b>Rural Electrification Corporation</b>	28,629	13,661
<b>TOTAL</b>	<b>61,937</b>	<b>27,173</b>

#### **XI. CORPORATE GOVERNANCE AND ACCESSING CAPITAL MARKETS**

Powergrid Corporation of India Limited, Power Finance Corporation, Rural Electrification Corporation and National Hydro Power Corporation have been allowed to issue Initial Public Offers (IPO) to raise about Rs.6000 crore.

#### **XII. MULTILATERAL / BILATERAL EXTERNAL ASSISTANCE ARRANGED FOR POWER SECTOR DURING 2006.**

In comparison to 2005 during which 3 power projects aggregating Rs.1838 crore of external assistance were sanctioned, in 2006 there has been substantial increase and in the year five power projects have been sanctioned by various multilateral / bilateral funding agencies. An assistance of equated Rs.6494 crore has been committed, details of which are given below:

S. No.	Name of Project	Executing Agency	Funding Agency	Loan Amount	
				Foreign Currency (Million)	Rs. in crore
1.	Power Transmission (Sector) Project –III	PGCIL	ADB	USD 400	1800
2.	Uttaranchal Power Development Project (Multi-Tranche Finance Facility)	Govt. of Uttaranchal	ADB	USD 300	1350
3.	Powergrid System Development Project-III	PGCIL	World Bank	USD 400	1800
4.	Purulia Pump Storage Project Tranche-III	WBSEB	JBIC	JY 17963	723
5.	Rural Electrification Project	REC	JBIC	JY20439	822
<b>Total</b>					<b>6494</b>

### **XIII. MAJOR POLICIES NOTIFIED UNDER THE ELECTRICITY ACT DURING 2006**

#### **(i) Tariff Policy**

The Tariff Policy has been notified by Government of India on 6<sup>th</sup> January, 2006 under the provisions of section 3 of the Electricity Act, 2003.

The objectives of the tariff policy are to:

- a) Ensure availability of electricity to consumers at reasonable and competitive rates;
- b) Ensure financial viability of the sector and attract investments;
- c) Promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimise perceptions of regulatory risks;
- d) Promote competition, efficiency in operations and improvement in quality of supply.

#### **(ii) Rural Electrification Policy**

Rural Electrification Policy, in compliance with section 4 and 5 of the Electricity Act 2003, was notified on 23<sup>rd</sup> August, 2006.

- Overall approach enunciated in the Policy highlights grid connectivity to be normal way of electrification of villages.
- For villages / habitations where grid connectivity is not feasible or not cost effective of grid solutions based on stand alone systems may be taken up.
- De-centralized distribution generation facilities together with local distribution network may be based on either conventional or non-conventional method of electricity generation.
- The State Governments should within six months prepare and notify a Rural Electricity Plan to achieve the goal of providing access to all households.

### **(iii) Guidelines for procurement of electricity**

In compliance with section 63 of the Electricity Act, 2003, the Central Government had notified guidelines for procurement of power by Distribution Licensees through competitive bidding. Central Government has also issued the standard bid documents containing RFQ, RFP and model PPA for long term procurement of power from projects having specified site and location.

Amendment to these guidelines has been issued on 30<sup>th</sup> March, 2006 and 18<sup>th</sup> August, 2006.

### **(iv) Rules notified during the year 2006 under section 176 of the Act**

- i) Works of Licensees Rules, 2006 (under section 176(2)(e)) (Notification dated 18.4.2006).
- ii) Qualifications, Power and Functions of Chief Electrical Inspector and Electrical Inspectors Rules, 2006 (under section 176(2)(z)) (Notification dated 17.8.2006)

### **(v) Amendments made to the Rules**

- i) Appeal to the Appellate Authority Rules, 2006 issued on 7<sup>th</sup> September, 2006.
- ii) Electricity (Amendment) Rules, 2006 issued on 26<sup>th</sup> October, 2006.

