



NTPC

Welcomes You

to

5th Analysts and Investors Meet

August 3, 2009

Mumbai



A Presentation
on
NTPC
By

Mr. A.K.Singhal
Director (Finance), NTPC

Corporate Vision

Corporate Vision

“A world class integrated power major, powering India’s growth, with increasing global presence”

Contents

1 NTPC today

2 Performance Highlights:2008-09 & Q1/10

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Evolution of NTPC

1975

Set up in 1975 with 100% ownership by the Government of India

1997

GOI conferred status of 'Navratna' – granting more autonomy to the Board of Directors.

2004

Listed on 5.11.2004.
Became 3rd largest by Market capitalisation

2005

Rechristened as NTPC Limited in line with its changing business portfolio to transform from a thermal power utility to become world class integrated power major.

2007

First step towards strategic diversification-
Decides to acquire 44.6% stake in TELK

2008

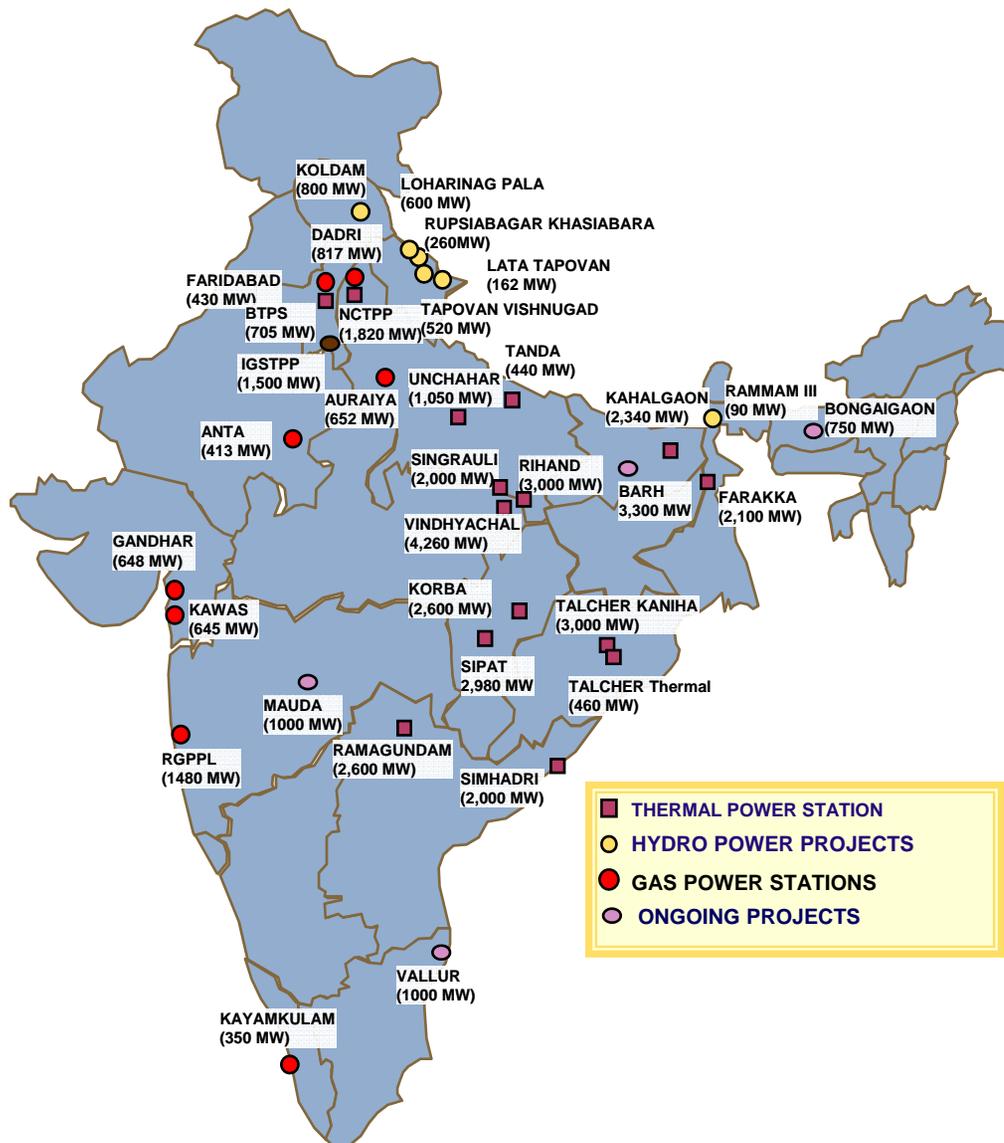
Strategic alliances :
▪ JV Co. with BHEL for EPC and Mfg,
▪ JV Co. with Bharat Forge for mfg castings
▪ JV Co. for setting-up a power exchange.



89.5 % owned by Govt. of India

FII own about 3% and rest 7.5% owned by domestic institutions & public

Pan India Presence



	No of plants	Capacity (MW)
NTPC Owned		
Coal	15	24,395
Gas/Liquid fuel	7	3,955
Total	22	28,350
Owned by JVs		
Coal & Gas	4	2,294
Total	26	30,644

Regional Spread of Generating Facilities

Region	MW		
	Coal	Gas	Total
Northern	7,035	2,312	9,347
Western	6,360	1,293	7,653
Southern	3,600	350	3,950
Eastern	7,400	–	7,400
JVs	814	1,480	2,294
Total	24,709	5,435	30,644

Capacity includes capacity under construction

NTPC- Today



The Stature

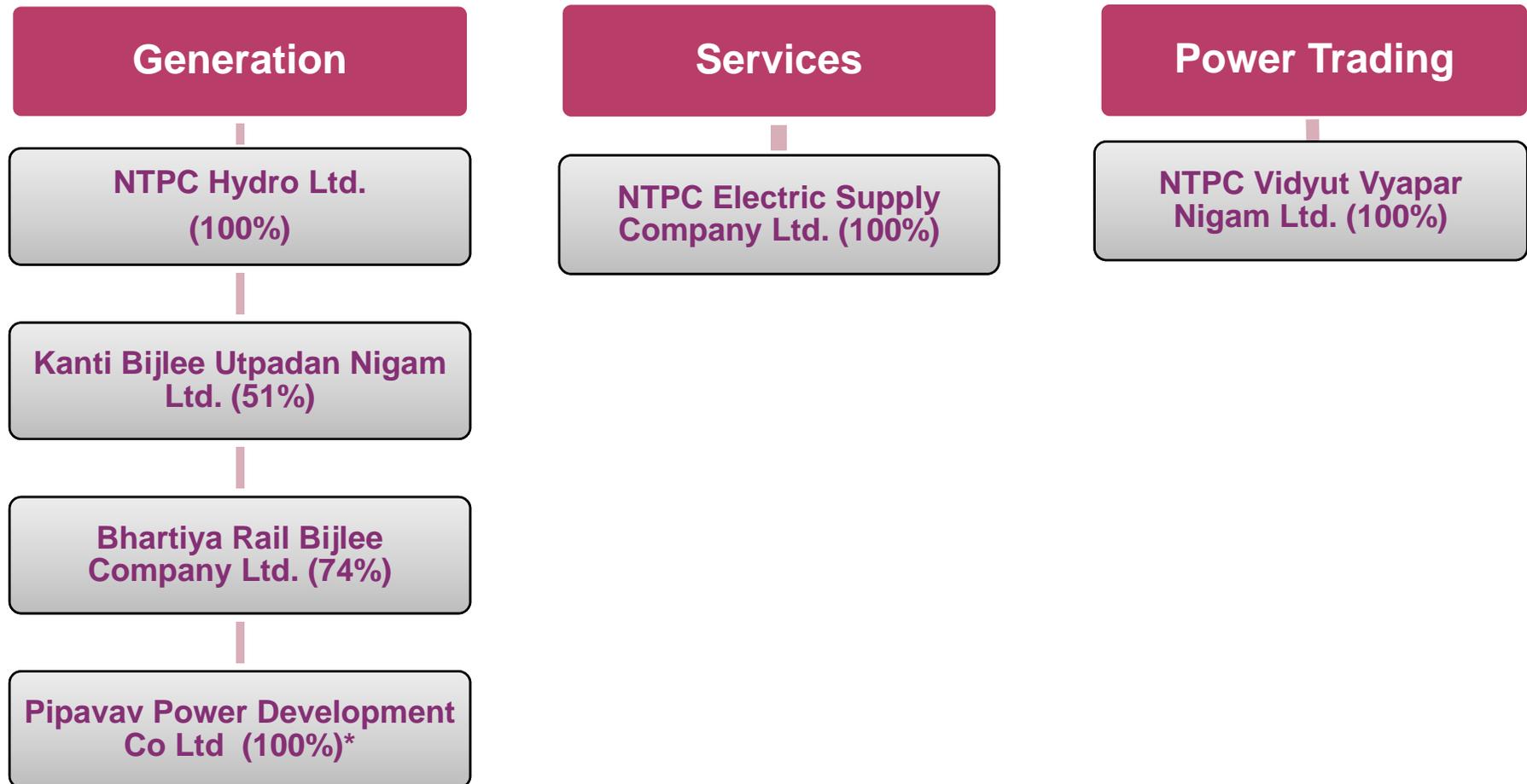
- One of the three largest Indian companies with market cap of Rs.1778 billion
- Ranks 126th on the basis of market Cap globally (Forbes 2009 data)
- Has a net worth of Rs. 574 billion
- Owns total assets of Rs. 1052 billion



The Size

- Ranked # 1 independent power producer in Asia in 2008 (by Platts, a division of Mcgraw-Hill companies)
- 5th largest generating company in Asia
- 317th Largest company in the world (FORBES ranking – 2009)
- The largest generator in India

NTPC – Subsidiaries (6)

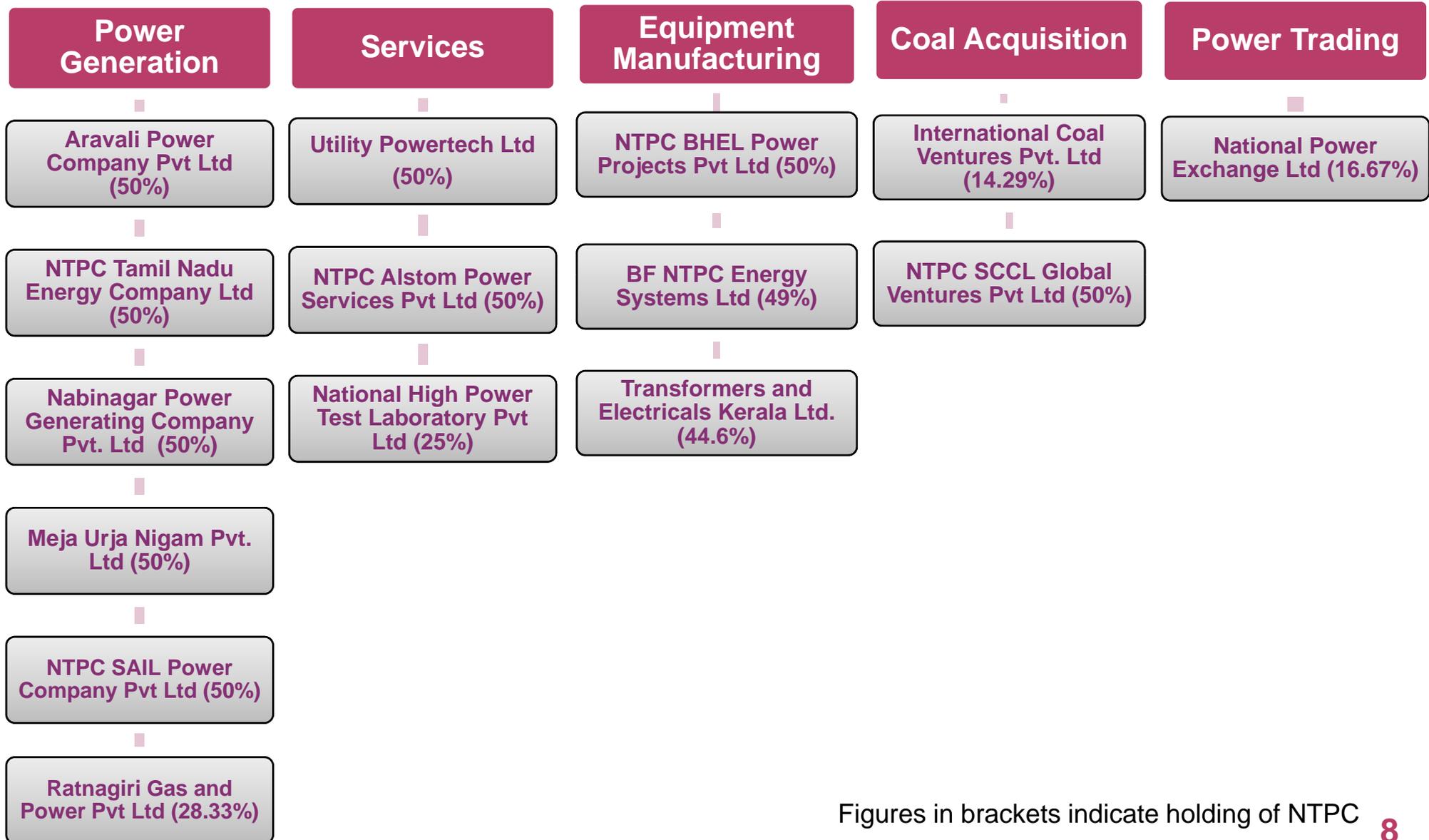


**NTPC Group as on 31.3.2009: Total Assets Rs. 1,110 Billion,
Net-worth above Rs. 574 Billion
Profit after tax Rs. 81 Billion.**

* Under winding up

Figures in brackets indicate holding of NTPC

NTPC – Joint Ventures (15)



Figures in brackets indicate holding of NTPC

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Performance Highlights:2008-09 & Q1/10

- 1 Capacity Growth**
- 2 Operational Performance**
- 3 Financial Performance**
- 4 Commercial Performance**
- 5 Others**