## **XIV. Energy Conservation**

- National Energy labeling Scheme was launched on May 18, 2006 at New Delhi and initially Frost Free Refrigerators and 4 feet Tubular Fluorescent lamp were taken on voluntary basis.
- Recommendations of Energy Audit implemented in Rashtrapati Bhawan, Prime Minister's Office, Shram Shakti Bhawan and Transport Bhawan through Energy Services Companies (ESCOs). Sanchar

Bhawan implemented the same departmentally.

- 713 certified Energy Managers and 2023 certified Energy Auditors are in place.
- Energy Performance Codes & Manuals prepared for 7 segments and released on 14<sup>th</sup> December, 2006.
- National level painting competition was organized and about 4,00,000 students of 4<sup>th</sup> and 5<sup>th</sup> standards belonging to about 18,000 schools participated in the event and prizes to the winners were given by Hon'ble Union Minister of Power, Shri Sushil Kumar Shinde on Energy Conservation Day i.e. 14<sup>th</sup> December, 2006.
- A joint workshop with International Energy Agency (IEA) was organized on "Energy Efficiency in Building and Building Codes" on 4<sup>th</sup> & 5<sup>th</sup> October, 2006 at New Delhi.

#### **XV. GUIDELINES FOR MERCHANT PLANTS / COAL LINKAGES OF POWER PROJECTS WERE ISSUED ON 3<sup>RD</sup> NOVEMBER, 2006.**

- The Ministry of Power announced the guidelines on Merchant Power Plants. Merchant power plants are a product of the restructuring of the electricity industry. Merchant power plants fill different niches in the market; some provide steady supplies to a power grid, while others fire up only when demand is highest and meet peak loads. Merchant power plants operating competitively help assure that power is produced with efficiency and supplied to locations where it is needed most. Coal blocks/coal linkage will be provided to Merchant Power Plants on priority basis.
- Coal linkages will be available for successful bidders in setting thermal power stations

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**POWER PROJECTS COMMISSIONED DURING 2006**

<b>Name of the Project / State</b>	<b>Implementing Agency</b>	<b>Capacity (MW)</b>	<b>Date of Commissioning</b>
<b><u>A. THERMAL</u></b>			
<b><u>Central Sector</u></b>			
Vindhyachal TPS-III	NTPC	500	27-Jul-06
Unchahar TPS-III	NTPC	210	28-Sep-06
Ratangiri CCPP-II	RGPPL	740	15-May-06
	<b>Sub-Total</b>	<b>1450</b>	
<b><u>State Sector</u></b>			
Dhuvaran CCPP Extn.	GSECL	72	17-Mar-06
Rokhia GT Extn.	Govt. of Tripura	21	31-Mar-06
Parichha TPS Extn.	UPRVUNL	210 U-3	29-Dec-06
		210 U-4	28-Dec-06
	<b>Sub-Total</b>	<b>513</b>	
<b><u>Private Sector</u></b>			
Vemagiri CCPP - GT	Vemagiri Power Gen. Ltd.	233(GT) 137(ST)	13-Jan-06 08-Jun-06
Valantharavai CCPP	Arkay Energy Ltd.	14.8	29.10.05
	<b>Sub-Total</b>	<b>384.8</b>	
<b>Thermal Total (C+S+P):</b>		<b>2347.80</b>	
<b><u>B. HYDRO</u></b>			
<b><u>Central Sector</u></b>			
Tehri Stage-I	THDC	250 U-4	17.07.2006
		250 U-3	25.10.2006
	<b>Sub-Total</b>	<b>500</b>	
<b><u>State Sector</u></b>			
Larji	H.P	42 U-3	03.09.2006
		42 U-2	24.09.2006
		42 U-1	27.12.2006
Sardar Sarovar RBII	SSNNL	200 U-5	07.03.2006
		200 U-6	20.06.2006
Bansagar Tons PH-IV	MPEB	10 U-1	20.08.2006
		10 U-2	30.08.2006
Madhikheda	MPEB	20 U-1	28.08.2006
		20 U-2	09.09.2006
Bhawani Barrage-I	T.N.	15 U-1	01.08.2006
		15 U-2	22.09.2006