Capacity Growth

☐ Increase in commissioned capacities

- 500 MW at Sipat-II
- 500 MW at Bhilai Expansion

Q1/10

- 500 MW at Kahalgaon-II

☐ Increase in commercial capacities

- 1000 MW at Sipat –II
- 1000 MW at Kahalgaon-II

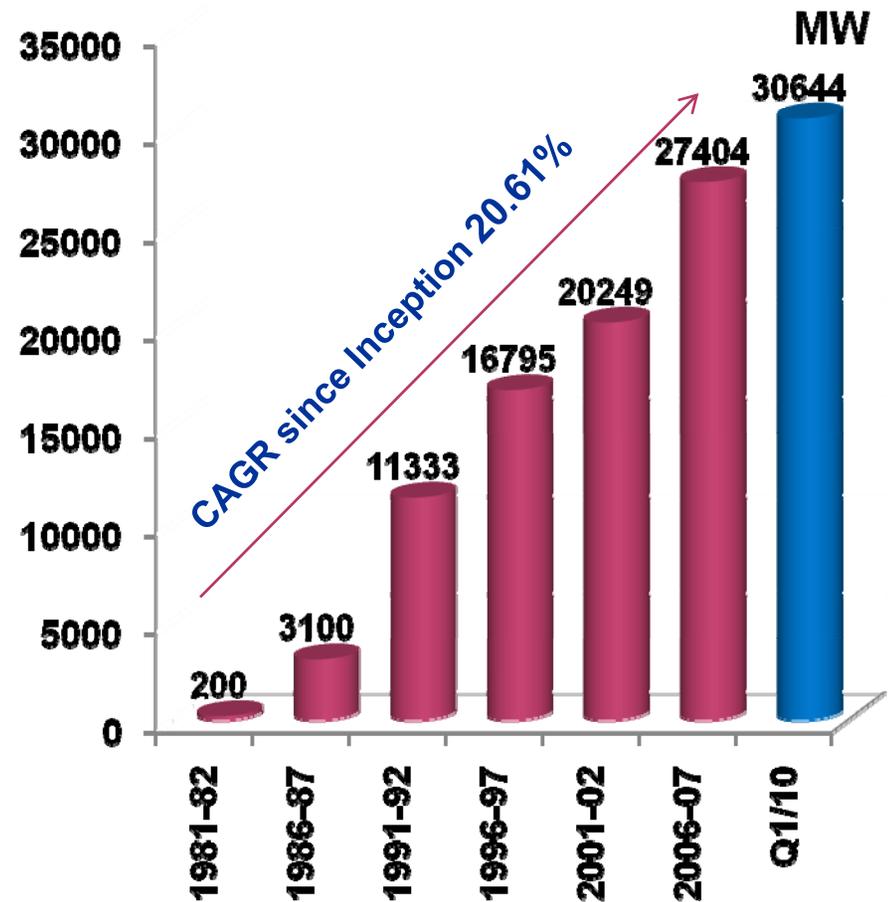
☐ Investment approved

Project investment

- Rs. 121458 million for Rihand-III and Vindhyachal-IV

R&M investment

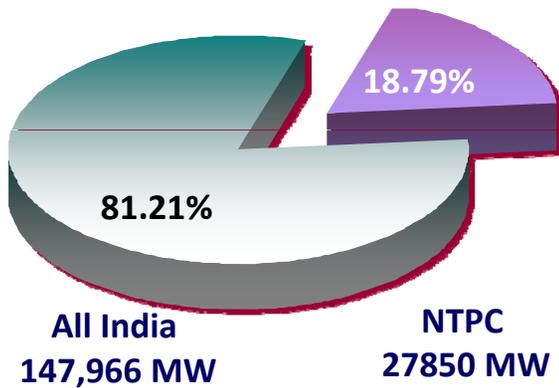
- Rs. 4868 million for R&M of Auriaya GBPP
- Rs. 545 million for R&M of (Phase-I) extension works at Rihand (2X500 MW)
- Rs 673 million for R&M of Controls & Instrumentation System works at Korba 3X500 MW



Operational Performance 2008-09

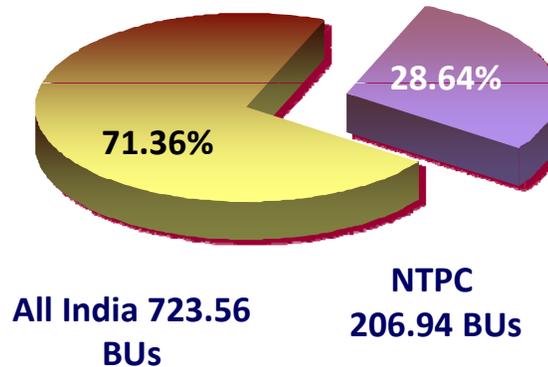
Installed Capacity Crosses
30000 MW

TOTAL CAPACITY
AS ON 31.3.2009



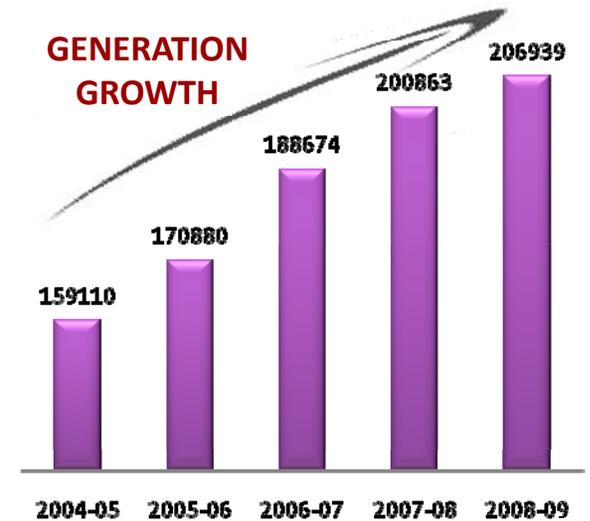
1000 MW commissioned

GENERATION
2008-2009



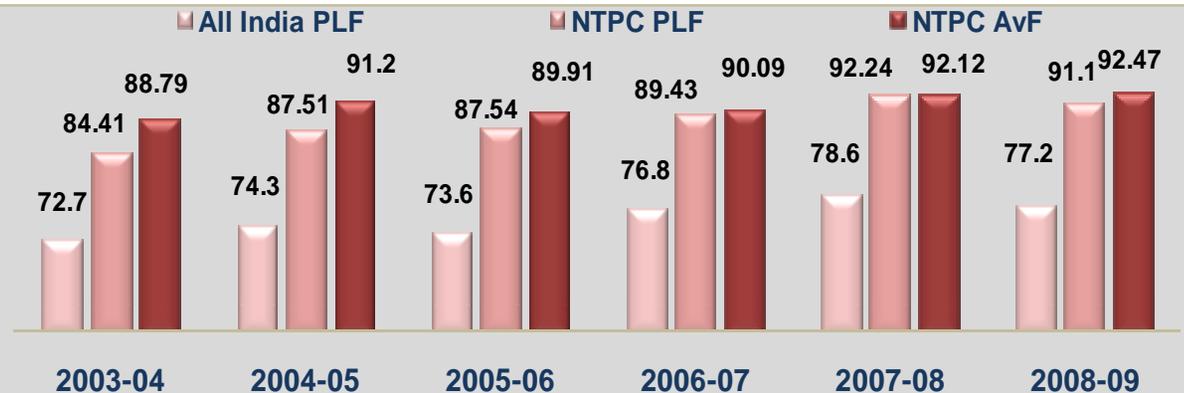
2000 MW commercial
capacity addition

GENERATION
GROWTH



10 Coal Based stations
achieved over 90% PLF

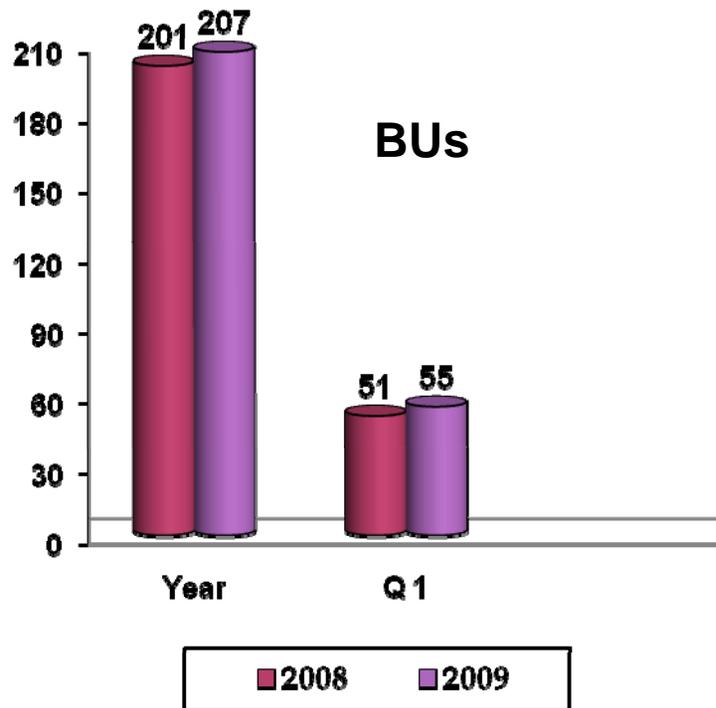
NCTPP achieved
99.36%



CAGR of generation 21.83% since inception

Operational Performance – Generation & Capacity utilization

Generation – Quarter and Year



- Contributed 31.41% of the generation increase in the country during fiscal 2009,
- Q1 generation contributed to 48.15% of country's addition in generation

PLF – Year and Quarter

	2009	2008	Q1-10	Q1-09
Coal Stations	91.14%	92.24%	92.87%	92.19%
Gas Stations	67.01%	68.14%	79.87%	67.20%
All India	77.19%	78.61%	77.75%	77.74%

Availability – Year and Quarter

	2009	2008	Q1-10	Q1-09
Coal Stations	92.47%	92.12%	92.64%	92.56%
Gas Stations	86.65%	85.93%	93.08%	87.16%

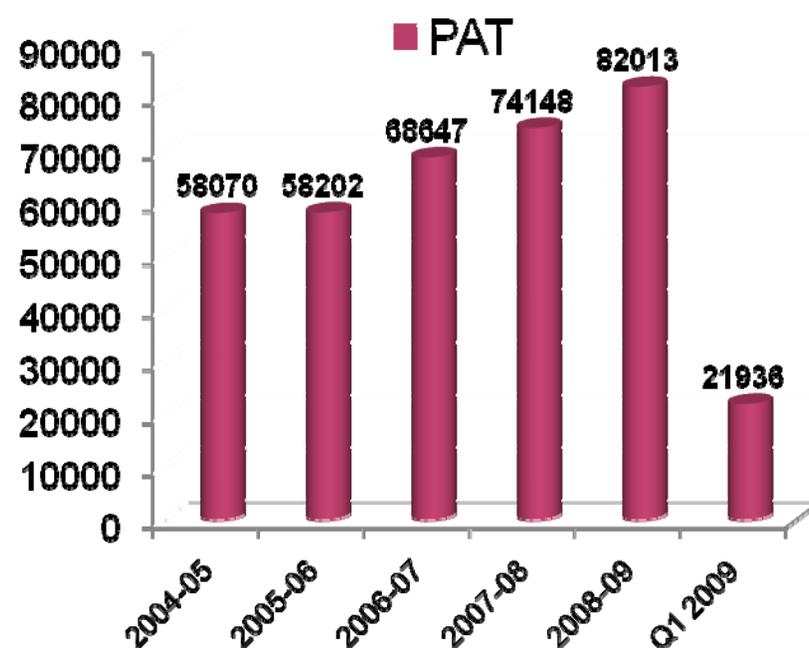
- In Q1, Gross Generation increases by 10%, ESO by 11% over corresponding quarter
- Highest ever PLF of 79.87% for gas stations during Q1

Financial Performance – 2008-09(Audited)

Rs. Million

	2008-09	2007-08	GOLY*
Total income	452,728	400,177	13%
Net Sales	419,238	370,501	13%
Other income	33,490	29,676	13%
Total Expenditure	359,133	297,628	21%
Fuel	271,107	220,202	23%
Depreciation	23,645	21,385	11%
Interest & finance charges	20,229	17,981	12%
PBT	93,595	102,549	-9%
Tax	11582	28401	-59%
PAT	82,013	74,148	11%
Adjusted PAT	80,783	75,140	8%

*GOLY-Growth over last Year



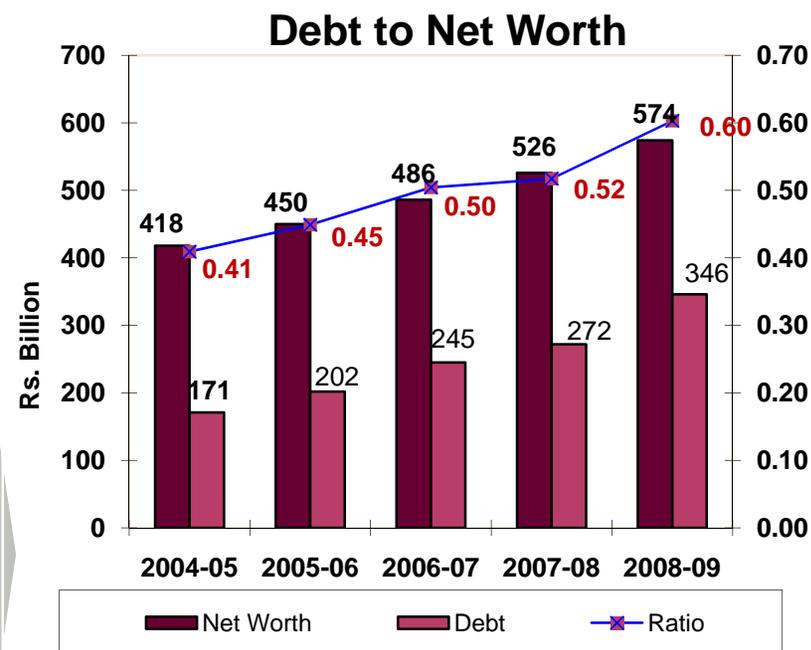
+Gross revenue up by 13%
+Crosses Rs. 452 billion

+Adjusted PBT up by 8% after
adjustment of income tax Recoverable

Robust Financials- YOY

Rs. Million

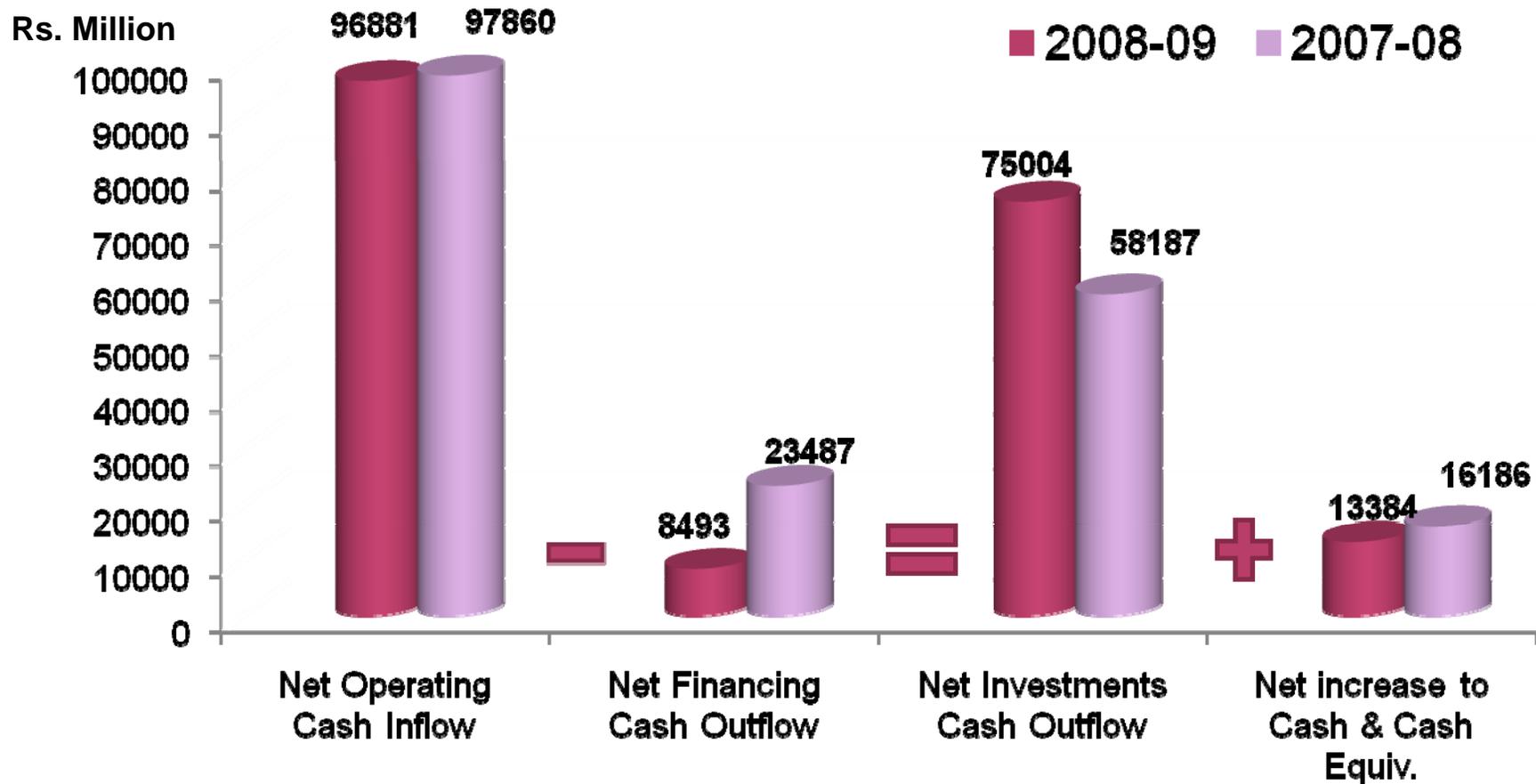
	31.03.2009	31.03.2008	GOLY
Gross fixed assets	623,530	533,680	17%
Net block	329,377	260,937	26%
CWIP incl. stores	264,049	224,783	17%
Investments	139,835	152,672	-8%-
Current assets, loans and advances	309,253	255,488	21%
Deferred FE Assets	9,734	-	
TOTAL	1,052,248	893,880	18%
Equity share capital	82,455	82,455	-
Reserves and surplus	491,246	443,931	11%
Net worth	573,701	526,386	9%
Long Term Liabilities	345,678	271,906	27%
Current Liab. & Prov .	106,886	79,299	35%
Others (Deferred - AAD/ FERV liability)	25,983	16,289	60%
TOTAL	1,052,248	893,880	18%



Highest Credit Rating
 'AAA' by CRISIL & ICRA
 'BBB-' with negative outlook - S&P
 'BBB-' with stable outlook - FITCH

RoCE improves to 14.3% (14% Last Yr)
 RoNW improves to 16.7% (16.1% last Yr)
 Improved Leverage- Debt-Equity is 0.60
 (0.52 Last Yr)

Robust financials leading to strong Cash Flows



During 2008-09, 77% of Net Operating Cash Flows used in Investment Activities as compared to 60% during 2007-08.

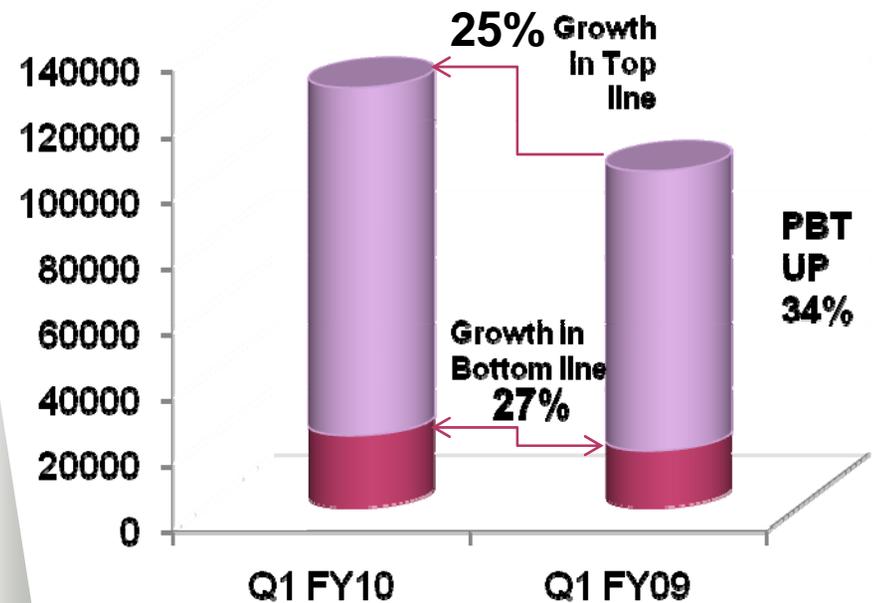
Cash & Cash Equivalents :
 +Rs. 149 Billion as on 31.03.08
 +Rs. 163 Billion as on 31.03.09

Financial Performance – Q1 2009-10

(Unaudited)

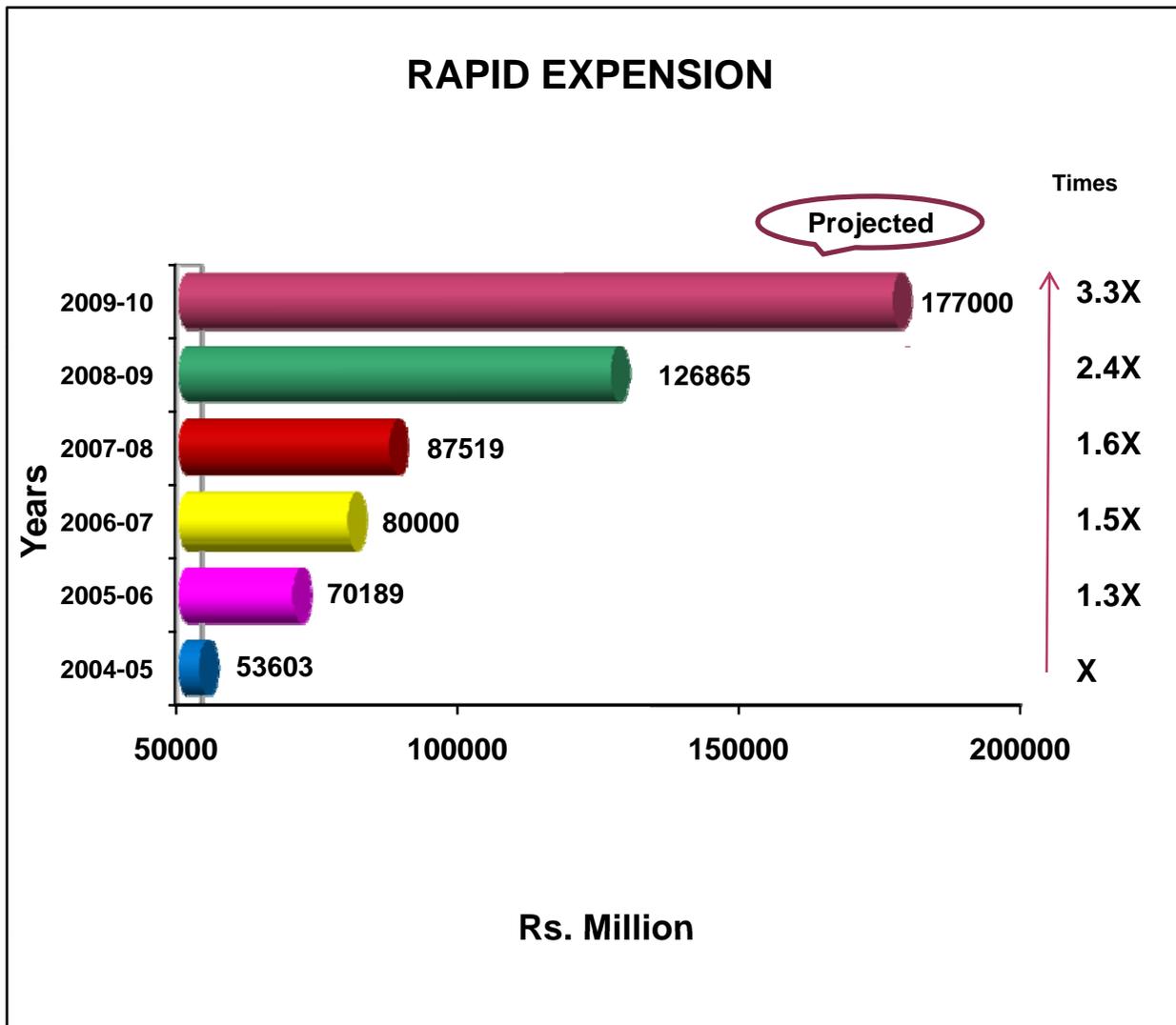
Rs. Million

	Q1 2009-10	Q1 2008-09	GOLQ
Total income	127790	102567	25%
Net Sales	120027	95395	26%
Other income	7763	7172	8%
Total Expenditure	98845	80920	22%
Fuel	77427	61386	26%
Depreciation	6128	5524	11%
Interest & Finance Charges	4447	4219	5%
PBT	28945	21647	34%
Tax	7009	4382	60%
PAT	21936	17265	27%



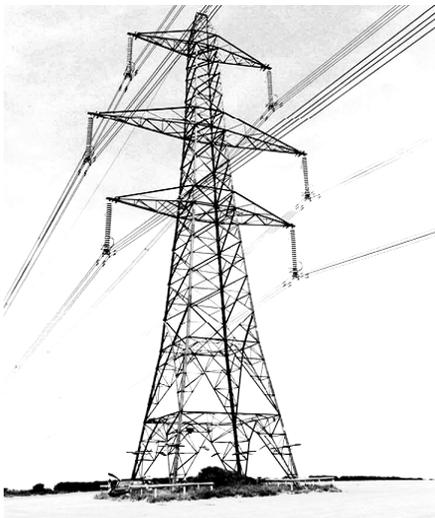
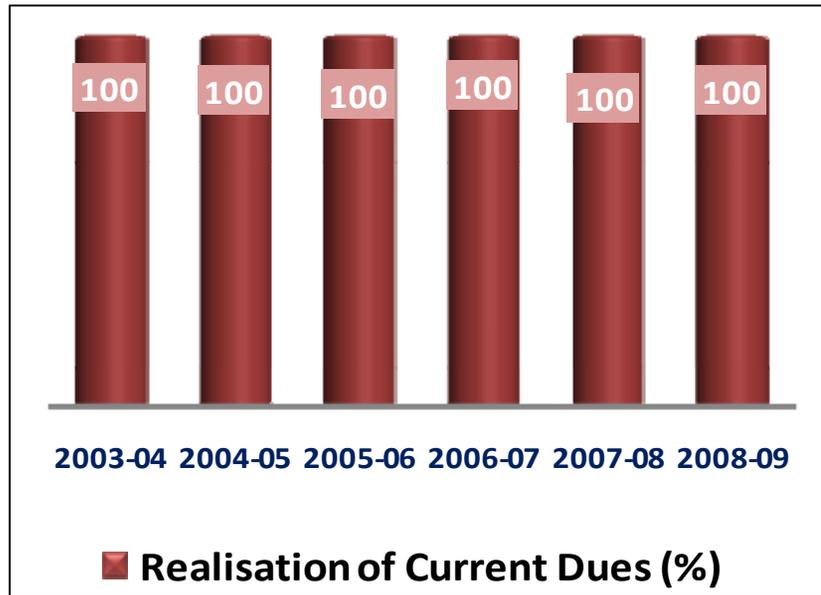
- ✦ Better PLF resulting in higher generation
- ✦ Balanced Tariff Regulation 2009 issued by CERC

Financial Performance- Accelerated investment in Capex



- ❑ Highest ever capital expenditure of Rs. 127bn during 2008-09
- ❑ 45% higher than previous year's Rs. 88 bln
- ❑ Total capital expenditure incurred by NTPC Group companies is Rs. 152 bln
- ❑ Outlay for 2009-10 for NTPC's capital schemes is Rs. 177 bln
- ❑ For Group NTPC the outlay is around Rs. 245 bln, an increase of 62% over last year

Commercial Performance



- ❑ 100% realization of billing for six years in succession and also for Q1/10
- ❑ Letters of Credit to the extent of 105% of average monthly billing established by all customers
- ❑ Timely Servicing of Bonds under One-time-settlement Scheme
- ❑ Incentive scheme for encouraging prompt payment continues
- ❑ 66% of energy bills realized within a week of presentation of bill for the month
- ❑ Signed PPAs with 24 beneficiaries for new projects of 5820 MW capacity during 2008-09

Other key highlights 2008-09, Q1/10

MoU for 4000 MW Coal Based plant

MOU signed on July 12, 2009 with the Government of Chhattisgarh for establishing a 4000 MW coal based thermal power project having 5 units of 800 MW each at Lara in Raigarh District of Chattisgarh.