<b>Name of the Project / State</b>	<b>Implementing Agency</b>	<b>Capacity (MW)</b>	<b>Date of Commissioning</b>
	<b>Sub-Total</b>	<b>616</b>	
<b>Private Sector</b>			
Vishnuprayag HPP	<b>JP Power</b>	<b>100- U1</b>	3.6.2006
		<b>100 U2</b>	23.6.2006
		<b>100 U3</b>	16.8.2006
		<b>100 U4</b>	30.9.2006
	<b>Sub Total</b>	<b>400</b>	
<b>Hydro-Total (C+S+P):</b>		<b>1516</b>	
<b>C. Nuclear</b>			
<b>Central Sector</b>			
Tarapur Atomic Power Plant / Maharashtra	NPC	540 (U-4)	----
Madras Atomic Power Station Uprating / TN	NPC	50 (U-1)	---
	<b>Sub-Total</b>	<b>590</b>	
<b>Grand Total (Thermal+ Hydro+ Nuclear):</b>		<b>4453.8</b>	

Annex-II

**Power Plants / Projects Commissioned During 2006 (CPP)**  
**CAPTIVE CAPACITY ADDITION BY BHEL**

<b>Sl. No.</b>	<b>Customer</b>	<b>MW</b>	<b>Commissioning Date</b>
1	Maihar Cement	15	02.02.06
2	RIL JamNagar Fr6B	36.67	11.03.06
3	EID Parry	18.5	22.03.06
4	RIL Hazira 2xFr6B Unit 2	36.67	26.03.06
5	Arasmata	43	01.05.06
6	Bhushan Steel	60	08.05.06
7	JSPL Unit-1	25	19.05.06
8	JSPL Unit-2	25	09.06.06
9	TATA Sponge	18.75	02.06.06
10	SKS Ispat	25	27.06.06
11	IOCL Panipat 4xFr 6 GTG 3&2+HRSG	60	U3-25.07.06,U2- 31.12.06
12	Essar construction	123.4	14.08.06
13	JP Rewa	38.5	14.08.06
14	BSSL	31	03.09.06
15	Mysore Sugar	30	07.09.06
16	SAIL Bhilai	15	24.09.06
17	JSPL Unit-3	25	03.10.06
18	JSL Dubri	13	01.12.06
	<b>TOTAL</b>	<b>639.49</b>	

Annex-III

**THERMAL POWER PROJECTS FOR WHICH LETTER OF AWARD ISSUED IN YEAR 2006**

<b>Project Name, Sector &amp; State</b>	<b>Impl. Agency</b>	<b>Capacity</b>	<b>AS On LOA Date</b>	<b>30-Dec-06 Estimated Cost (Revised)In Cr</b>
<b>CENTRAL SECTOR</b>				
<b>Chhattisgarh</b>				
Kobra STPP	NTPC	500	03/2006	2448.49
<b>UP</b>				
National Capital Power Project St-II	NTPC	490	07/2006	2000.00
NCPP U-6		490	12/2006	2000.00
<b>WB</b>				
Farakka STPS st. III	NTPC	500	10/2006	2000.00
Mejia Extn.	DVC	1000	12/2006	4000.00
	<b>Sub Total</b>	<b>2980</b>		<b>12448.49</b>
<b>STATE SECTOR</b>				
<b>Assam</b>				
Lakwa Waste Heat Unit	APGCL	37.2	03/2006	161.10
<b>Gujarat</b>				
Surat Lignite TPP Extn.	GIPCL	250	03/2006	1015.00
<b>Karnataka</b>				
Bellary TPP St-11	KPCL	500	08/2006	2096.00
Raichur U-6		250	09/2006	925.00
<b>Maharashtra</b>				
Paras TPS Extn.	MSEB	250	08/2006	1000.00
Parli Extn. St-II		250	08/2006	1000.00
<b>Rajasthan</b>				
Chhabra TPS	RRVUNL	500	03/2006	1750.00
Kota TPP		195	06/2006	880.00
Suratgarh TPP		250	06/2006	750.00
<b>TN</b>				
Valuthur CCPP Extn.	TNEB	92.2	05/2006	301.36

**UP**

Harduaganj Extn.	UPRVUNL	500	06/2006	2000.00
Parichha Extn.		500	06/2006	2000.00

**Sub Total****3574.4****13878.46****PRIVATE SECTOR****Karnataka**

Toranagallu TPP	Jindal Tractabel Power Co.	600	06/2006	1860.00
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**Maharashtra**

Trombay Extn.	Tata Power Company	250	07/2006	1000.00
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**WB**

Budge-Budge III	CESC	250	09/2006	1000.00
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**Sub Total****1100****3860.00****Total In 2006****7654.4****30186.95**

Annex-III (contd.)