Online High Power Test Laboratory

A JV Company set up along with DVC, NHPC and PGCIL named "National High Power Test Laboratory Pvt. Ltd." with equal equity participation for short Circuit Testing facility. The company will test power transformers, LT/HT Switchgears, bus-ducts, CTs etc.

MOU with HAL

MOU signed on January 6, 2009 for preparation of DPR for "Repairs of Hot Gas Path Components" which may eventually graduate to manufacturing facility creation for GT indigenously" by forward and reverse engineering

Foray into Nuclear Power

Proposal for formation of JV Company with Nuclear Power Corporation of India Ltd. (NPCIL) for setting up a Nuclear Power Projects. NPCIL and NTPC stake in the ratio of 51:49 .

Board of Directors expanded

5 more independent directors appointed in addition to existing 4 independent directors, 7 full time functional directors incl. CMD and two Govt. nominees. New Director (Commercial) and Director (Projects) appointed on the Board.

Awards and Accolades



**PLATTS TOP
250 GLOBAL
ENERGY
COMPANY
2008**



**IPMA
AWARD 2005
& 2008**



**CII - ITC
SUSTAINABILITY
AWARD 2008**



BEST CFO



**Infrastructure
Excellence
Award**



**CII Exim
Bank
Award for
Excellence
2008**



**Dun &
Bradstreet
American
Express
Corporate
Award**

BEST WORK PLACE

PROJECT
MANAGEMENT

EFFICIENCY

ENVIRONMENT
MANAGEMENT

OPERATIONAL
MANAGEMENT

BUSINESS
MANAGEMENT

TRAINING

THE AWARDS GALORE ARE IN RECOGNITION OF NTPC'S CONTRIBUTION IN ALMOST EVERY FIELD INDICATING CLEAR INTERACTION BETWEEN PEOPLE AND BUSINESS PROCESS

CSR

SUSTAINABLE
DEVELOPMENT

GLOBAL
FINANCIAL

INDUSTRY
PERFORMANCE

CORPORATE
GOVERNANCE

CUSTOMER
EXCELLENCE

LONG STANDING
CONTRIBUTION

SERVICE TO
NATION



SAP award



**IEEMA
POWER
AWARD 2008**



**SCOPE
Meritorious
Award**



**Star
Company of
the year**



**Greentech
Environment
Excellence
Award 2007**



**Business
Standard
Award 2008**



**Amity
Leadership
Award**



**Employer
Branding
Award**

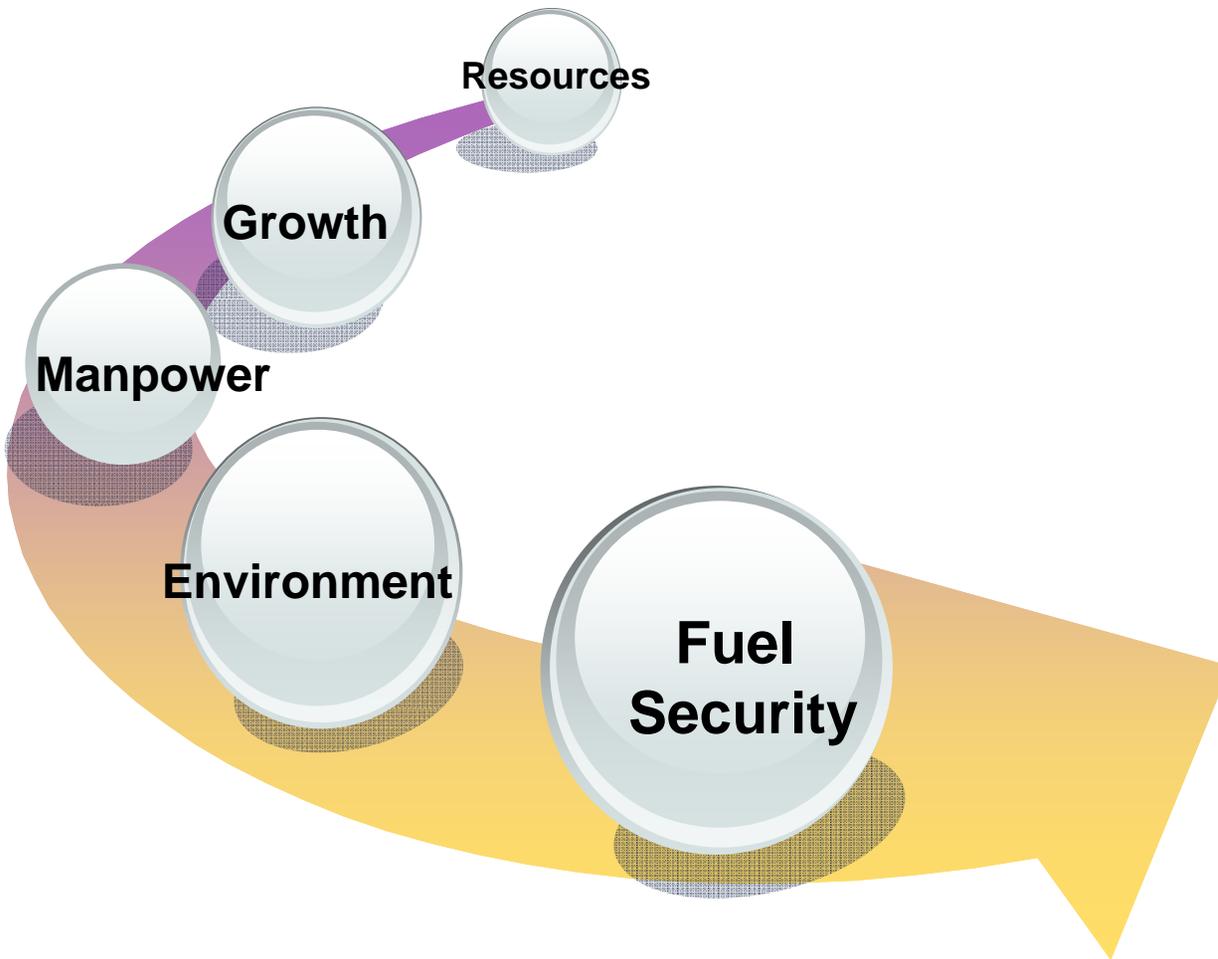
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Opportunities and Challenges



- Sustaining present level of Operational Performance
- Fuel Security
- Growth Challenges
 - Accelerated Organic Growth
 - Diversification and Inorganic Growth
- Managing Environment
- Regulatory Environment
- Managing people
- Fund mobilization
- Technology upgradation
- Competition
- Corporate Governance

Sustaining present level of Operational Performance

Strategy –well defined operations Strategy

Follow up

- Periodic Regional Operations Performance Review (ROPR), Technical Audits emphasis and redefinition , PEER review, efficiency gap removal follow-up, R&M process streamline, overhaul real time guidance, real time commissioning guidance.

Institution Building

- Knowledge teams formation, maintenance works package reduction Vendor Development focus, MRO industry initiative, RLA specifications, efficiency improvement projects, focus on replacements.

Resources Availability

- Spares/services preparedness planning, modular spares purchase, long term overhauling planning, coal/gas imports etc.

Information Enablement

- Plant outage/generation MIS IT enablement, Outage Preparedness Index, Station Performance Evaluation Matrix, web based MIS, Sms alerts, plant efficiency mappings, best practice inputs etc.

Sustaining present level of Operational

Performance Benchmarking with world standards

- NTPC became a member of North America Electric Reliability Corporation (NERC). NERC maintains a database of more than 5000 generating units around the world through its Generating Availability Data System (GADS)
- Obtained database 5000 units from NERC for the period 1982-2005 for benchmarking

Parameter selection for comparison

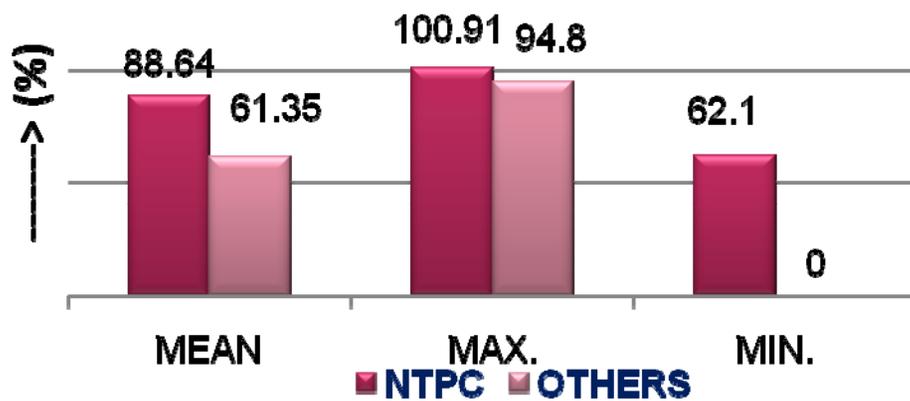
- Gross Capacity Factor (PLF) for last year
 - Unplanned Outage Factor (Forced Outage) for last year
 - Availability Factor for last year
 - Planned Outage Factor for last three years
- Since utility wise data is not available, the units were compared in two clusters of 200-220 MW capacity and 475-525 MW capacity

Sustaining present level of

Performance comparison (475 – 525 MW)

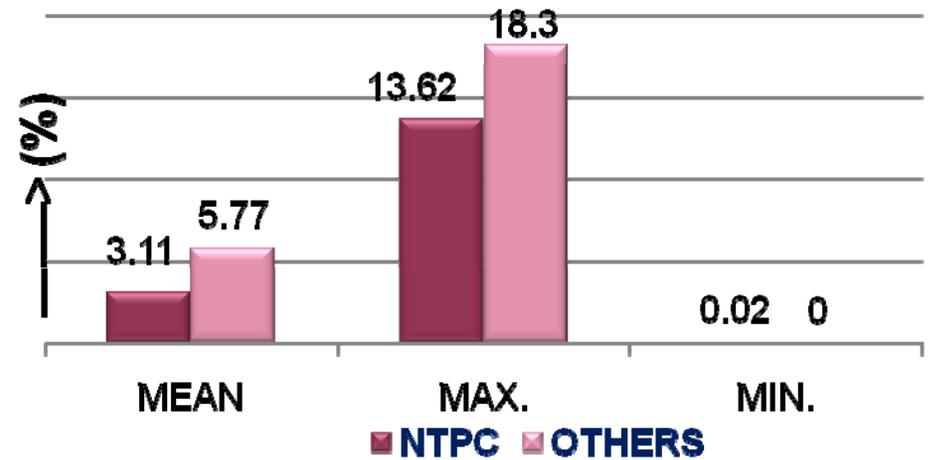
No. of international units in the cluster = 74

GROSS CAPACITY FACTOR(PLF)

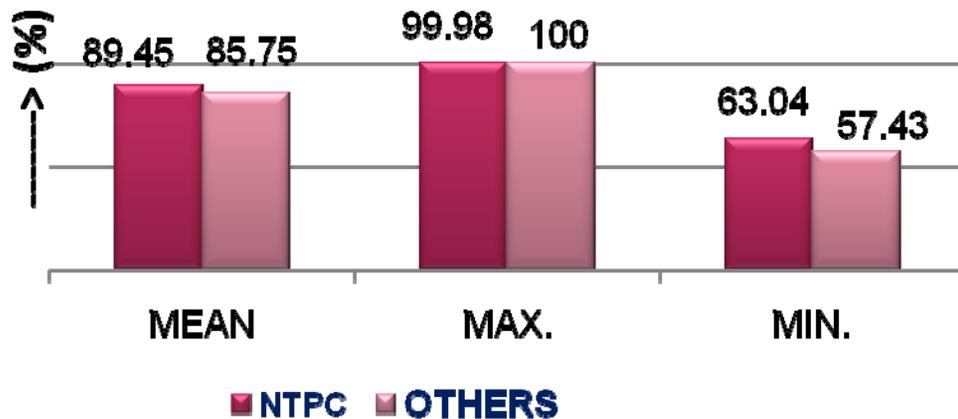


No. of NTPC units = 26

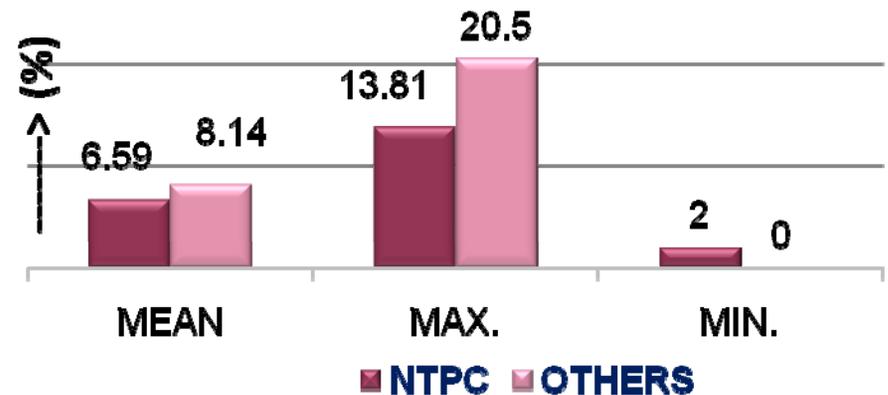
UNPLANNED OUTAGE FACTOR



AVAILABILITY FACTOR



PLANNED OUTAGE FACTOR

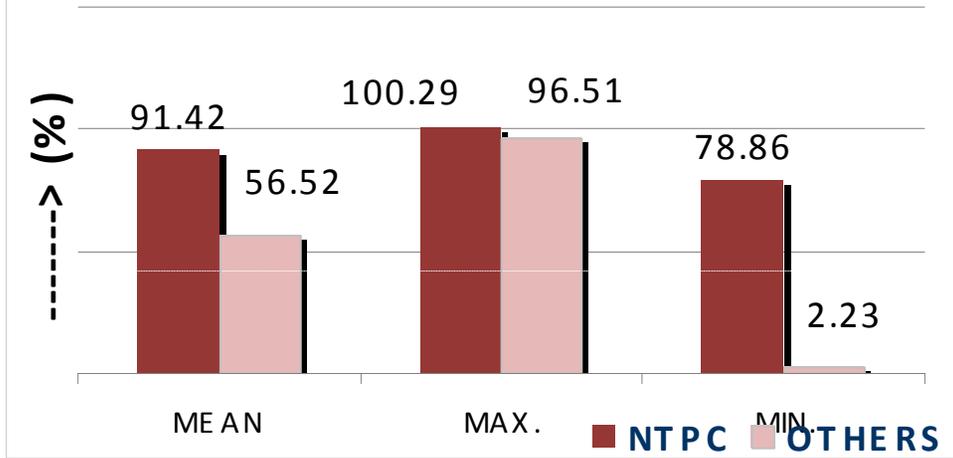


Sustaining present level of

Performance comparison (200–220 MW)

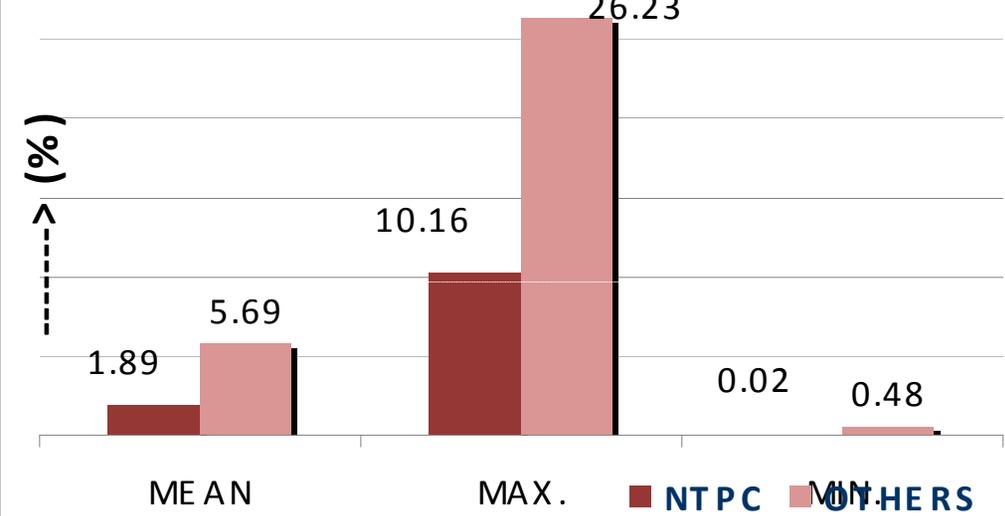
No. of international units in the cluster = 81

GROSS CAPACITY FACTOR (PLF)

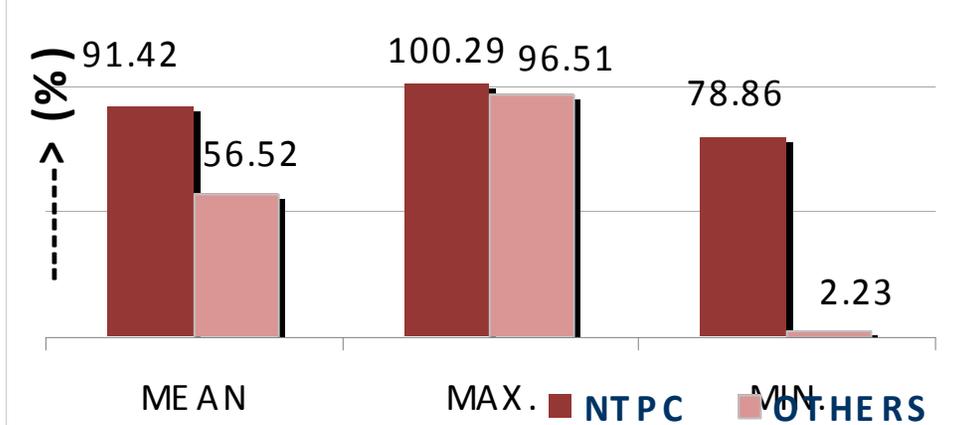


No. of NTPC units = 35

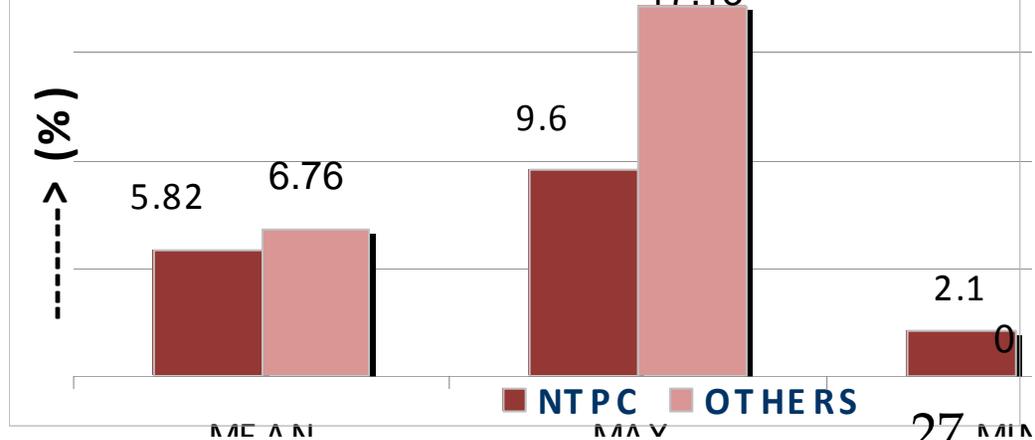
UNPLANNED OUTAGE FACTOR



AVAILABILITY FACTOR



PLANNED OUTAGE FACTOR

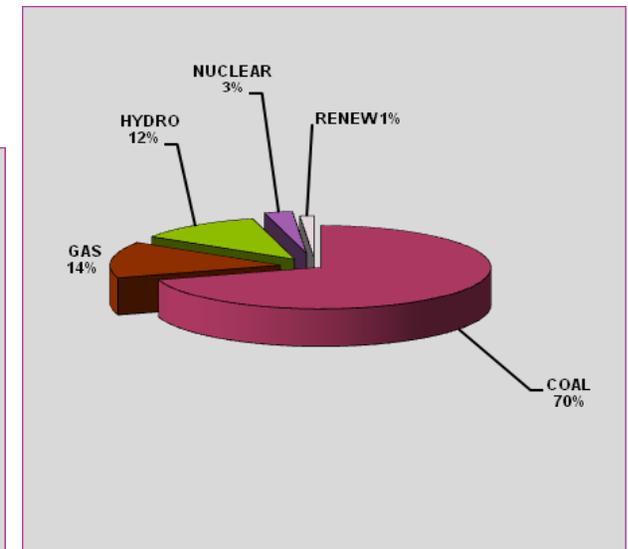


Fuel Security

Strategy - Reducing reliance on fossil fuels by diversification of fuel-mix

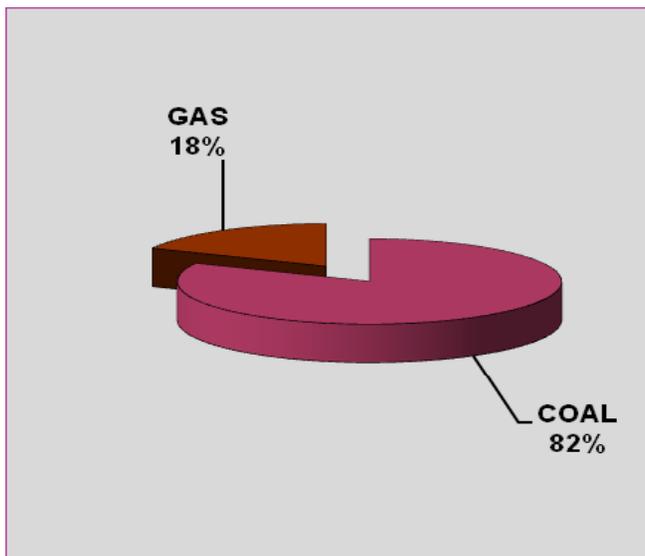
- Coal based generation to reduce to 70% by 2017
- Hydro generation to contribute 12% by 2017
- Nuclear and renewable to contribute 3% and 1% respectively

**CAPACITY MIX - 2017
(75,000 MW)**



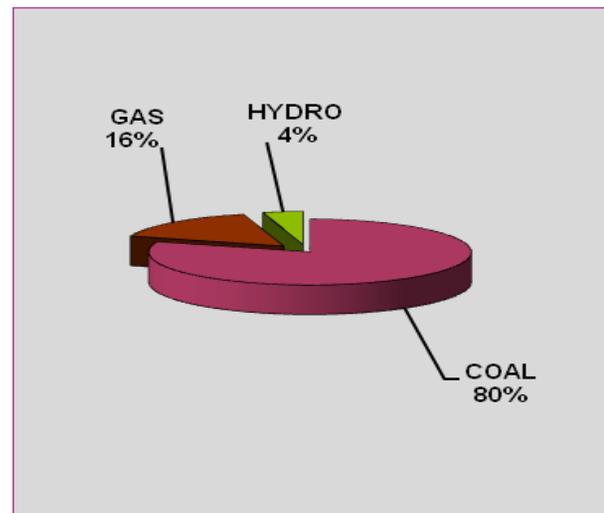
COAL	53000
GAS	10000
HYDRO	9000
NUCLEAR	2000
RENEWABLE	1000

**CAPACITY MIX - TODAY
(30,644 MW)**



COAL	25209
GAS	5435

**CAPACITY MIX - 2012
(50,000 MW)**



COAL	40000
GAS	8000
HYDRO	2000

Fuel Security

Strategy-Foray into Renewable Energy

- ❑ **Wind Energy:**
 - 1,010 MW under active consideration in the State of Karnataka, Andhra Pradesh and Gujrat;
- ❑ **Hydro Energy:**
 - Mini Hydel plans envisaged at three sites
- ❑ **Solar Energy:**
 - Solar field at NTPC Anta (10MW), NTPC Rihand/Singrauli (25MW) and Andaman and Nicobar Islands (5+1 MW) under consideration;
- ❑ **Biomass Energy:**
 - Various projects with different technologies envisaged in Madhya Pradesh and Chhattisgarh
- ❑ **Geothermal Energy:**
 - MOU with National Geophysical Research Institute (NGRI) Hyderabad for development of Geothermal energy based power project.

Planned Renewable Energy Portfolio

Renewable Energy Source		Capacity (MW)
1	Wind energy Farms	650
2	Solar PV Power Projects	5
3	Solar Thermal	10
4	Biomass Power Projects	15
5	Geo Thermal Power Project	30
6	Small Hydro Project	300
7	Bio Fuel	5
Total		1,015

Fuel Security - Coal

Strategy – Sustaining & Enhancing Fuel Security

2008-09

- ➔ Total Coal Supply received 129.78 MMT (consisting of Domestic Coal of 124.37 MMT & imported coal of 5.41 MMT) as against 122.97 MMT received during 2007-08

Q1/10

- ➔ 32.85 MMT of coal received (including imported coal of 3.25 MMT) as against 28.7 MMT in Q1/09

Domestic
Fuel Security

- Long term Fuel Supply Agreement signed with CIL for supply of coal to NTPC Power Stations for a period of 20 years

Development
of
Coal Mines

- Land Acquisition at advanced stage at PB Coal Mining Project (CMP)
- Mining Plan approved for CB CMP & KD CMP.
- Environmental Clearance received for PB CMP
- 14 MTPA to be mined from Pakri Barwadih (PB)

Acquisition
of Mines
Abroad

- A JV Company 'International Coal Ventures Ltd' incorporated for overseas acquisition and/or operation of coal mines or blocks.
- Scouting opportunities for acquisition of stakes in Coal Mines in Indonesia and Mozambique



Fuel Security - Gas

Strategy – Sustaining & Enhancing Fuel Security

2008-09

- ➔ **APM/PMT Gas of 8.68 MMSCMD received as against 8.99 MMSCMD received last Yr.**
- ➔ **Purchased 1.9 MMSCMD of regassified LNG from Spot Market and 0.07 MMSCMD on Spot/Fallback Arrangement as against 2.81 MMSCMD last Yr.**

Q1/10

- ➔ **14.03 MMSCMD received as against 11.39 MMSCMD received during Q1/FY09**
- ➔ **5.1 MMSCMD of Spot & Fallback RLNG received as against 2.57 MMSCMD during Q1/FY09**

**Long Term
Supply
Agreements**

- **Gas Supply agreement with GAIL in place for supply of 12.9 MMSCMD gas**
- **New Agreement to be entered with GAIL for Supply of 2.5 MMSCMD of RLNG for 10 Years.**
- **Agreements with BPCL, IOC for utilization of fall back gas**

**Participation
in Gas Value
Chain**

- **Allotted a Block under NELP-V for Exploration activities in Arunachal Pradesh in Consortium (NTPC Share 40%)**
- **Exploration & Production activities in the NELP-V in Arunachal Pradesh in full swing**

Rationale for accelerated organic growth... the drivers

Growth Drivers: Global GDP Forecasts 2009-10

	Consensus Estimate 2009	Worst Case 2009	Consensus Estimate 2010
USA	-1.8/-2.2	-2.5/-3.0	+0.7/1.3
Japan	-1.6	-2.5	+0.2
Euro zone	-1.8/-2.5	-3.5	+0.6
UK	-2.3/-2.7	-3.8	+0.2
China	+7.3/6.0	+5.0	+7.0
India	+6.1/5.6	+4.5	+6.5
Brazil	+2.4/1.8	+0.5	+3.0
World	0.7	0.0/-0.5	+2.2

India's GDP Growth is expected to be 2nd highest in the World during 2009 & 2010 leading to sustained demand for electricity

As per a recent World Bank report, India's GDP is expected to grow at 8.0% in 2010 overtaking China's GDP growth rate of 7.5%

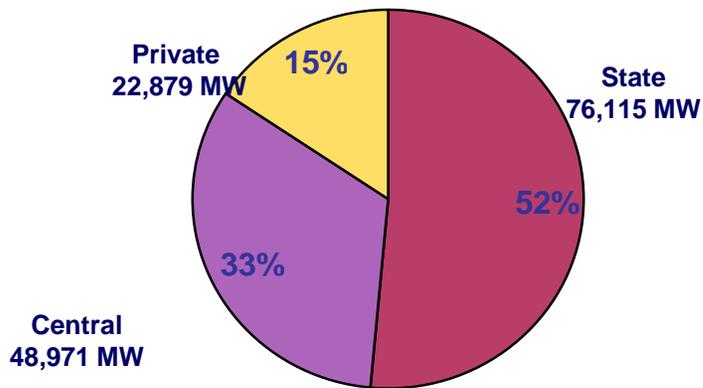
Global Economic Outlook (Jan 2009) - The Economist

Growth Drivers.....