**Award of Works/Investment Decision- January 2006 to December 2006 (Hydro)**

<b>Name of Project</b>	<b>Capacity MW</b>	<b>Approved cost (Rs in crore)</b>	<b>Date of Award/Investment Decision</b>
<b>Central Sector</b>			
Teesta Low Dam-IV (NHPC)	160	1061.38	19.01.2006
Nimoo Bazgo	45	611.01	23.09.2006
Chutak	44	621.26	23.09.2006
<b>Total C.S</b>	<b>249</b>	<b>2293.65</b>	
<b>State Sector</b>			
Bhawani Kattlai Barrage-II	30	165.21	03.02.2006
Bhawani Kattlai Barrage-III	30	166.92	03.02.2006
<b>Total S.S</b>	<b>60</b>	<b>332.13</b>	
<b>Private Sector</b>			
Allain Duhangan	192	922.35	01/2006
Karcham Wangtoo	1000	5909.59	01/2006
Malana-II	100	633.47	2005-06
Chujachen	99	448.76	23.09.2006
<b>Total P.S</b>	<b>1391</b>	<b>7914.17</b>	
<b>Grand Total(C+S+P)</b>	<b>1700</b>	<b>10539.95</b>	

## Annexure-IV

## BEST PLF(%) OF THERMAL POWER STATIONS ( APRIL-DEC ) 2006-07

NAME OF STATION	CAPACITY(MW)	PLF
BUDGE-BUDGE(CESC)	500	102.9
DAHANU(BSES)	500	100.6
FGUNCHAHAHAR(NTPC)	1050	95.3
AECO THERMAL(PRIVATE)	490	95.0
DADRI(COAL)NTPC	840	94.4
SURATGARH (Rajasthan)	1250	92.5
LEHMOHABAT(PSEB)	420	91.6
VINDHYACHAL(NTPC)	2760	91.3
METTUR(TNEB)	840	90.8
TITAGARH(CESC)	240	90.4
KORBA - II (CSEB)	200	90.3
KAPARKHEDA II (MSEB)	840	90.1
RIHAND(NTPC)	2000	89.5
SIMHADRI(NTPC)	1000	89.4
TALCHER SUPER(NTPC)	3000	89.0
ROPAR(PSEB)	1260	88.3
TANDA(NTPC)	440	88.3
KOTA (Rajasthan)	1045	88.0
SOUTHERN Generating station (CESC)	135	87.6
BAKRESWAR (WBPDC)	630	87.3