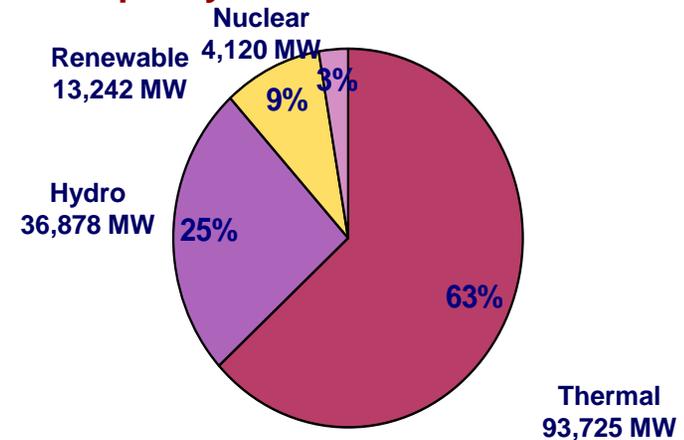
Existing Energy Deficit

Need for additional capacity due to soaring energy deficit in India

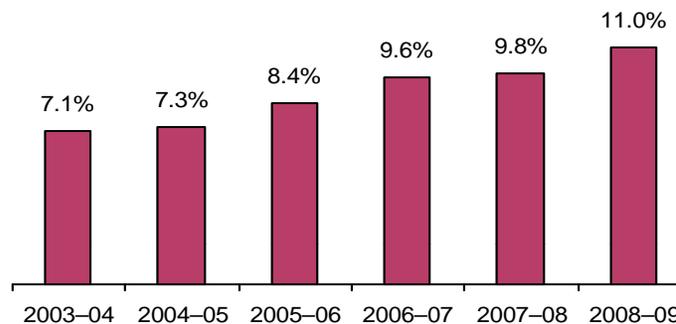
Sectorwise Capacity As On 31.3.2009



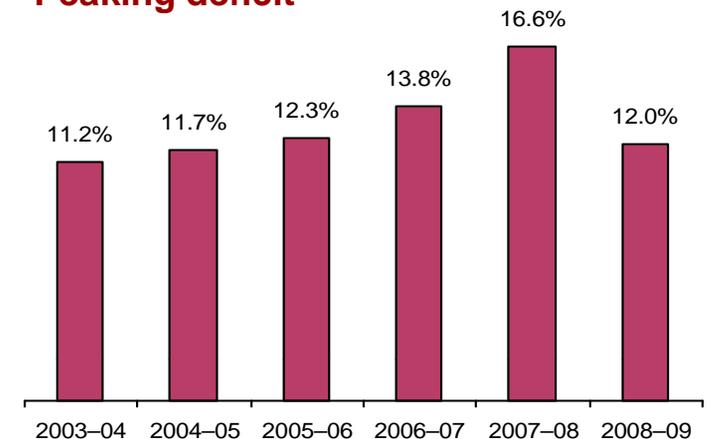
Fuelwise Capacity As On 31.03.2009



Energy deficit



Peaking deficit

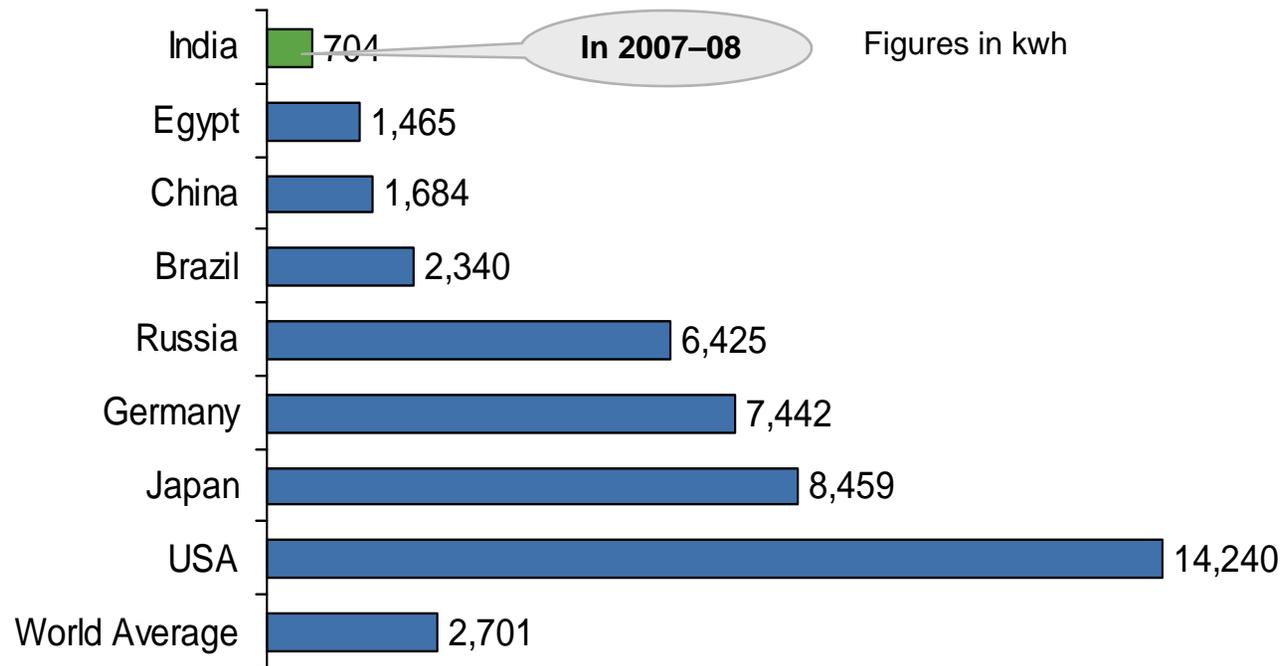


At projected GDP growth of 7% - 8% for next ten years, power demand expected to grow significantly

Growth Drivers.....

Low Per Capita Consumption

Per Capita Consumption of Electricity



Source: UNDP Human Development Report 2007-08 – Data for 2004

- India is 5th largest power consuming country in the world with 3.8% share

- India is 3rd largest power consuming country in Asia with 11.3% share

- National electricity Policy aims at per capita availability of 1000 kwh by 2012

Low per capita consumption leaves scope for capacity expansion in the power sector

Growth Drivers.....

XI Plan Target-2007-2012 (Revised)

Sector	Thermal	Hydro	Nuclear	Total
Central sector	24840	8654	3380	36874
State Sector	23301	3482	0	26783
Private Sector	11552	3491	0	15043
Total	59693	15627	3380	78700

Year wise XI plan targets vs achievement

Year	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Thermal	6620	9304	14229	16655	12885	59693
Hydro	2423	1097	1805	1741	8561	15627
Nuclear	220	660	2000	500	0	3380
Total	9263	11061	18034	18896	21446	78700

**NTPC to contribute to 61% of central sector share by adding around 22430MW during XI plan
Commissioned 15,636 MW so far, of XI plan target**

Accelerated Organic Growth

Strategy-Increasing Generation Capacity

- ❑ 3240 MW already commissioned under XI plan
- ❑ 17930 MW capacity under Construction including 4000 MW under construction in JV companies
- ❑ 17 projects under construction at 16 locations
- ❑ 45 units under construction
 - ❑ 7 units of 250 MW each
 - ❑ 18 units of 500MW each
 - ❑ 8 units of 660 MW each
 - ❑ 12 units under Hydro capacity

Target for 2009-10

Kahalgaon - unit 7	500*
Sipat - units 1&2	1320
NCTPP - units 5&6	980
Korba - unit 7	500
Total	3300

* Commissioned on 28.6.2009

Projects under construction	(MW)
SIPAT – I (COAL) / CHHATTISGARH	1980
BARH – I (COAL) / BIHAR	1980
NCTPP – II DADRI (COAL),UP	980
KORBA – III (COAL) / CHHATTISGARH	500
FARAKKA – III (COAL) / WEST BENGAL	500
SIMHADRI – II (COAL) AP	1000
KOLDAM (HYDRO) / HIMACHAL PRADESH	800
LOHARINAG PALA (HYDRO) / UTTARAKHAND)	600
TAPOVAN VISHNUGAD (HYDRO) UTTARAKHAND	520
MAUDA (COAL) / MAHARASHTRA	1000
BONGAIGAON (COAL) / ASSAM	750
BARH – II (COAL) / BIHAR	1320
VINDHYACHAL-IV(COAL)/MADHYA PRADESH	1000
RIHAND-III (COAL)/UTATR PRADESH	1000
ARAVALI STPP JHAJJAR (COAL-, JV WITH HPGCLetc.)	1500
VALLUR (COAL) - JV WITH TNEB	1500
NABINAGAR - JV WITH RAILWAYS	1000
TOTAL	17930³⁶

Diversification and Inorganic Growth

Strategy-Related Diversification

Acquisition of 44.6% stake in TELK

- ❑ for manufacturing and repair of high voltage transformers and associated equipment
- ❑ Business collaboration and shareholders agreement signed with Govt of Kerala and TELK
- ❑ Acquired 44.6% stake for Rs. 31.34 Crore subject to final adjustment based on valuation of Assets.

JV with BHEL

- ❑ “NTPC- BHEL Power Projects Private Ltd” started functioning as a 50:50 JV
- ❑ JV to manufacture and supply equipments for power plants and other infrastructure projects in India and abroad
- ❑ CMD and two full time directors of the Company selected
- ❑ NTPC Board approved assigning implementation of 500 MW expansion of Singrauli on turnkey EPC contract basis
- ❑ BHEL has issued LOI for BOP works of 726 MW CCPP at Pallatana, Tripura and EPC works of 100MW CCPP at Namrup, Assam to NBPPL.

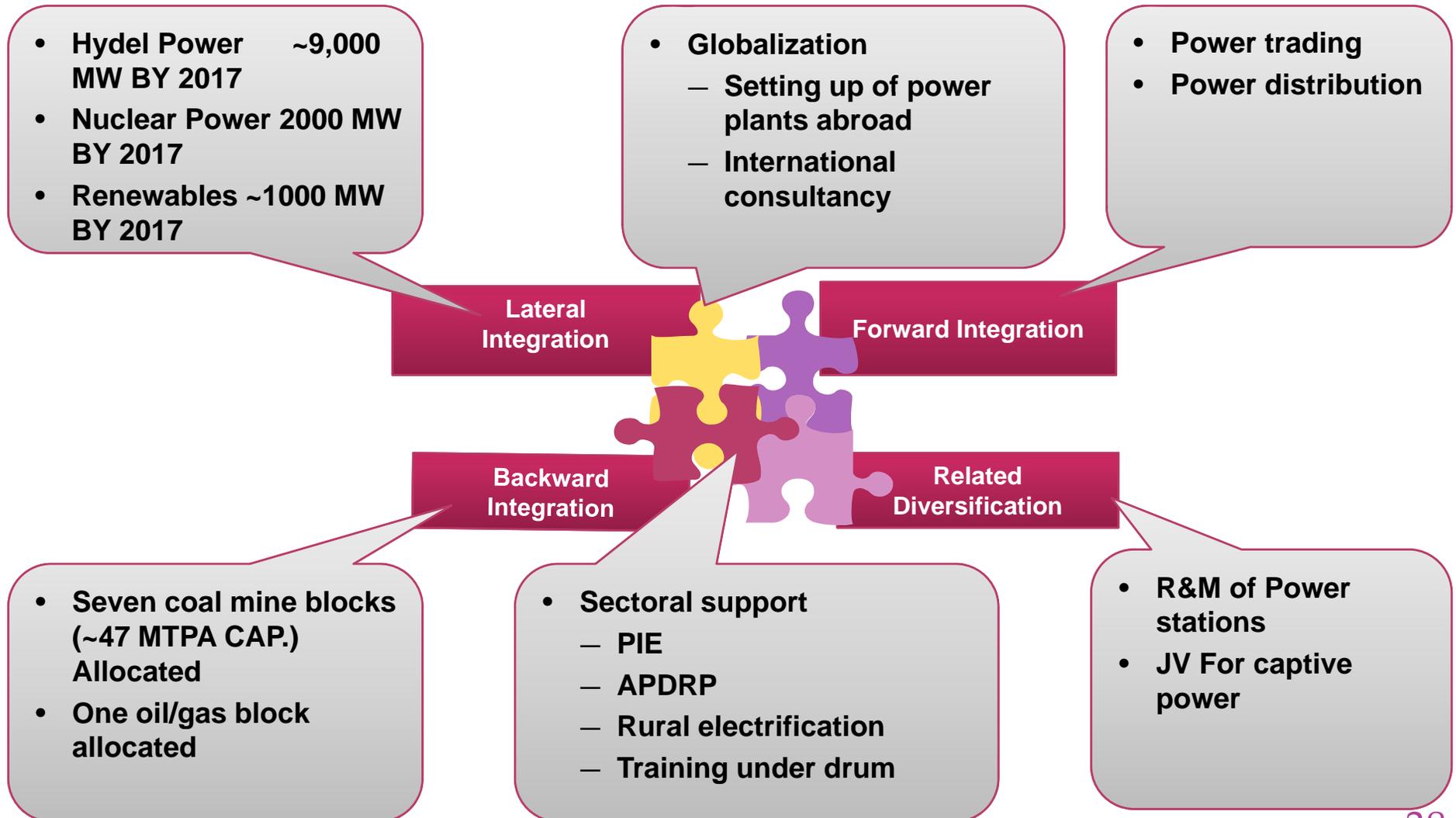
JV with Bharat Forge Ltd

- ❑ JV to manufacture castings, forgings, fittings and pressure piping required for power and other industries, balance of plant equipment for power sector
- ❑ “BF NTPC Energy Systems Ltd” incorporated, NTPC shall have 49% and BFL 51%
- ❑ The Company is in the process of developing its comprehensive business model.

Setting up of Power Exchange

- ❑ A JV Company has been incorporated with NHPC Ltd., PFC Ltd. and TCS Ltd. under the name “National Power Exchange Limited” (NPEX)
- ❑ The JV Co. shall operate a Power Exchange at National level.
- ❑ NPEX to provide a neutral and transparent electronic platform for trading of power on “day ahead basis” and ensure clearing of all trades in a transparent, fair and open manner with access to all players in the power markets.
- ❑ NTPC Ltd. & NHPC Ltd. will contribute 16.67% equity each, PFC Ltd. will contribute 16.66% of equity while TCS 50% equity in the share capital
- ❑ Obtained in-principle approval to set up and operate on July 1, 2009

Way Forward—An Integrated Power Major



NTPC BY 2017 ...

Poised to become a well diversified corporate

	Present	2011-12	2016-17
Installed capacity (MW)	30,644	~ 50,000	~ 75,000
Coal mining (production)	--	14 MTPA	~ 47 MTPA
Trading (units traded)	4.83 BU (2008-09)	10 BU	25 BU
Distribution (capacity)	--	1,000 MW	2,000 MW
Employee strength <small>*Excluding JVs & Subsidiaries</small>	23,309*	~ 30000	~35000
Man MW Ratio	0.82	0.60	0.46

Managing Environment – generating clean power

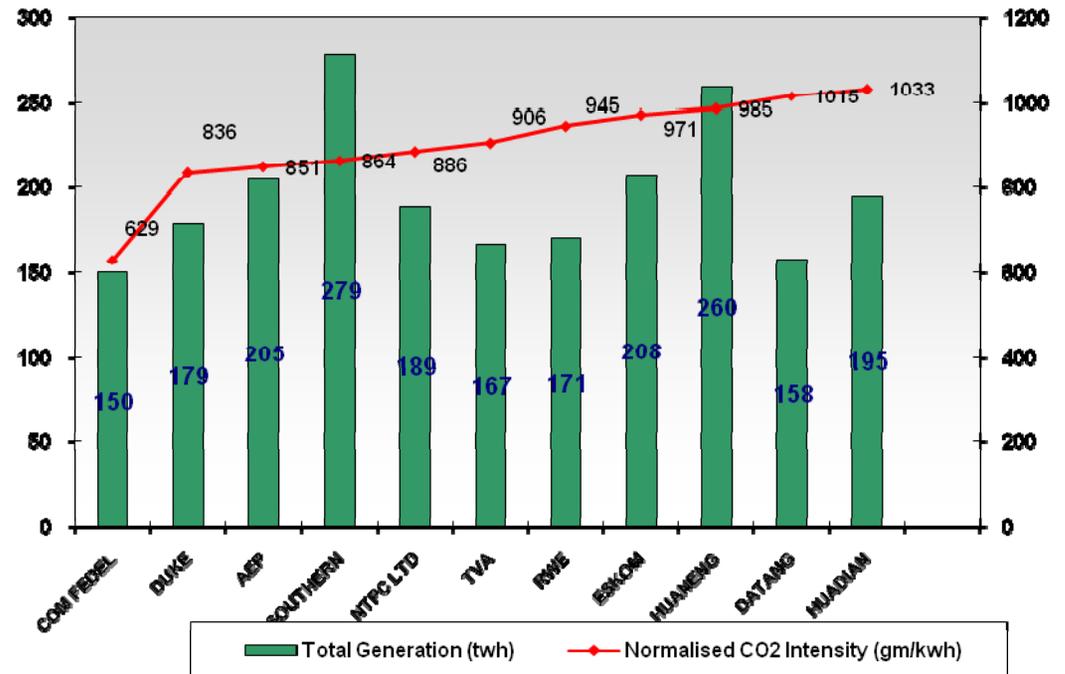
Strategy – Sound environment management

NTPC is amongst the cleanest fossil fuel based power generator in the world with CO2 intensity of power generation comparable with the best

Renewables

- By 2017, NTPC plans to have at least 1000 MW thro' renewable energy resources– wind, hydro, solar, biomass and geo-thermal
- Currently implementing 1920 MW hydro capacity at
 - Koldam - 800 MW
 - Loharinag Pala - 600 MW
 - Tapovan Vishnugad - 520 MW
- Pre-award activities in progress for 552 MW of new hydro capacity
- MoUs signed for development of Hydro / Renewables
- 460 MW Kolodyne hydro project with Mizoram
- With Karnataka for 500 MW wind farms
- With ADB, GE Energy Financial Securities and Kyushu Electric Power
- Distributed Generation (DG) projects

	No of projects	Total Capacity
In operation	10	220 KW
Under construction	6	140 KW
DPR prepared	40	1200 KW



Assumptions:

- 1) The largest generating companies with Annual generation above 150 BU
- 2) The companies having minimum fossil fuel mix of 50%

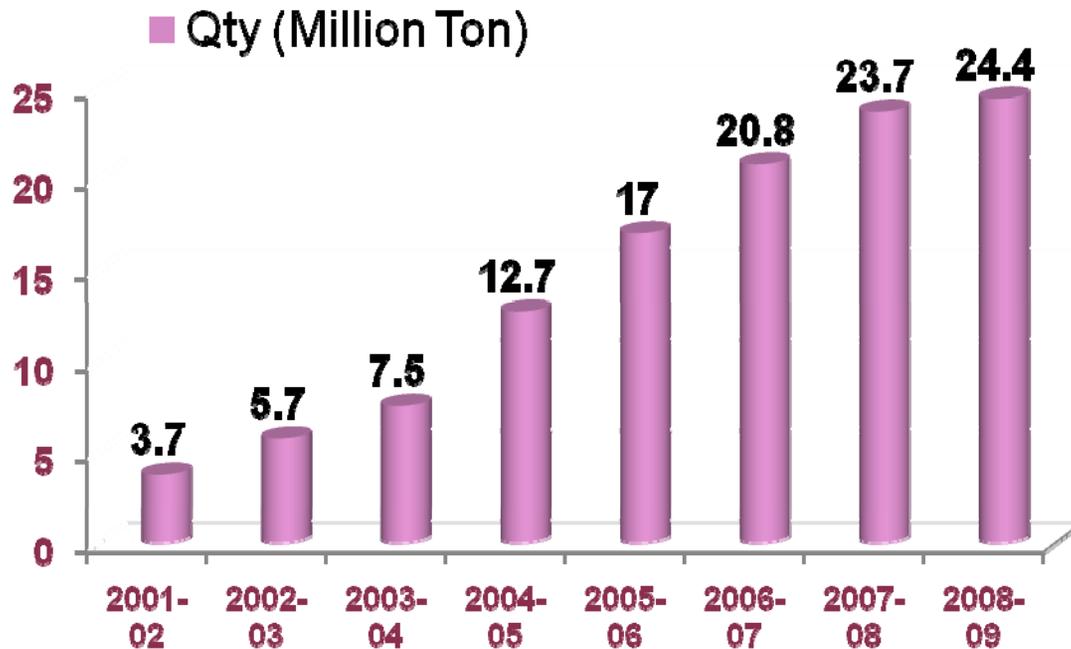
New Technologies

- In the domain of CO2 fixation and utilization, NETRA is actively pursuing biological route using marine algae for producing bio- fuels, along with national labs. Feasibility to set up a 1500 sq.mtr size demonstration plant at Simhadri TPS is being explored
- Inducting Flue Gas Desulphurising (FGD) technology in the coal based power plant at Bongaigaon (3X250 MW)
- 1.0 % of PAT for research and technology development

Managing Environment

Strategy – Innovating methods for Ash Utilisation

Ash Brick Plant at Dadri



Achieved ash utilization of 56.7% i.e. 24.4 MTs of ash.
Ash utilization increased to over 5 times in 7 years.

The Challenge of Regulatory Environment

Strategy – to strive to remain commercially attractive source of power

Average selling price is around Rs.2.12 per unit in fiscal 2009

Supply decisions based on commercial principles

- Allocation of power to customers with ability to pay
- Regulation/reallocation in case of default

Long-term Power Purchase Agreements

- Off-take secured for entire output
- Payment security arrangement in place – TPA upto 2016 and escrow thereafter

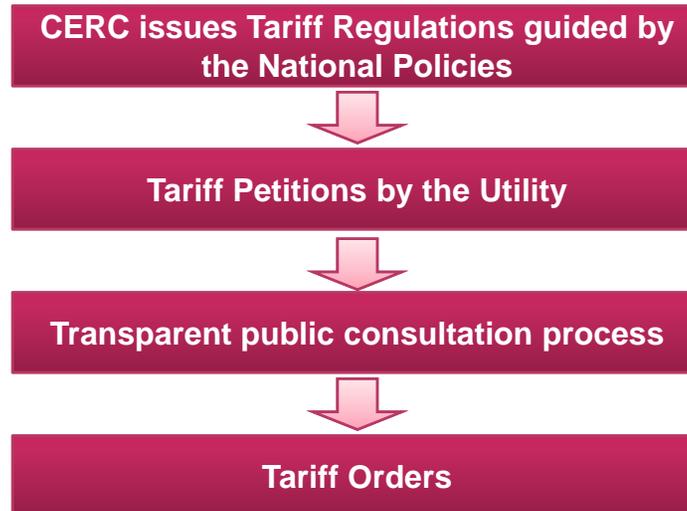
Adequate evacuation arrangement

- Associated transmission system for each project being developed by CTU matching with project schedule
- Regional grids being integrated to provide flexibility in evacuation of power across the country
- National grid capacity expansion from 17000 MW to 37700 MW under way

Tariff Regulation 2009-14.....

providing certainty for next 5 years

Tariff Fixing Process



Supportive Regulatory Structure provides certainty of Revenues for next 5 Years

Tariff Components

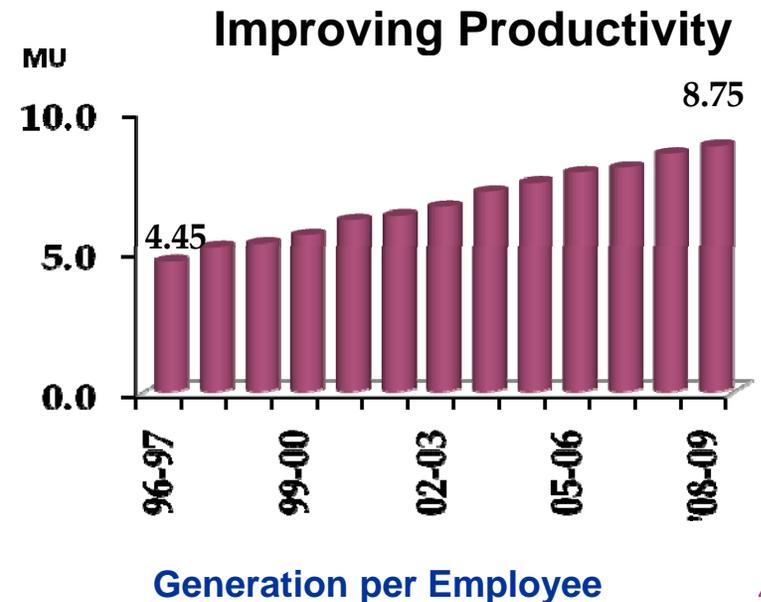
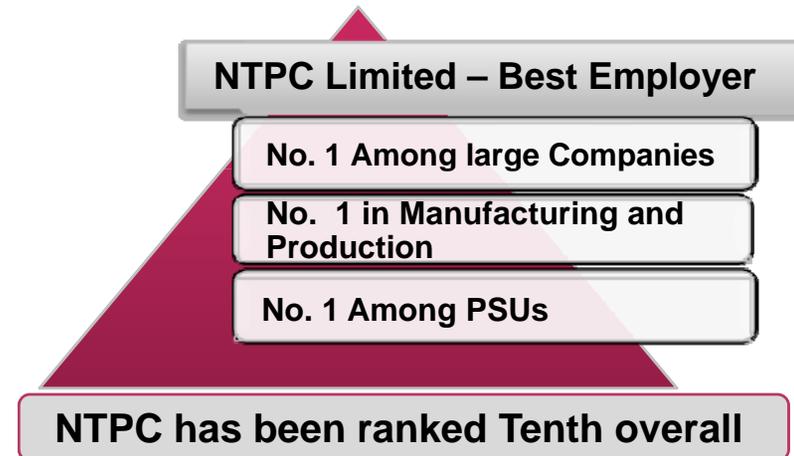
- **Capacity Charges:**
 - Return on Equity–15.5% grossed up for Tax
 - Depreciation–aligned with Companies Act;
 - Operation and Maintenance Expenditure–at normative rate per MW escalated annually;
 - Interest on Loans–at actual interest rate on Normative loan.
 - Interest on Working Capital–Normative
 - Secondary Fuel–Normative with efficiency sharing
- Annual Capacity Charges are payable in the ratio of Actual Availability and Normative Availability (depending upon age of the unit for incentive and depreciation);
- Energy Charges–Normative Operating parameters with landed cost of fuel
- FERV: On normative loan to the extent not hedged. For hedged exposure, hedging costs are recoverable, FERV during construction period included in capital cost.