**Annex-V****Major transmission lines commissioned during 2006**

SI No.	Particulars	CKM	Date of Commercial Operation (DOCO)	Approx. Cost (Rs. Crore)
1	400KV S/C Dadri - Panipat line	117	01.04.2006	60
2	800KV Tehri - Meerut TL - I S/C	184	01.04.2006	356
3	400KV D/C Neelamangla - Mysore line	266	01.05.2006	152
4	800KV Tehri - Meerut TL - II S/C	184	01.06.2006	370
5	400KV Meerut - Muzaffaranager Trans. Line	38	01.06.2006	33
6	400KV Tala - Siliguri Line II D/C alongwith Extn.	234	01.05.2006	145
7	LILO of 400 KV Bongaigaon - Malda at Purnea	116		
8	400 KV D/C Gorakhpur (UPPCL) - Gorakhpur line.	92	01.08.2006	81
9	400KV D/C Lucknow - Unnao line	152	01.08.2006	109
10	400KV D/C Kishenpur-Wagoora Transmission line	388	01.11.2006	270
11	400KV S/C Jalandhur - Amritsar line	60	01.05.2006	81
12	LILO of 400 KV Bawana - Bhiwani at Bahadurgarh	34	01.11.2006	57
13	400KV D/C Kanpur - Auraiya line	144	01.10.2006	87
14	LILO of 400KV S/C Korba - Raipur at Sipat	10	01.05.2006	7
15	400KV D/C Bhadrawati - Chandrapur line	46	01.05.2006	40
16	LILO of Nellore - Sriperambdure at Almathi	165	01.06.2006	88
17	400KV D/C Biharshariff - Muzaffarpur line	262	01.11.2006	188
18	400KV Vindhyachal - Satna line	516	Ckt-III: 01.10.06 Ckt-IV: 01.12.06	240
19	400 KV D/C Agra - Jaipur Line	435	Commissioned on 31.12.06. DOCO awaited.	235
20	400 KV D/C Neelmangla - Somanhally	84	Commissioned on 31.12.06. DOCO awaited.	40
	<b>Total CKM commissioned</b>	<b>3527</b>		<b>2638</b>

**FACT SHEET ON MAJOR PERFORMANCE PARAMETERS  
(Cumulative for the Tenth Plan)**

**I. CAPACITY ADDITION IN :**

VIII Plan	16,422 MW	}	35, 437 MW
IX Plan	19, 015 MW		
<b>X Plan</b>			<b>30,642 MW</b>

**II. STATUS OF X PLAN CAPACITY ADDITION**

**(in MW)**

	Mid Term Appraisal target	Units commissioned	Expected to commission during Nov.06-March 07	Total*
<b>Central State Private</b>	19,817 12,240 4,899	10,865 5200 1931	5,314 5,808 1,524	16,179 11,008 3455
<b>Total</b>	<b>36,956</b>	<b>17,996</b>	<b>12,646</b>	<b>30,642</b>

\* In addition capacity through captive plants aggregating 4,200 MW is expected.

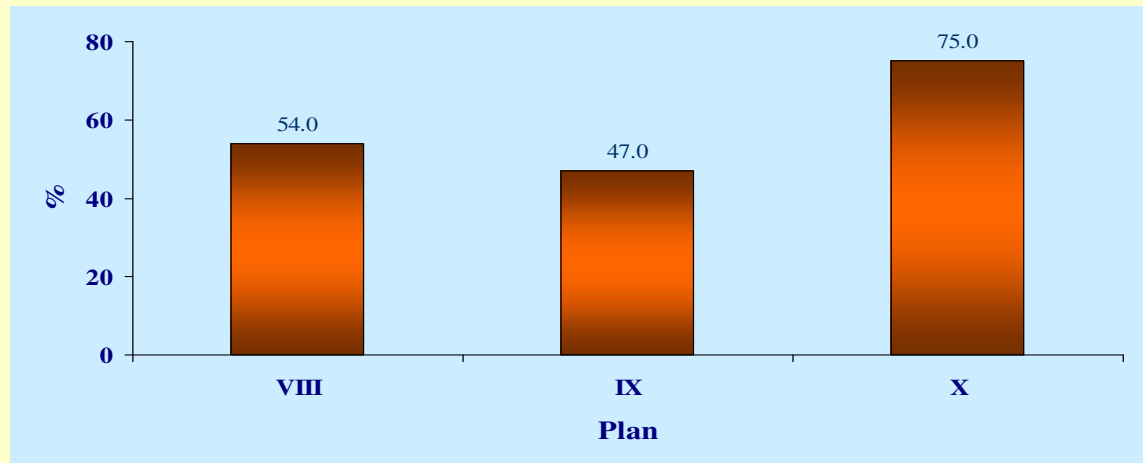
**II A. Projects which are slipping would be commissioned in 1<sup>st</sup> three quarters of 2007-08 as per details given below:**

**(in MW)**

Category	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	Total
Thermal	570	250	0	820
Hydro	130	679	150	959
Nuclear	0	220	1000	1220
	700	1149	1150	2999