Managing people-Human Resource Development

Strategy –to retain experienced manpower and attract new talent

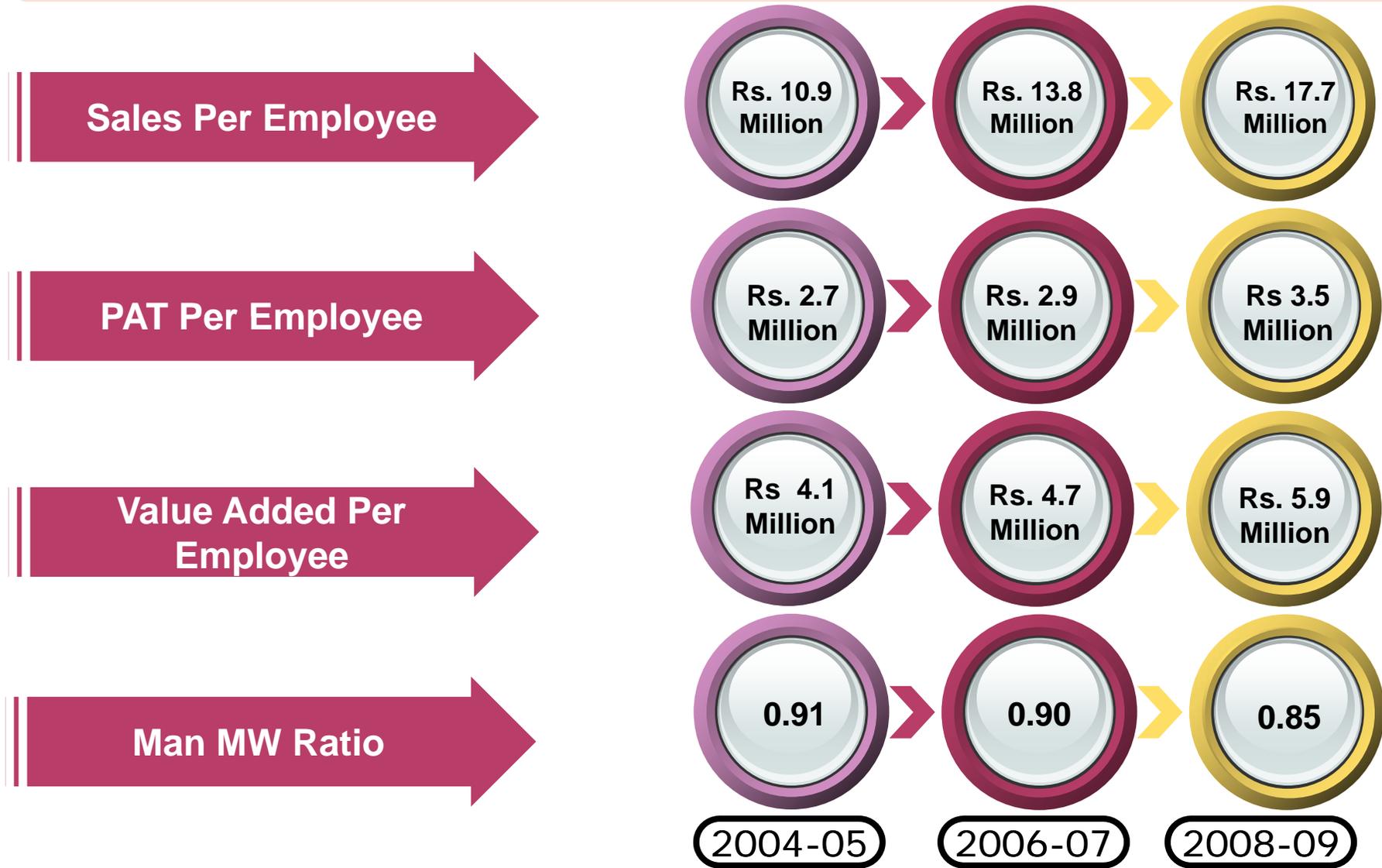
- ❑ Senior executives possess extensive experience of the industry
- ❑ Planned interventions at various stages of career
- ❑ Systematic training ensures 7 man days training per employee per year
- ❑ Knowledge sharing & develop Over 24000 highly trained employees including JV's and Subsidiaries

Executive Turnover rate has come down to 1.88% in 2008-09 from 3.1% last year



Managing people....

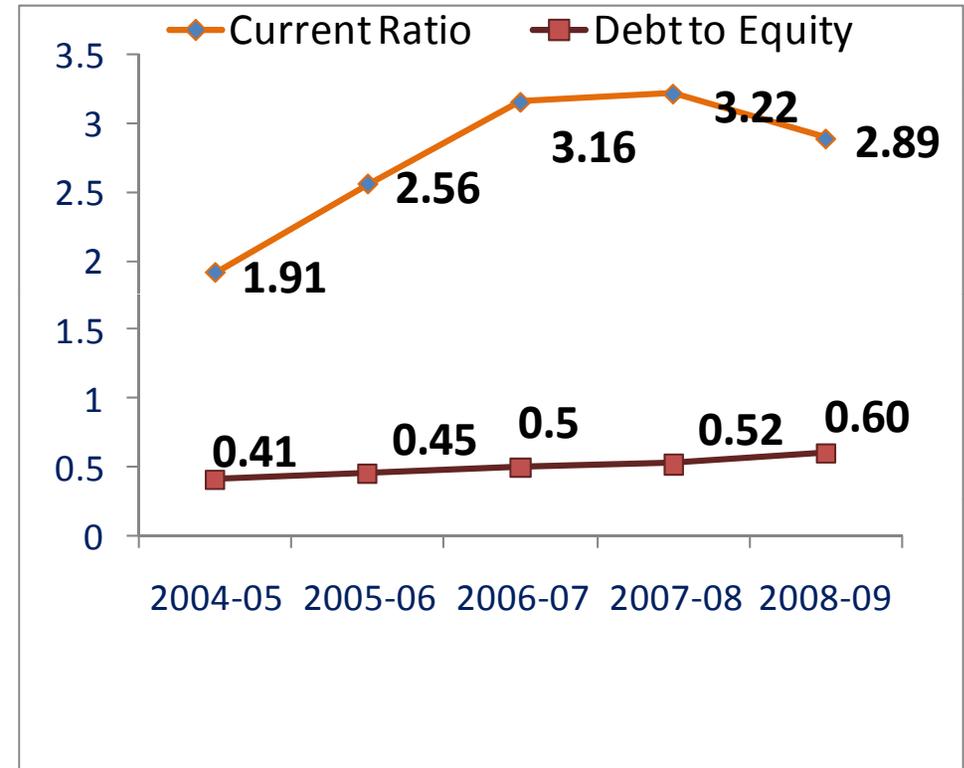
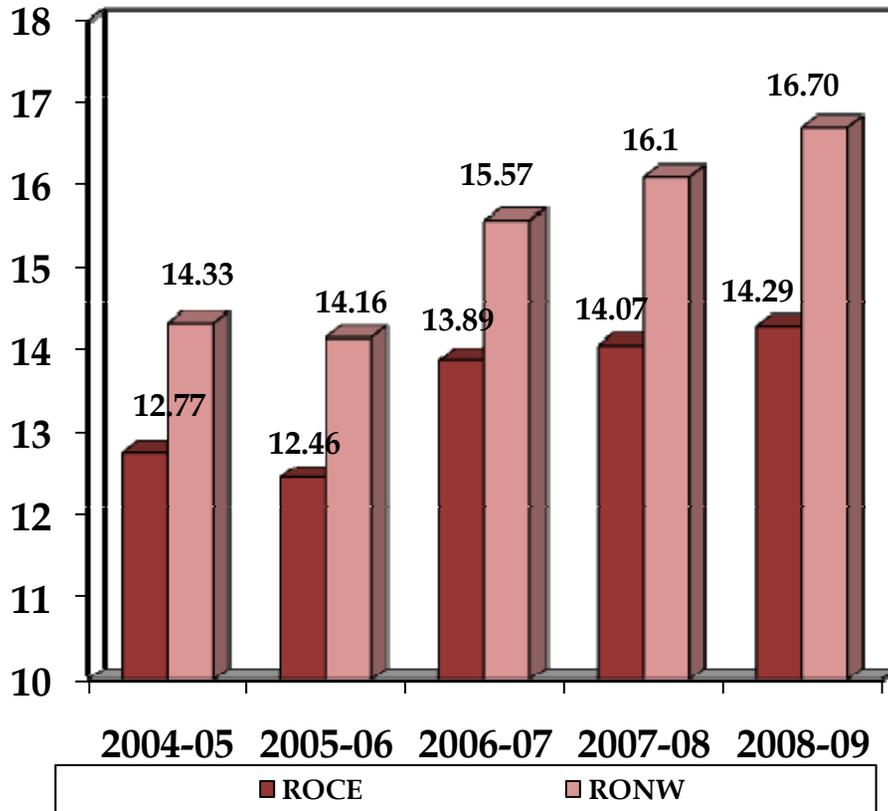
Sustained improvement in Per Employee Performance Indicators



- Growth doesn't have a linear relationship with number of resources. Improvement in productivity helps improving bottom lines as well as sustaining competition.

Fund Mobilization

Strategy – to maintain robust Key Ratios



- ❑ Low gearing ratio ensures favored borrower status amongst lenders
- ❑ Financial Leverage to improve RoNW due to higher debt deployment

Fund Mobilization...

Strategy – to leverage strong ratios to raise debt at optimal cost

- ❑ New projects to be financed with Debt equity ratio of 70:30.
- ❑ Internal accruals sufficient to finance equity portion of scheduled investment
- ❑ Borrowings to be made from domestic and foreign sources based on optimal cost of funds
- ❑ Long Term loans/bonds preferred to match project cash flows
- ❑ Projects executed by Subsidiaries and JVs to be financed under project finance route

Debt tie-ups

2008-09

- ❑ Raised bonds of Rs.19 billion
- ❑ Term loans of Rs.115.75 billion from banks, financial institutions and NBFC tied up

2009-10

- ❑ Tied up single largest corporate loan with a Public Sector bank for Rs.85 billion
- ❑ Signed loan agreements of Rs.43.5 billion with domestic banks

Total loans of Rs. 453 billion tied up with domestic financial institutions, Banks, NBFCs, Committed loans of Rs. 243 billion to be drawn over next 2 yrs

Technological Up gradation

Strategy –to imbibe latest technological innovations considering 3 Es

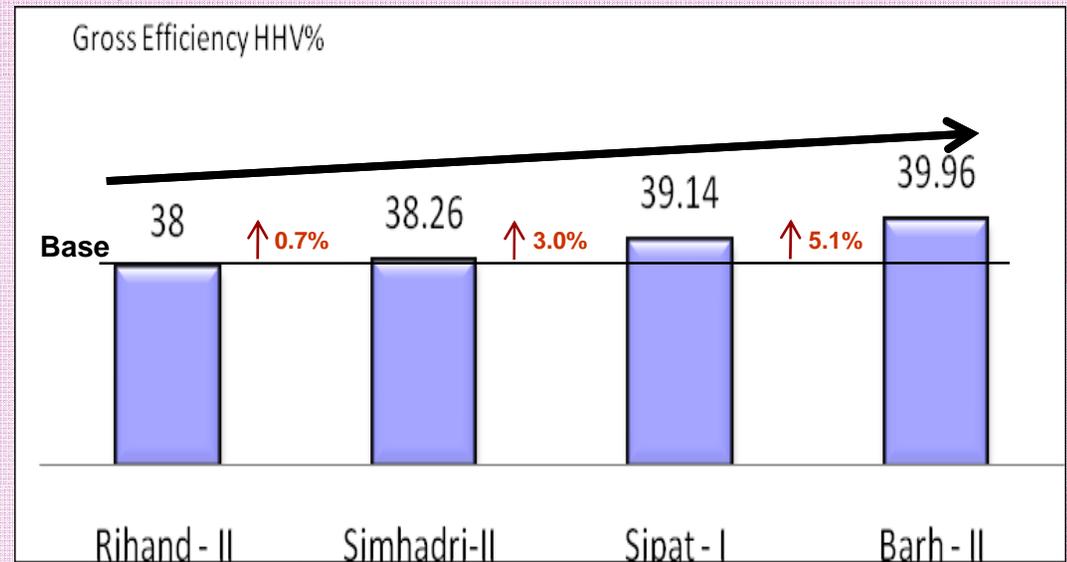
NETRA

- NTPC’s Research and technology development wing, NETRA (NTPC Energy Technology Research Alliance) to focus on research and technology development related to green power.
- NETRA building in Greater Noida is the first ECBC (Energy Conservation Building Code) compliant building in NTPC.

3Es- Economies, Efficiency & Environment

Adoption of higher efficiency units

Progressive adoption of supercritical technology raising the cycle efficiency to 39.96% from 38.00% by adopting higher Hot Reheat Temperature of 595°C and Super heater temperature of 565°C in 2x660 MW Barh-II project, presently under construction.



Study for adopting ultra-supercritical technology with efficiency levels of 41.1% in progress.

	Sub - critical units		Super - critical units	
Unit Size	500 MW	500 MW	660 MW	660 MW
MS Pressure kg/cm ²	170	170	247	247
MS Steam Temp (° C)	537	537	537	565
RH Steam Temp (° C)	537	565	565	593

Competition

Strategy –Recent Initiatives to sustain leadership thru better monitoring & Planning

Video Conferencing

- Monitoring of ongoing projects on daily/weekly basis
- Conducting Management committee Meeting-covering practically all sites

Project Monitoring Centre

- Set up to identify bottlenecks in project management at an early stage and flag it to top management for quick decision
- Shall move to swift working

Web Based Monitoring

- Pilot implemented at Dadri
- Integration with BHEL for status of supplies
- To extend to other projects in due course

Corporate Plan

- Last Corporate Plan was for 2002-17
- Process commenced for revisiting the Corporate Plan and finalizing targets for a period upto 2032

Sound Corporate Governance Practices

Fully Compliant with Clause 49 (Corporate Governance) of Listing Agreement

Management Oversight Various Committees of the Board

- Audit Committee of independent Directors oversees Financial Reporting
- Committee on Management Controls review & Monitor management Control System
- Project Sub-committee for approving FRs, investment decisions.
- Committee for Controls for award of large value contracts
- Investors Grievance Committee for expeditious handling of investors Complaints
- Recently constituted Remuneration Committee consisting of 3 independent director and one govt. nominee director

Composition of Board of Directors:

- 7 Full Time Directors
- 2 Govt. Nominee Directors
- 9 Independent Directors

Accountability of the Board to the stakeholders

- Well established system of appraisal of Directors performance by Ministry of Power
- Well established PMS for employees at all levels.

Balanced Disclosures

- Transparency of Operations
- All important events/ happenings/ material decisions are disclosed on Company's website & to Stock Exchanges

Enterprise wide Risk Management Framework

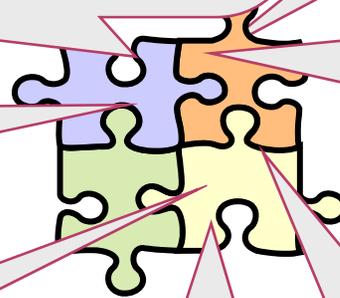
- Well developed risk portfolio
- ERM: Consisting of 24 Executive Directors in place –meets regularly
- Focus on mitigating top risks

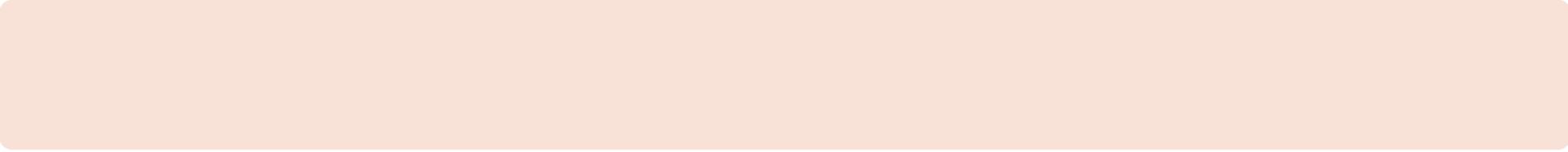
Controls over Operations

- Subject to 3 audits
 - Independent Audit by C&AG
 - Independent audit by Statutory Auditors
 - Internal Audit

Internal Control Framework on Financial Reporting

- Elaborate Framework consisting of Key controls drawn up and implemented at all 40 units
- Gap Tracking Reports are reviewed by Management.
- Test of operating effectiveness of key controls conducted by Audit Department





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