### III. TARGET/ACHIEVEMENT IN CAPACITY ADDITION

#### Capacity Addition as % of Target



3

	HYDRO	TOTAL THERMAL	NUCLEAR	TOTAL
CENTRAL	8,612	11,404	3,380	<b>23,396</b>
STATE	3,217	10,802	0	<b>14,019</b>
PRIVATE	2,191	4,126	0	<b>6,317</b>
<b>TOTAL</b>	<b>14,020</b>	<b>26,332</b>	<b>3,380</b>	<b>43,732</b>

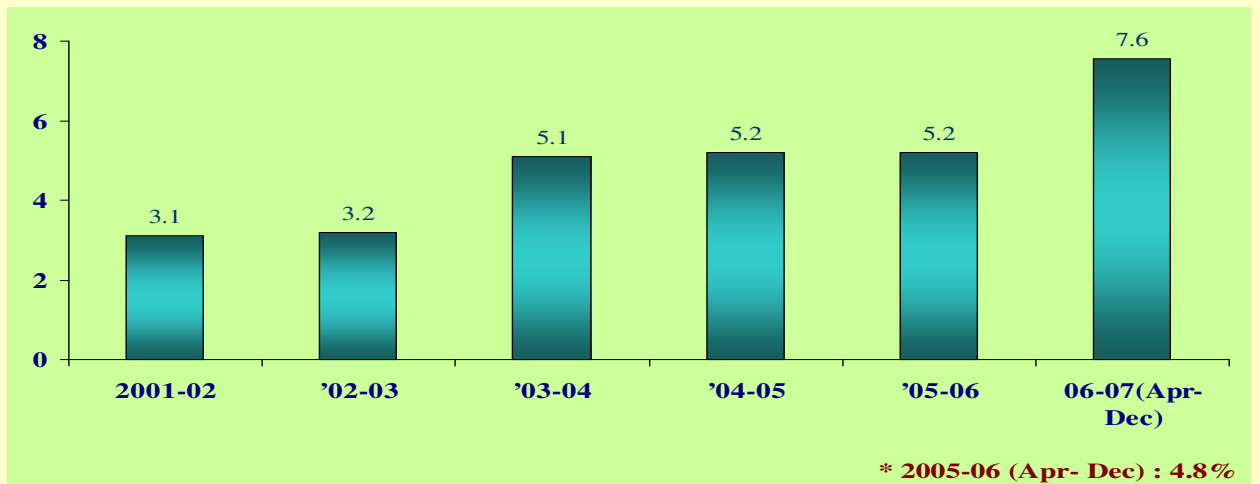
### IV. GENERATION CAPACITY UNDER EXECUTION

(in MW)

✚	To be commissioned by March 2007	:	12,898 MW	
✚	To be commissioned during 2007-08	:	8,297 MW	} 30,967
✚	To be commissioned during 2008-09	:	10,285 MW	
✚	To be commissioned during 2009-10	:	12,385 MW	

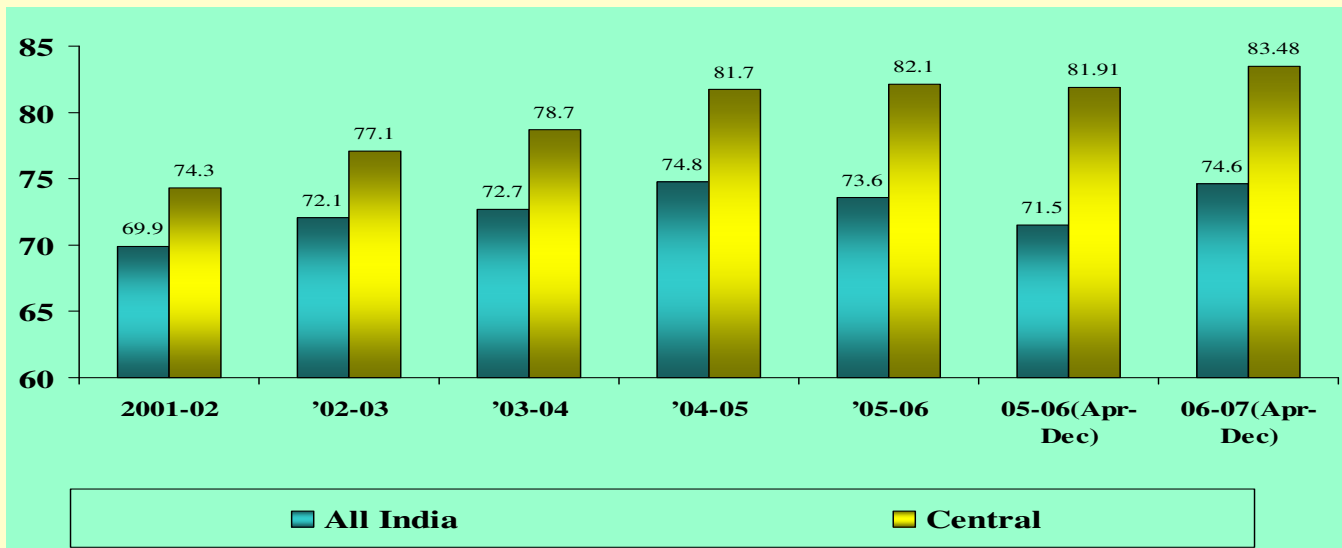
## V. GENERATION GROWTH RATE

### Growth in Electricity Generation (%)



## VI. PLANT LOAD FACTOR

## Growth in PLF of Thermal Stations (%)



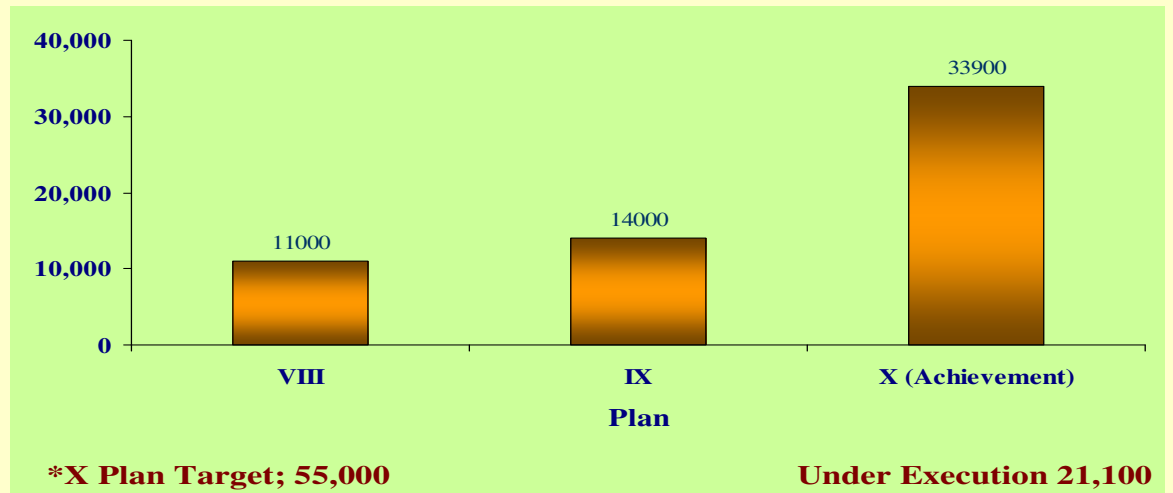
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### VII. VILLAGE ELECTRIFICATION

Entire VIII Plan - 11,000 villages  
IX Plan - 14,000 villages  
X Plan - 55,000 villages (target)\*

- Of this, **33,900** already done and another **21,100** are under execution.

## Electrification of Villages



5

### VIII DISTRIBUTION

Out of the 917 towns taken up in the APDRP scheme, **169 towns recorded AT&C loss less than 15%** and another 43 towns recorded AT&C losses between 15 to 20%.

### IX TRANSMISSION

Inter regional connectivity has been planned with hybrid system consisting of HVDC, Ultra high voltage AC (765KV) and Extra high voltage AC (400KV) lines. The present **Inter Regional capacity is 11,500 MW** and projects in hand indicate that this capacity would be enhanced to 18,000 MW by 2007 and 37,000 MW by 2012.